

National Institute of Technology Agartala

राष्ट्रीय प्रौद्योगिकी संस्थान अगरतला



ANNUAL REPORT 2022 - 2023



National Institute of Technology Agartala
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2022-2023**

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MINISTER OF STATE IN THE
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NATIONAL INSTITUTE OF TECHNOLOGY AGARTALA

ANNUAL REPORT

2022 – 2023



NATIONAL INSTITUTE OF TECHNOLOGY AGARTALA

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1.0 INTRODUCTION

National Institute of Technology Agartala, a Centrally Funded Institution is one of the thirty-one National Level Technical Institutes in India. The Institute has marked an important footprint in this short span of time after its conversion from the erstwhile Tripura Engineering College to NIT Agartala in the year 2006. Situated in the lap of nature, NIT Agartala has embarked on a journey to make its presence felt on the map of technical education and innovation in the country. Presently at the undergraduate level, B. Tech Degree Courses are offered in Civil Engineering, Mechanical Engineering, Electrical Engineering, Computer Science & Engineering, Electronics & Communication Engineering, Production Engineering, Chemical Engineering, Electronics & Instrumentation Engineering and Bio Engineering, out of which seven branches also offer post-Graduate courses. The Institute also offers courses of higher study in computer applications, science subjects and management programmes. To promote fundamental research, it also offers Ph.D. along with Post-Doctoral Fellowship programs in various specializations of Engineering, Science, Management, Humanities & Social Sciences. The School of Management of NIT Agartala produces management professionals skilled in analytical and administrative abilities.

The Institute has a dedicated Center for Career Development for organizing on campus placements process, Industrial Training, Study Tours, and Apprenticeship Training for the final year students. The Institute has several highly sophisticated laboratories empowered with the latest technical equipments that aim at catering the state-of-the-art research. The Institute has a well-equipped workshop that provides centralized facilities for conducting classes at the undergraduate level and also meets the requirements of any state-of-the-art project work and consultancy initiatives. The Library of the Institute is equipped with the latest RFID systems and a dedicated digital section with online access to numerous international journals of repute and e-books from different online portals and subjects to quench the needs of our students and researchers.

The Institute has both Boys' and Girls' Hostel facilities. Students are accommodated in five Boys' Hostels and one Girls' Hostel. The students take an active part in all sorts of activities held in cultural and technical festivals in and outside the campus. The NITA Student Gymkhana is a very active student organization that acts as a link between the students and the administration. The Gymkhana Club promotes the objectives of fostering extra-curricular activities and works for the welfare of students. Every year the students of NIT Agartala organize the Annual Technical Fest Aayam and Cultural fest called Moksha that witness spontaneous participation of students. Different Clubs such as the Robotic, Soft Skills Development Club, Electronic Club, Music Club, Drama Club, Photographic Club, Art & Culture Club have been formed for encouraging the students to take part and develop themselves in various fields.

The entire NIT Agartala is sprawled over 365 acres of lush green land in nature's lap. Virtual classroom through 10 Mbps High-definition video conferencing has been established under the second phase of the Pilot project launched by NICSI, New Delhi to connect IITs, IISc, TIFR and NITs through NKN and, a Multimedia centre has been developed to cater to the needs of the CDAC curricula. Having regard to the concern for the environment, Solar panels have been installed with a 90% subsidy by MNRE for street lights and other Emergency loads like Hospital, Guest House, Girls' Hostel etc. The entire campus of NIT Agartala is a Wi-Fi campus where internet facilities can be accessed from anywhere at any point of time. NIT Agartala is the first NIT to have started Kendriya Vidyalaya within its campus to provide education to the local people as well as the children of the faculty members and other staff members staying within the campus. NIT Agartala looks forward to working for a future that would empower our young generation with a quality technical education that will help them take greater responsibility to take our country forward.

The Government of India converted the Tripura Engineering College to National Institute of Technology Agartala on 1st April 2006 vide notification No. F. 20-20/2004/TS III/ dated 10.03.2006 of the Ministry of Human Resources Development (MHRD), Govt. of India. During the conversion, Tripura Engineering

college was offering undergraduate degrees in Civil, Mechanical, Electrical, Electronics & Communication and Production Engineering.

In the academic session 2010-11, the institute started two UG courses, Electronics & Instrumentation Engineering and Chemical Engineering. After that, during the Academic Session 2012-13, a Bio-Engineering course at the UG level was started. Apart from the UG courses, the institute now offers a postgraduate degree in MBA, MCA, MTech in 20 specializations and MSc in Basic Science. Besides these academic curricula, the institute provides an opportunity for research. The research carried out at the departments of the institute has produced more than 100 PhD scholars. The institute presently has 13 departments offering UG, PG and PhD courses.

The majority of the admission to this institute is based on all-India entrance tests and or national counselling. The UG students are admitted to the institute for the seats that are allocated by the Central Seat Allocation Board (CSAB) under Joint Seat Allocation Authority (JoSAA), based on the performance of these students, in the Joint National Entrance Examination main (JEE Main). The institute also invites international students to undergo UG studies under Direct Admission of Students Abroad (DASA) scheme.

For admission to M. Tech courses, students should have a valid GATE score and should appear in the centralised counselling for M.Tech./M.Arch./M.Plan (CCMT). Besides the regular intake, to promote higher education among the employed persons, few seats are kept reserved for sponsored candidates from academia and industry. Admission to the MCA course in the institute is based on the performance of the candidate in the national level entrance test NIT MCA Common Entrance Test (NIMCET). The students for the M.Sc. programme are admitted through Centralised Counselling for M.Sc./ M.Sc. Tech programmes in NITs and CFTIs (CCMN) based on the performance in joint admission test for M. Sc (JAM). The unfilled seats of M.Sc. are filled up locally based on a test and or interview. The regular PhD scholars are admitted through interviews after they qualify in the written test. The institute makes wide publicity about the PhD admission in reputed All India as well as local newspapers. The curricula of UG, PG and PhD courses are strictly governed by the rules and regulations laid down for each course.

The classrooms and the laboratories of the Institute are equipped with modern facilities. The institute provides computer labs in each department, to provide the students access to the worldwide net to upgrade their knowledge. Besides the computer centres of the departments, there is a central computational facility, mostly for the first year UG students. The Computer Science and Engineering department has a PARAM Shavak super-computer. The state-of-the-art National Institute of Technology Agartala Library cum Knowledge Centre has over fifty thousand textbooks and online e-resources. The centre for career development (CCD) assists to arrange internship and placement for the students of the institute. Besides the academic curriculum, the institute encourages its students to participate in extra-curricular activities after the academic hours. The students actively participate in sports and techno-cultural activities.

The faculties of the institute are highly qualified and have good expertise in their fields. The institute has established academic tie-ups with IIT Kharagpur, IIT Guwahati, Jadavpur University, IIST (Formerly BESU), NITK Surathkal, NIT Warangal apart from another renowned University / Institute of India and abroad. There is an agreement with IIT Madras, whereby the top 10% of the B. Tech students of engineering departments are allowed to pursue their final year at IIT Madras. After that, depending on their performance, they may be allowed to carry out integrated PhD programmes at IIT Madras. The institute has taken the initiative to go into a similar agreement with reputed national and international institutes. Apart from this, a continuing education cell in the form of a national-level research centre in areas like Geotechnology, Information Technology and Renewable energy has been established. Industry Institute Linkage has been revamped for catering to the needs of industrialization of the region at large and the State in particular.

The hostels in the institute accommodate more than 3000 boys and 500 girls. To take care of the health of the students, the institute has a medical unit in its campus. Doctors are present, round the clock, here. To

help the students financially, the institute implements various scholarships of the government of India and various state governments.

1.1 Objectives:

The National Institute of Technology Agartala is an Institution of National Importance set up by Govt. of India. The vision and mission of the Institution is:

Vision:

National Institute of Technology, Agartala will transform its students through education, innovation, creativity, research and entrepreneurship to become professionals and impact the nation and the society to be at the forefront of an ever-changing world.

Mission:

- i. To impart world class education in all frontiers of science and technology.
- ii. To integrate knowledge and experiences both inside and outside of the classroom by faculty-student interaction, experiential learning and embracing new technology – making every opportunity into a possible learning outcome.
- iii. To train future leaders who will serve the nation, society and the world with the highest standards of personal ethos and integrity coupled with patriotism.
- iv. To empower the nation with high quality research and propel the nation to become the leading country in innovation, creativity and entrepreneurship.

1.2 Goal:

Institutional Goal – Short term and long term

The target of the Institute is to achieve Short Term Goals within 5 years and the Long-Term Goals within 10 years.

Short term goals:

- To complete the construction of Students' Hostels.
- To construct roads & other amenities as proposed in the master plan.
- To procure adequate laboratory equipment and machinery for UG and PG classes.
- To develop modern laboratories for Central Research Facilities and consultancy activities.
- Upgradation of existing campus to the wide network to provide continuous high broadband internet connectivity.
- Upgradation of the existing library with modern facilities namely RFID, digital library, library management system, connectivity to e-journals and e-books of reputed publications.
- Creation of all infrastructural and other facilities such as all-weather internal roads with footpath and well-planned campus to be developed keeping in view the architectural landscaping and beautification.
- Entrepreneurship development aided by Technology Incubation.

Long Term Goals:

- To make it one of the leading technological Institutions not only in India, but also in the world map of technical Institutes.
- To attract a large number of foreign students.
- To produce high quality research scholars in all professional areas.
- To attract high quality experienced faculty members of national and international standards.
- To strengthen Industry Institute partnership linkages.

- To extend facilities in terms of technology transfer for developing infrastructural facilities of the Region.
- To establish community development centres for nurturing and motivating the local talents and resources.
- To establish itself as an Educational Hub in the North-East Region.

1.3 Education System:

The National Institute of Technology Agartala offers B. Tech, MCA, MBA, M. Tech., M. Sc. (courses in Physics, Chemistry and Mathematics), BS-MS (in Physics, Chemistry and Mathematics), BT-MT (in Engineering Physics) and Ph.D. courses in Engineering, Technology, Sciences, Management, Humanities & Social Sciences.

The Institute has introduced a new curriculum in the line of IITs where a greater number of elective subjects are offered to make the system flexible. The Institute follows a credit-based system for academic evaluation. It offers Industrial training and projects as a part of the education system and students are also encouraged to take part in various activities through NSS, NCC, Sports and other co-curricular activities for their social and personality development.

1.4 New Initiatives:

The PG programmes have been aimed to fulfill the requirements of Tripura and North East as a whole. The campus has been partially made residential with four boys' hostels and one girls' hostel. A fully residential campus will be developed with modern facilities for the overall requirement of the Institute within 3 years.

The Institute gets a 33 KV dedicated power supply through Tripura State Electricity Corporation Limited for uninterrupted supply in the campus. Some other initiatives taken up for augmenting the Institute with more infrastructure facilities are as follows:

- (1) Revamping of lakes, water harvesting and beautification of water bodies in NIT Agartala.
- (2) CCTV Surveillance System, LAN networking and telephone/ intercom system in Central Library at NIT Agartala.
- (3) HVAC System in Central Library at NIT Agartala.
- (4) Area Development works in and around Central Plaza, Academic Zone, NIT Agartala in progress.
- (5) Construction of Academic Block for Bio-Engineering Department.

2.0 AN OVERVIEW

2.1 Historical Background:

National Institute of Technology Agartala, a Centrally Funded Institution was set up to impart quality technical education into various levels of higher learning. It may be mentioned here that the 23rd February 2006 is a Red-Letter Day in the history of Tripura Engineering College as well as in the State of Tripura as the Union Cabinet approved the proposal of the State Government for conversion of Tripura Engineering College to National Institute of Technology, a fully Central Government funded Institution with Deemed to be University status.

The Institute (i.e., erstwhile Tripura Engineering College) was established in 1965 with the three traditional branches of Civil, Electrical and Mechanical Engineering. It was initially affiliated to Calcutta University and had the same curriculum structure and examination system at par with Bengal Engineering College (presently Bengal Engineering and Science University, Shibpur). After the establishment of Tripura University, the Institute was then affiliated to Tripura University w.e.f. 1987.

2.2 Institute Administration:

The Institute is administered by the Director of the Institute under the direct supervision of the Board of Governors (BoG) of the Institute headed by the Chairman. The Institute is governed as per NIT Act 2007. His Excellency, the President of India, is the Visitor of the Institute. The academic policies of the institute are implemented by the Dean Academic Affairs after the approval by the SENATE of the Institute and ratification by the Board of Governors (BoG). The Planning and Development of the institute are implemented through Dean (P&D). All the student-related affairs are looked after by the Dean (SW). The works of Research and Consultancy are looked after by the Dean (R&C) while Dean (FW) is In-Charge of all the faculty related works in the Institute. Chairman (AA&IR) looks after all alumni affairs and affairs of Institutional Relations. The Registrar is responsible to the Director for proper implementation of all the policies of the institute.

2.3 Location:

The Institute is located on a site, 20 km. away from the capital city of Agartala and 4 km. away from National Highway (NH-44) connecting Agartala to Shillong. Agartala is linked to the rest of the country by road and rail-link via Silchar and Guwahati. It has direct air links to New Delhi, Kolkata, Guwahati, Silchar, Imphal, Mumbai, Bangalore and Chennai. NIT Agartala is situated at 91°21'22.681" E (E 339387.823 m.) longitudes and 23°50'26.906" N (N 2637495.384 m.) latitude at a height of 43.786 metres above the sea level. The climate in the institute campus is moderate. The temperature varies from a minimum 6⁰ C in the winter season to a maximum of 35⁰ C in the summer season. The area has an approximate annual rainfall of 2200 mm.

The Institute is connected to the National Highway with all weather-metalled roads. Regular bus and jeep services are available from Agartala city to College Chowmuhani (NH 44 junction) near the Institute. Auto-rickshaw services are also available on the route from College Chowmuhani to the Institute and back. Direct regular bus service from Agartala (Nagerjola) to NIT Campus via Ranirbazar is now available. The nearest railway station at Jirania is about 2.5 km. from the Institute. The Institute also has its own bus service for campus dwellers.

2.4 Campus and Common Facilities:

The campus of the Institute is spread over an area of 365 acres, set amidst a sprawling landscape of natural quietness. It presents a spectacle of harmony in modern architecture, natural beauty aided with picturesque surroundings.

A well-equipped Medical Unit with two Medical Officers, two Pharmacists and other supporting staff is available in the campus for rendering medical care to the students, staff and other inmates of the campus. In case of emergency, arrangements are made for transferring the patients to the Jirania Primary Health Centre which is 4 km. away from the campus or to the State Hospital in Agartala. An ambulance service is also provided for students and staff.

A full-fledged Branch of State Bank of India named SBI NIT Agartala Branch has been functioning in the Institute campus with the Core Banking facility since 28th March 2008. The SBI has opened an ATM counter in the Institute campus. Teachers, staff, students and local inhabitants are getting benefit out of it. With the introduction of a nationalized Banking facility in the campus, a long pending demand of the students and staff of the Institute has been fulfilled. Two ATM counters one by CANARA Bank and the other by Punjab National Bank have also been operating in the campus. CANARA Bank has opened a branch in the Institute's premises.

The Tripura Gramin Bank has a branch operating from the Institute campus named as NIT Agartala Branch. The campus also has a Sub-Post Office by the name "NIT Agartala" having PIN: 799046.

2.5 Placements:

The Institute has a Centre for Career Development (CCD) under the Chairmanship of Dr. Tara Sen with supporting staff. The CCD helps the students to get proper placements in various Public and Private Sector Organizations by arranging the campus interviews. Study Tours and Industrial Trainings are also organized by this Cell.

2.6 Games and Sports:

The students actively participate in all co-curricular activities like Games and Sports, Debates, Cultural-Functions, Essay Competitions, Drama Competitions, Rallies on various themes, NSS programmes, etc. being sponsored by the State Government and Central Government and other statutory bodies and also by the institute authority. N.S.S. or N.C.C. is a compulsory subject for all the students of first year.

2.7 Medical Facility:

The Medical Unit is centrally located within the campus at National Institute of Technology, Agartala. It provides dedicated health services to the institute community comprising of students, employees, their dependents and institute guests. It renders 24 hours doctor, nursing, emergency and ambulance service for its patients provided by in house and outsourced staff.

3.0 ADMINISTRATION

3.1 Introduction:

Recognizing the growing need of quality technical education in the North Eastern Region, the Union Cabinet approved the proposal of the State Government for the conversion of the erstwhile Tripura Engineering College to National Institute of Technology, to a fully Central Government funded Institution with Deemed to be University status on 23rd February, 2006. The Ministry of Human Resource Development, Government of India issued the official notification No. F. 26-20/2004/TS-III dated 10.03.2006 that marked the emergence of National Institute of Technology Agartala with effect from 01.04.2006.

National Institute of Technology Agartala (NITA) is an autonomous statutory organization set up by NIT ACT. NIT Act and first Statutes framed under the ACT have provision for 4 Authorities. The Board of Governors (BOG) is the highest authority, responsible for overall administration and control of the Institution. Under the supervision of BOG, three (3) other authorities work in different areas for proper supervision, maintenance and implementation of decisions and policies of the Institution. The other authorities are (1) Finance Committee, (2) Building & Works Committee and (3) Senate. The functions, responsibilities, powers of BOG, Finance Committee, Building & Works Committee and Senate are provided in the NIT ACT and Statutes.

3.2 Number of Meetings of the Authorities:

During the period under report, the numbers of meetings held by various authorities are mentioned below:

A.	Board of Governors	: 05 Nos.
B.	Finance Committee Meeting	: 04 Nos.
C.	Building & Works Committee Meeting	: 01 Nos.
D.	Senate	: ----

3.3 Staff Position:

3.3.1 Name of Director, Registrar, Deans and HoDs

DIRECTOR : Prof. (Dr.) H. K. Sharma

REGISTRAR : Col. (Dr.) Ashish Badola

Deans:

Name of the Deans

1) Dean (Academic)	:	Prof. (Dr.) Swapan Bhaumik
2) Dean (Faculty Welfare)	:	Prof. (Dr.) Ardhendu Saha till 30/01/2023 Dr. Rajshekhar Panua since 30/01/2023
3) Dean (R & C)	:	Prof. (Dr.) Ajoy Kumar Das
4) Dean (S.W.)	:	Dr. Rajshekhar Panua, (S&W-1)
	:	Prof. (Dr.) R.N. Rai (S&W-2)
5) Dean (P & D)	:	Prof. (Dr.) Ajay Kumar Chakraborty

Heads of the Departments/Schools

Name of the HODs

1) Civil Engineering	:	Dr. Sima Ghosh
2) Electrical Engineering	:	Prof (Dr.) P. N. Das
3) Mechanical Engineering	:	Dr. Pritam Das

4) Computer Science & Engineering	: Dr. Suman Deb
5) Electronics & Communication Engineering	: Dr. Tamosi Moyra
6) Production Engineering	: Dr. Uttam Kr. Mandal
7) Physics	: Dr. (Mrs.) Aparna Nath
8) Chemistry	: Dr. Mitali Saha
9) Mathematics	: Dr. Baby Bhattacharya
10) Management, Humanities & Social Science	: Prof (Dr.) Debasish Neogi
11) Chemical Engineering	: Dr. Srimanta Ray
12) Electronics & Instrumentation Engineering	: Prof (Dr.) P. N. Das
13) Bio Engineering	: Dr. T. K. Bandopadhyay

Head of Central Services, Facilities and Sections:

Chairman (AA & IR)	: Prof. (Dr.) Prasun Chakraborti
Medical Officer	: (i) Dr. Supriti Tripura (ii) Dr. Suryashish Chakraborty (iii) Dr. Pankaj Kr. Deb (iv) Dr. Bipradip Saha
Chief Warden	: Dr. Arvind Kr. Jain
Faculty in Charge, Workshop	: Dr. Barnik Saha Roy
Chairman, Library	: Dr. Partha Pratim Sarkar
Chairman of CCD	: Dr. John Deb Barma
Chairman, Industrial Institute Interaction Cell	: Prof. (Dr.) Umesh Mishra

Engineering Unit:

Estate Engineer (Civil)	: Sri Sunil Das (on deputation)
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3.3.2 List of Faculty Members:

3.3.2.1 Regular faculty members

Sl. No	Faculty Name	Position	Branch	Date of joining at NITA
1	Prof. (Dr.) H. K. Sharma	Director		03-12-2017
Professor				
1	Dr. Richi Prasad Sharma	Professor	C. E	01-04-2006
2	Dr. Umesh Mishra	Professor	C. E.	03-10-2008
3	Dr. Swapn Bhowmik	Professor	M.E	01-04-2006
4	Dr. Prasun Chakrabarti	Professor	M.E.	01-04-2006
5	Dr. Ajoy kumar Das	Professor	M.E.	01-04-2006
6	Dr. Manish Pal	Professor	C. E.	01-04-2006
7	Dr. Ratul Das	Professor.	C.E.	01-04-2006
8	Dr. Sujit Kumar Pal	Professor	C.E.	01-04-2006
9	Dr. Ardhendu Saha	Professor	E.E	01-04-2006
10	Dr. Ajay Kumar Chakraborty	Professor	E.E.	15-07-2010
11	Dr. Priyanath Das	Professor	E.E	01-04-2006
12	Dr. Ram Naresh Rai	Professor	P.E	25-06-2010
13	Dr. Aparna Nath	Professor	Physics	01-04-2006
14	Dr. Debasish Bhattacharya	Professor	Maths	01-04-2006

15	Dr. Debasish Neogi	Professor	MHSS	22-08-2008
16	Dr. Vipin Kr. Tripathi	Professor	M.E.	29-07-2020
Associate Professor				
1	Dr. Rama Debbarma	Associate Prof.	CE	01-04-2006
2	Dr. Rupnarayan Roy	Associate Prof.	E.E	01-04-2006
3	Dr. Rajsekhar Panua	Associate Prof.	M.E	24-05-2010
4	Dr. Diptendu Bhattacharya	Associate Prof.	C.S.E	25-06-2010
5	Dr. Dibyendu Ghoshal	Associate Prof.	E.C.E	29-04-2010
6	Dr. Saroj kumar Das	Associate Prof.	Chemistry	01-04-2006
7	Dr. Tarun Kumar Mishra	Associate Prof.	Chemistry	09-04-2012
8	Dr. Uttam Kumar Bera	Associate Prof.	Maths	01-09-2010
9	Dr. Paritosh Bhattacharjee	Associate Prof.	Math.	27-03-2012
10	Dr. John Deb Barma	Associate Prof.	M.E.	01-04-2006
11	Dr. Mrinal Kanti Debbarma	Associate Prof.	CSE	01-04-2006
12	Dr. Pritam Das	Associate Prof.	M.E.	01-04-2006
13	Dr.Mrs. Sima Ghosh	Associate Prof.	C.E.	01-04-2006
14	Dr. Rajib Saha	Associate Prof.	C.E.	01-04-2006
15	Dr. Apu kumar Saha	Associate Prof.	Math.	01-04-2006
16	Dr. Debdulal Tripura	Associate Prof.	C.E.	01-04-2006
17	Dr. Partha Pratim Sarkar	Associate Prof.	C.E.	08-09-2008
18	Dr. Baby Bhattacharya	Associate Prof.	Math	06-02-2009
19	Dr. Subhadeep Bhattacharjee	Associate Prof.	E.E.	13-04-2010
20	Dr. Mitali Saha	Associate Prof.	Chemistry	12-04-2010
21	Dr. Sambhu Nath Pradhan	Associate Prof.	ECE	28-05-2010
22	Dr. Munesh Chandra	Associate Prof.	CSE	01-04-2019
23	Dr. Manish Bhargava	Associate Prof.	M.E.	03-04-2019
24	Dr. Arvind Kumar Jain	Associate Prof.	E.E.	29-04-2019
Asstt. Professor (Grade-I)				
1	Dr. Sumita Deb	Asstt. Prof.(Gr-I)	EE	01-04-2006
2	Dr. Atanu Chowdhury	Asstt. Prof. (Gr-I)	ECE	22-09-2008
3	Dr. Kishan Choudhuri	Asstt. Prof. (Gr-I)	PE	18-09-2008
4	Dr. Barnik Saha Roy	Asstt. Prof. (Gr-I)	M.E.	01-04-2006
5	Dr. Dipankar Sarkar	Asstt. Prof. (Gr-I)	C.E.	01-04-2006
6	Dr. Swarup Paul	Asstt. Prof. (Gr.I)	P.E.	20-02-2009
7	Dr. Madhujit Deb	Asstt. Prof. (Gr.I)	M.E.	01-04-2006
8	Dr. Jayanta Pal	Asstt. Prof. (Gr-I)	C.E.	01-04-2006
9	Dr. Rahul Banerjee	Asstt. Prof. (Gr-I)	M.E.	12-04-2010
10	Dr. (Mrs.) Tara Sen	Asstt. Prof. (Gr-I)	C.E.	12-04-2010
11	Dr. Gyanabati Khuraijam	Asstt. Prof. (Gr-I)	HSS	07-05-2010
12	Dr. Pankaj kumar Das	Asstt. Prof. (Gr-I)	M.E.	01-04-2006
13	Dr. (Mrs.) Soma Nag	Asstt. Prof. (Gr.I)	Chemical Engg.	14-06-2010
14	Dr. Swapan Deb Barma	Asstt. Prof. (Gr-I)	CSE	01-04-2006
15	Dr. Jayanta Kr. Rakshit	Asstt. Prof. (Gr-I)	EIE	23-08-2010
16	Dr. Tarun Kanti Bandyopadhyay	Asstt. Prof. (Gr-I)	Chemical Engg.	04-05-2012
17	Dr. Srimanta Ray	Asstt. Prof. (Gr-I)	Chemical Engg.	04-05-2012

18	Dr. Kalyan Gayen	Asstt. Prof. (Gr-I)	Chemical Engg.	04-05-2012
19	Dr. Surajit Das	Asstt. Prof. (Gr.I)	C.E.	16-05-2012
20	Dr. Vidyut Dey	Asstt. Prof. (Gr.I)	P.E.	01-06-2012
21	Dr. Sanjay Paul	Asstt. Prof. (Gr-I)	C.E.	24-05-2012
22	Dr. Subrata Kr. Ghosh	Asstt. Prof. (Gr-I)	M.E.	07-06-2012
23	Dr. Uttam Kumar Mandal	Asstt. Prof. (Gr-I)	P.E.	28-05-2012
24	Dr. Animesh Debnath	Asstt. Prof. (Gr-I)	C.E.	21-06-2012
25	Dr. Sushant Kr. Biswal	Asstt. Prof. (Gr-I)	C.E.	21-06-2012
26	Dr. (Mrs.) Tamasi Moyra (Panua)	Asstt. Prof. (Gr.I)	ECE	13-06-2012
27	Dr. Ajay Biswas	Asstt. Prof. (Gr.I)	M.E.	23-07-2012
28	Dr. Ashim Saha	Asstt. Prof. (Gr-I)	CSE	12-10-2012
29	Dr. Suvra Prakash Mondal	Asstt. Prof. (Gr-I)	Physics	01-11-2012
30	Dr. Anirban Dutta	Asstt. Prof. (Gr-I)	SoM	06-11-2012
31	Dr. Mrinmoy Majumder	Asstt. Prof. (Gr-I)	C.E.	17-11-2012
32	Dr. Ajay kumar Manna	Asstt. Prof. (Gr-I)	Chemical Engg.	17-12-2012
33	Dr. Biswajit Saha	Asstt. Prof. (Gr.I)	Physics	30-11-2012
34	Dr. Jawahar Paulraj	Asstt. Prof. (Gr.I)	M.E.	13-03-2019
Asstt. Professor (Grade-II)				
1	Smt Anindita Jamatia	Asstt. Prof. (Gr-II)	E.E.	01-04-2006
2	Dr. Abaniswar Chakraborti	Asstt. Prof. (Gr.II)	E.E.	01-04-2006
3	Sri Prabir Ranjan Kasari	Asstt. Prof. (Gr.II)	E.E.	01-04-2006
4	Dr. Minakshi Deb Barma	Asstt. Prof. (Gr-II)	E.E.	01-04-2006
5	Dr. Bikram Das	Asstt. Prof. (Gr.II)	E.E.	01-04-2006
6	Sri Prasenjit Debnath	Asstt. Prof. (Gr.II)	E.E.	30-07-2010
7	Sri Nikhil Deb Barma	Asstt. Prof. (Gr-II)	CSE	01-04-2006
8	Dr. Kunal Chakma	Asstt. Prof. (Gr.II)	CSE	01-04-2006
9	Mrs. Smita Das	Asstt. Prof. (Gr.II)	CSE	01-04-2006
10	Dr. Dwijen Rudra Pal	Asstt. Prof. (Gr-II)	CSE	01-04-2006
11	Dr. Suman Deb	Asstt. Prof. (Gr.II)	CSE	01-04-2006
12	Dr. Anupam Jamatia	Asstt. Prof. (Gr.II)	CSE	01-04-2006
13	Sri Tribid Deb Barma	Asstt. Prof. (Gr-II)	CSE	01-04-2006
14	Dr. Nirmalya Kar	Asstt. Prof. (Gr.II)	CSE	29-07-2010
15	Sri Kamalesh Debnath	Asstt. Prof. (Gr-II)	ECE	12-04-2010
16	Sri Anirban Bhattacharya	Asstt. Prof. (Gr.II)	ECE	21-05-2012
17	Dr. Mitra Barun Sarkar	Asstt. Prof. (Gr.II)	ECE	15-06-2012
18	Dr. Somnath Roy Choudhury	Asstt. Prof. (Gr-II)	ECE	21-05-2012
19	Dr. Prasenjit Datta	Asstt. Prof. (Gr.II)	PE	01-04-2006
20	Dr. Abhik Majumder	Asstt. Prof. (Gr.II)	M.E.	01-04-2006
21	Dr. Gopinanday Dey	Asstt. Prof. (Gr-II)	C.E.	01-04-2006
22	Sri Manik Bhowmik	Asstt. Prof. (Gr.II)	ECE	01-04-2006
23	Dr. Ankuran Saha	Asstt. Prof. (Gr.II)	M.E.	21-05-2012
24	Dr. Lipika Haldar	Asstt. Prof. (Gr-II)	C.E.	01-04-2006
25	Mr. Nilotpal Debbarma	Asstt. Prof. (Gr.II)	C.E.	01-04-2006
26	Dr. Biman Debbarma	Asstt. Prof. (Gr.II)	ECE	01-04-2006
27	Dr. Arindam Majumder	Asstt. Prof. (Gr-II)	M.E.	20-04-2010
28	Ms. Seena Priyan	Asstt. Prof. (Gr-II)	P.E.	13-05-2010

29	Mr. R.K. Bogendra Meiti	Asstt. Prof. (Gr.II)	M.E.	29-06-2012
30	Dr. Joyshree Das	Asstt. Prof. (Gr.II)	E.E.	11-10-2012
31	Dr. Biswanath Bhunia	Asstt. Prof. (Gr.II)	B.E.	24-08-2022
32	Dr. V. C. Padmanaban	Asstt. Prof. (Gr.II)	B.E.	29-08-2022
33	Dr. Jayakumar L	Asstt. Prof. (Gr.II)	C.S.E.	31-08-2022
34	Dr. Nabamita Ghoswami	Asstt. Prof. (Gr.II)	E.E.	24-08-2022
35	Dr. P Padmagirisan	Asstt. Prof. (Gr.II)	E.E.	24-08-2022
36	Dr. Manas Rakshit	Asstt. Prof. (Gr.II)	E.C.E.	05-09-2022
37	Dr. Shikha Maurya	Asstt. Prof. (Gr.II)	E.C.E.	01-09-2022
38	Dr. Pinku Debnath	Asstt. Prof. (Gr.II)	M.E.	25-08-2022
39	Dr. Sagnik Pal	Asstt. Prof. (Gr.II)	M.E.	25-08-2022
40	Dr. Dipak Chandra Das	Asstt. Prof. (Gr.II)	M.E.	25-08-2022
41	Dr. Ravivarman R	Asstt. Prof. (Gr.II)	M.E.	29-08-2022
42	Dr. Rajib Mallik	Asstt. Prof. (Gr.II)	M.H.S.S.	26-08-2022
43	Dr. Ngangbam Herojit Singh	Asstt. Prof. (Gr.II)	MCA	24-08-2022
44	Dr. Prakash Kumar Sahu	Asstt. Prof. (Gr.II)	P.E.	05-09-2022
45	Dr. Debanjan Acharyya	Asstt. Prof. (Gr.II)	E.I.E.	05-09-2022
46	Dr. Supriyo Dutta	Asstt. Prof. (Gr.II)	Mathematics	29-08-2022
47	Dr. Goutam Kumar Gupta	Asstt. Prof. (Gr.II)	E.C.E.	07-09-2022
48	Dr. Mamidi Suresh	Asstt. Prof. (Gr.II)	Chemical Engg.	09-09-2022
49	Dr. Venkata Bharat Nisahtala	Asstt. Prof. (Gr.II)	Chemistry	09-09-2022
50	Dr. Paramvir Singh	Asstt. Prof. (Gr.II)	M.E.	13-09-2022
51	Dr. Subir Das	Asstt. Prof. (Gr.II)	E.I.E.	13-09-2022
52	Dr. Manu S Nadesan	Asstt. Prof. (Gr.II)	C.E.	13-09-2022
53	Dr. Preeti Gulia	Asstt. Prof. (Gr.II)	M.E.	13-09-2022
54	Dr. Ranjita Das	Asstt. Prof. (Gr.II)	C.S.E.	08-09-2022
55	Dr. Awnish Kumar	Asstt. Prof. (Gr.II)	C.S.E.	16-09-2022
56	Dr. Yogesh Kumar Sariya	Asstt. Prof. (Gr.II)	E.I.E.	19-09-2022
57	Dr. Sadhan Gope	Asstt. Prof. (Gr.II)	E.E.	08-09-2022
58	Dr. Maraju Suman Kalyan	Asstt. Prof. (Gr.II)	Physics	05-09-2022
59	Dr. Suyel Namasudra	Asstt. Prof. (Gr.II)	MCA	28-09-2022
60	Dr. Dharendra Kr. Pandey	Asstt. Prof. (Gr.II)	C.E.	29-09-2022
61	Dr. Abhishek Koner	Asstt. Prof. (Gr.II)	Chemistry	14-10-2022
62	Dr. Shailendra Singh	Asstt. Prof. (Gr.II)	E.E.	27-10-2022
63	Dr. Sagarika panigrahi	Asstt. Prof. (Gr.II)	C.E.	15-11-2022
64	Dr. Nabarun Biswas	Asstt. Prof. (Gr.II)	P.E.	05-09-2022
65	Dr. Sujoy Chakraborty	Asstt. Prof. (Gr.II)	P.E.	05-09-2022

3.3.2.2 Contractual faculty members.

Sl. No.	Name	Designation	Department	Date of Joining
1.	Dr. Moumita Majumder	Asstt. Prof.	Comp. Sc. & Engg.	18-08-2010
2.	Ms. Priyanka Sarkar	Asstt. Prof.	Comp. Sc. & Engg.	01-04-2013
3.	Sri Dhruvajyoti Bhowmik	Asstt. Prof.	Comp. Sc. & Engg.	01-04-2013
4.	Sri Kishore Kr. Dhar	Asstt. Prof.	Comp. Sc. & Engg.	10-07-2014
5.	Sri Prashant Bhardwaj	Asstt. Prof.	Comp. Sc. & Engg.	10-07-2014
6.	Ms. Tannistha Pal	Asstt. Prof.	Comp. Sc. & Engg.	10-07-2014

7.	Sri Subhajit Deb	Asstt. Prof.	Civil Engg.	06-08-2010
8.	Dr. Tillotama Chakraborty	Asstt. Prof.	Civil Engg.	30-08-2011
9.	Ms. Nabanita Bhowmik	Asstt. Prof.	Civil Engg.	06-12-2012
10.	Ms. Sadria Begam	Asstt. Prof.	Civil Engg.	14-07-2014
11.	Ms. Dipika Debnath	Asstt. Prof.	Civil Engg.	14-07-2014
12.	Sri Chirabrata Debnath	Asstt. Prof.	Civil Engg.	10-10-2014
13.	Ms. Nabina Khanam	Asstt. Prof.	Civil Engg.	21-01-2015
14.	Sri Ratnadeep Modak	Asstt. Prof.	Civil Engg.	22-01-2015
15.	Sri Debashish Karmakar	Asstt. Prof.	Civil Engg.	07-07-2015
16.	Sri Sajal Rudra Paul	Asstt. Prof.	Civil Engg.	01-09-2016
17.	Dr. Bibhab Kr. Lodh	Asstt. Prof.	Chemical Engg.	05-08-2011
18.	Dr. Mriganka Sekhar Manna	Asstt. Prof.	Chemical Engg.	17-07-2014
19.	Dr. Swarup Biswas	Asstt. Prof.	Chemical Engg.	22-08-2016
20.	Dr. Abhijit Baidya	Asstt. Prof.	Maths. Dept.	23-08-2010
21.	Dr. Susmita Roy	Asstt. Prof.	Maths. Dept.	01-08-2011
22.	Dr. Jayanta Debnath	Teaching Asstt.	Maths. Dept.	01-08-2011
23.	Dr. Pinki Majumder	Teaching Asstt.	Maths. Dept.	01-08-2011
24.	Dr. Jayasree Chakraborty	Asstt. Prof.	Maths. Dept.	05-09-2012
25.	Dr. Mantu Das	Asstt. Prof.	Maths. Dept.	17-07-2014
26.	Ms. Sudipa Choudhury	Teaching Asstt.	Maths. Dept.	29-07-2015
27.	Dr. Sayanta Chakraborty	Asstt. Professor	Maths. Dept.	19-08-2016
28.	Dr. Kalyani Debnath	Asstt. Prof.	Maths. Dept.	19-08-2016
29.	Dr. Piyali Debnath	Asstt. Prof.	Maths. Deptt.	04-09-2017
30.	Sri Subharaj Paul	Teaching Asstt.	Physics Dept.	01-08-2012
31.	Dr. Manash Kr. Paul	Asstt. Prof.	Physics Dept.	16-07-2010 17-10-2012
32.	Dr. Sanjay Kr. Mandal	Asstt.Prof.	Physics Dept.	05-11-2012
33.	Dr. Thingujam Kiranmala Devi	Asstt.Prof.	Physics Dept.	21-07-2014
34.	Dr. Biswajit Paul	Asstt.Prof.	Physics Dept.	20-07-2015
35.	Dr. Santanu Chakraborty	Asstt.Prof.	Physics Dept.	13-07-2015
36.	Dr. Chakradhar Behra	Asstt. Prof.	Physics Dept.	16-08-2016
37.	Dr. Saswati Roy	Teaching Asstt.	Physics Dept.	16-08-2016
38.	Dr. Debanjan Bhattacharjee	Teaching Asstt.	Physics Deptt.	14-03-2017
39.	Dr. Saroj Kumar Parida	Asstt. Prof.	Physics Deptt.	13-02-2017
40.	Sri Durbadal Debroy	Asstt. Prof.	Mech. Engg.	03-08-2011
41.	Dr. Ashis Acharjee	Asstt. Prof.	Mech. Engg.	11-07-2014
42.	Sri Arindam Sinha	Asstt. Prof.	Mech. Engg.	14-07-2014
43.	Ms. Moutoshi Singha Roy	Asstt. Prof.	Mech. Engg.	29-07-2015
44.	Dr. Joydeep Roy	Asstt. Prof.	Mech. Engg.	07-03-2016
45.	Dr. Sharmistha Sharma	Asstt. Prof.	Elect. Engg.	12-08-2009
46.	Dr. Diptanu Das	Asstt. Prof.	Elect. Engg.	08-08-2011
47.	Dr. Nivedita Laskar	Asstt.Prof.	Elect. Engg.	15-11-2012
48.	Sri Diptanu Dey	Asstt.Prof.	Elect. Engg.	14-07-2014
49.	Dr. Arup Ratan Bhowmik	Asstt.Prof.	Elect. Engg.	11-07-2014
50.	Ms. Pushparenu Bhattacharjee	Asstt. Prof.	Prod. Engg.	08-08-2013
51.	Sri Debashis Podder	Asstt. Prof.	Prod. Engg.	18-07-2014
52.	Sri Shiladitya Chakraborty	Teaching Asstt.	Electronics & Comm. Engg.	25-07-2008

53.	Dr. Priyanka Chowdhury	Asstt. Prof.	Electronics & Comm. Engg.	13-08-2014
54.	Dr. Apangshu Das	Asstt. Prof.	Electronics & Comm. Engg.	10-08-2012
55.	Dr. Abhishek Nag	Asstt. Prof.	Electronics & Comm. Engg.	13-07-2015
56.	Sri Partha Kr. Deb	Asstt. Prof.	Electronics & Comm. Engg.	02-07-2015
57.	Dr. Smita Banik	Asstt. Prof.	Electronics & Comm. Engg.	22-08-2016
58.	Dr. Subhojit Das	Asstt. Prof.	Chemistry Dept.	24-07-2014
59.	Dr. Manojit Roy	Asstt. Prof.	Chemistry Dept.	07-08-2014
60.	Dr. Jhinuk De	Teaching Asstt.	Chemistry Dept.	12-01-2015
61.	Dr. Chitraniva Datta	Asstt. Prof.	Chemistry Dept.	03-08-2015
62.	Dr. Sajal Kundu	Asstt. Prof.	Chemistry Dept.	29-07-2015
63.	Dr. Manas Roy	Asstt. Prof.	Chemistry Dept.	26-08-2016
64.	Dr. Susanta Ghanta	Asstt. Prof.	Chemistry Dept.	22-08-2016
65.	Dr. Chanchal Bhowmik	Asstt. Prof.	Chemistry Dept.	22-08-2016
66.	Sri Bidhyasagar Debnath	Teaching Asstt.	Hum. & So. Sc.	04-08-2008
67.	Dr. Kaju Nath	Asstt. Prof.	Hum. & So. Sc.	24-07-2014
68.	Sri Nabendu Debnath	Teaching Asstt.	Hum. & So. Sc.	01-09-2014
69.	Dr. Anuradha Nongmaithem	Asstt. Prof.	Hum. & So. Sc.	25-07-2014
70.	Dr. Amit Bikram Chowdhury	Asstt. Prof.	Hum. & So. Sc.	22.08.2016
71.	Mr. Jayasree Tripura	Teaching Asstt.	Hum. & So. Sc.	07-07-2017
72.	Dr. Priyanka Dey	Asstt. Prof.	Electronics & Instrumentation Engg.	13-08-2012
73.	Ms. Priyanka Roy Goswami	Asstt. Prof.	Electronics & Instrumentation Engg.	06-02-2012
74.	Dr. Rupam Gupta Roy	Asstt. Prof.	Electronics & Instrumentation Engg.	11-07-2014
75.	Dr. Aparupa Kar	Asstt. Prof.	Electronics & Instrumentation Engg.	11-07-2014
76.	Dr. Tridib Kr. Bhowmik	Asstt. Prof.	Bio-Engg.	13-06-2013
77.	Dr. Deeplina Das	Asstt. Prof.	Bio-Engg.	21-07-2014
78.	Dr. Abhijit Chatterjee	Asstt. Prof.	Bio-Engg.	14-07-2015
79.	Ms. Hrijuta Datta	Asstt. Prof.	Bio-Engg.	10-07-2015
80.	Dr. Muthusivarampandi an M	Asstt. Prof.	Bio-Engg.	10-07-2015
81.	Dr. Sonit Dutta	Asstt. Prof.	School of Management	23-05-2013
82.	Dr. Amlanbrata Chakraborty	Asstt. Prof.	School of Management	21-07-2014

3.3.3 List of employees - other than faculty members

3.3.3.1 Regular non-teaching staff of the institute

Sl. No.	Name	Designation	Department	Date of Joining
1.	Col (Dr.) Ashish Badola	Registrar	Administration	16-01-2023
2.	Mr. Tanmoy Ghosal	Deputy Registrar	Accounts & Finance	01-08-2022

3.	Mr. Manish Kumar	Deputy Registrar	Establishment	01-12-2022
4.	Dr. Praveen Shukla	Deputy Librarian	Library	19-08-2022
5.	Mr. N. V Sivakumar Hari	Asstt. Registrar	Purchase	22-11-2019
6.	Mr. Krishanu Gupta	Asstt. Registrar	Academic	15-11-2019
7.	Mr. Kamlesh Tilwani	Asstt. Registrar	Accounts & Finance	29-11-2019
8.	Mr. Gangula Shanmuk	Asstt. Registrar	Academic	24-08-2022
9.	Dr. Supriti Tripura	Medical Officer	Health Care Centre	01-08-2022
10.	Dr. Suryashish Chakraborty	Medical Officer	Health Care Centre	01-08-2022
11.	Mr. Partha Sarathi Bhattacharjee	Scientific/ Technical Officer	Website & Networking	01-08-2022
12.	Mr. Abhishek Kumar Yadav	Student Activity & Sports Officer	Sports	03-08-2022
13.	Mr. Supriya Pradhan	Assistant Librarian	Library	31-08-2022
14.	Sri Suman Karmakar	Technical Assistant	Electrical Engg. Deptt	01-04-2006
15.	Sri Subhankar Chakma	Technical Assistant	Civil Engg. Dept.	01-04-2006
16.	Sri Jyoti Lal Debbarma	Stenographer (SG-II)	O/o the Director	01-04-2006
17.	Sri Tarun Debbarma	Sr. Assistant	Stipend & Scholarship	01-04-2006
18.	Smt. Bakul Debbarma	Sr. Assistant	Estt. Section	01-04-2006
19.	Sri Sukhen Saha	Jr. Assistant	Accounts Section	01-04-2006
20.	Sri Dhirendra Debnath	Jr. Assistant	Library	01-04-2006
21.	Sri Dhrubamani Dey	Jr. Assistant	Stipend Section	24-09-2018
22.	Sri Sukhendu Debbarma	Sr. Technician	Elect. Engg.	01-04-2006
23.	Smt. Uma Saha	Group – C	Exam. Sec.	01-04-2006
24.	Sri Dilip Debbarma	Group – C	Estt. Sec.	01-04-2006
25.	Smt. Sonalaxmi Debbarma	Group – C	Estt. Sec.	01-04-2006
26.	Sri Nepal Debnath	Group – C	Acad. Sec.	01-04-2006
27.	Sri Bishu Debbarma	Group – C	Prod. Engg.	01-04-2006
28.	Smt. Urmila Debbarma	Group – C	Mech. Engg.	01-04-2006

3.3.3.2 List of contractual non-teaching staff of the institute

Sl. No.	Name	Designation	Department	Date of Joining
1.	Sri Gopal Sil Sharma	PS	O/o the Director	14-01-2019
2.	Sri Bidyut Kr. Ghosh	Jr. Assistant	O/o the Director	12-12-2008
3.	Smt. Shampa Pal (Bhowmik)	Jr. Assistant	O/o the Director	02-02-2010
4.	Sri Tanumoy Paul	Jr. Assistant	O/o the Registrar	19-06-2006

5.	Sri Sanjib Debbarma	Helper	O/o the Registrar	15-07-2009
6.	Mrs. Kaninika Banik	Receptionist	O/o the Registrar	11-11-2011
7.	Sri Parimal Mahajan	Legal Advisor	Legal Cell	11-02-2019
8.	Sri Rajesh Kr. Majumder	Accountant	Accounts Section	21-11-2007
9.	Ms Aparna Nath	Accountant	Accounts Section	18-08-2010
10.	Sri Akhil Debbarma	Accountant	Accounts Section	03-10-2016
11.	Sri Karna Kr. Sarkar	Office Asstt.	Accounts Section	18-08-2016
12.	Sri Manish Dey	Accountant	Accounts Section	03-02-2014
13.	Smt. Sumitra Roy	Jr. Assistant	Accounts Section	12-12-2008
14.	Sri Ashim Banik	Accountant	Accounts Section	20-06-2018
15.	Sri Haradhan Roy	Sr. Assistant	Accounts Section	20-06-2018
16.	Sri Shyamal Purakayastha	Audit Officer	Audit Section	07-01-2014
17.	Sri Subrata Chakraborty	Audit officer	Accounts Section	05-12-2011
18.	Sri Kritisundar Saha	Office Assistant	Estt. Section	01-08-2013
19.	Sri Pradip Datta	Office Asstt.	Estt. Section	18-08-2016
20.	Mr. Kusum Debnath	Sr. Asstt.	Estt. Sec.	20-06-2018
21.	Sri Kabir Deb	Jr. Assistant	Academic Sec.	04-06-2007
22.	Ms. Krishna Rani Deb	Jr. Assistant	Academic Sec.	21-06-2011
23.	Ms. Trishita Choudhury	P.R. Asstt.	Academic Sec.	26-10-2016
24.	Ms. Payel Sarkar	Sr. Assistant	Exam. Sec.	05-07-2011
25.	Sri Sourav Mahajan	Jr. Assistant	Exam. Sec.	12-12-2008
26.	Sri Himangshu Paul	Section Officer(Pur)	Purchase Sec.	26-09-2011
27.	Sri Nabin Chandra Kundu	Lib. Asstt.	Purchase Sec.	01-04-2010
28.	Sri Partha Biswas	Estate Manager	Estate Section	12-12-2008
29.	Sri Jitendra Debnath	Sr. Assistant	Estate Section	03-03-2015
30.	Sri Rajesh Kr. Modak	Jr. Engineer	Estate Section	16-09-2011
31.	Sri Nakul Ch. Debnath	Plumber	Estate Section	01-05-2008
32.	Sri Sankar Debbarma	Work Asstt.	Estate Section	11-07-2009
33.	Sri Sanjib Chakraborty	Opt (Auditorium)	Estate Section	27-06-2011
34.	Sri Rakesh Tripura	Mason	Estate Section	10-12-2012
35.	Sri Pradip Sutradhar	Carpenter	Estate Section	10-12-2012
36.	Sri Biswajit Das	Helper	Estate Section	10-12-2012
37.	Sri Sanjib Sarkar	Helper	Estate Section	10-12-2012
38.	Sri Milan Karmakar	Helper	Estate Section	10-12-2012
39.	Sri Bapan Debroy	A.E.E.	Estate Section	20-06-2014
40.	Sri Debu Debnath	Work Assistant	Estate Section	13-06-2014
41.	Sri Rajesh Sarkar	J.E.	Estate Section	16-12-2014
42.	Sri Bimal Krishna Debnath	A.E.E.	Estate Section	02-09-2010
43.	Sri Sumit Debnath	J.E.	Estate Section	05-09-2014
44.	Sri Ranjit Sharma	Helper	Estate Section	09-11-2010
45.	Sri Rajib Chakraborty	Helper	Estate Section	09-11-2010
46.	Sri Chanki Paul	Helper	Estate Section	09-11-2010
47.	Sri Pradip Das	Electrician	Estate Section	01-12-2011
48.	Sri Arabinda Das	Electrician	Estate Section	01-12-2011
49.	Sri Sujit Debnath	Lineman	Estate Section	01-12-2011
50.	Sri Subir Namasudra	Helper	Estate Section	01-12-2011
51.	Sri Pabitra Shil	Electrician	Estate Section	08-08-2012
52.	Sri Krishan Debnath	Lineman	Estate Section	02-08-2012
53.	Sri Krishna Ch. Saha	Lineman	Estate Section	03-08-2012
54.	Sri Uttam Kr. Debnath	Lineman	Estate Section	07-08-2012

55.	Sri Parimal Debnath	Helper	Estate Section	03-08-2012
56.	Sri Biswajit Debbarma	Helper	Estate Section	03-08-2012
57.	Sri Rajib Deb	Helper	Estate Section	16-06-2014
58.	Sri Matilal Tanti	Operator	Estate Section	16-06-2014
59.	Sri Manitosh Sarkar	Operator	Estate Section	16-06-2014
60.	Sri Sadhan Debnath	Operator	Estate Section	31-08-2016
61.	Sri Amit Debbarma	Electrician	Estate Section	01-09-2016
62.	Sri Litan Sarkar	Jr. Assistant	TPO	16-07-2010
63.	Sri Dyanojyoti Kar	Accountant	TPO	15-09-2015
64.	Sri Sukanta Goswami	Jr. Assistant	Dean (FW)	19-12-2008
65.	Sri Anirban Sharma Roy	Lib. Asstt.	Library	30-01-2012
66.	Sri Dipankar Das	Jr. Assistant	Library	18-12-2008
67.	Sri Bidyut Choudhuri	Library Asstt.	Library	14-09-2015
68.	Ms. Purnima Singha	Library Asstt.	Library	14-09-2015
69.	Sri Kshitish Chakraborty	Office Asstt.	Library	16-08-2016
70.	Ms. Rupa Debnath	Library Asstt.	Library	24-09-2015
71.	Mrs. Tulshi Singha	P.R. Asstt.	Library	21-02-2017
72.	Sri Anupam Pal	Sports Officer	Dean (SW)	16-08-2007
73.	Sri Sukanta Ghoswami	Phy. Edu. Off.	Dean (SW)	16-08-2007
74.	Ms. Rumita Saha	Hostel Supervisor	Dean (SW)	01-08-2012
75.	Ms. Mahuya Biswas	Hostel Supervisor	Dean (SW)	10-02-2010
76.	Sri Ajoy Bhowmik	Hostel Supervisor	Dean (SW)	16-02-2010
77.	Sri Rabindra Das	Hostel Supervisor	Dean (SW)	10-02-2010
78.	Sri Sukrit Prasad Dutta	Hostel Supervisor	Dean (SW)	30-07-2012
79.	Sri Satyajit Das	Hostel Supervisor	Dean (SW)	30-07-2012
80.	Sri Prasanta Rn. Deb	Hostel Supervisor	Dean (SW)	08-07-2015
81.	Sri Mrinmoy Chakraborty,	Jr. Asstt.	Dean (SW)	07-03-2019
82.	Sri Litan Bhowmik,	Counsellor	Dean (SW)	02-03-2020
83.	Sri Debashish Biswas	Foreman	Workshop	04-08-2008
84.	Sri Manojit Das	Foreman/ Instructor	Workshop	18-09-2008
85.	Sri Arup Taru Roy	Instructor	Workshop	19-08-2009
86.	Sri Ranju Kr. Singh	Instructor	Workshop	19-08-2009
87.	Sri Biswajit Debnath	Instructor	Workshop	19-08-2009
88.	Sri Basudeb Banik	Tech.	Workshop	22-12-2008
89.	Sri Sujit Kumar Bhowmik	Skilled Asstt.	Workshop	18-09-2008
90.	Sri Shubendu Debbarma	Jr. Tech.	Workshop	19-08-2009
91.	Sri Kishore Das	Lab. Asstt.	Mech. Engg.	25-08-2010
92.	Sri Pinku Saha	Lab. Asstt.	Mech. Engg.	26-08-2010
93.	Sri Bishnupada Das	Driver	Workshop	19-11-2008
94.	Sri Babul Ch. Deb	Driver	Workshop	16-07-2009
95.	Sri Gopal Ch. Das	Driver	Workshop	16-07-2009
96.	Sri Sajal Saha	Driver	Workshop	01-02-2011
97.	Sri Gautam Acharjee	Technician	Mech. Engg.	28-07-2015
98.	Sri Subrajit Sen	Technical Asstt.	Mech. Engg.	27-07-2015
99.	Sri Prasenjit Majumder	Technical Asstt.	Mech. Engg.	28-07-2015
100.	Sri Pabitra Acharjee	Technician	Mech. Engg.	08-09-2016
101.	Sri Sudip Debnath	Technical Asstt.	Mech. Engg.	26-08-2016
102.	Sri Hillol Mutsuddy	Technical Asstt.	Mech. Engg.	26-08-2016
103.	Sri Pulak Kr. De	Office Asstt.	Mech. Engg.	18-08-2016
104.	Sri Abhijit Giri	Technical Asstt	Civil Engg.	13-08-2010

105.	Sri Suman Nandi	Lab. Asstt.	Civil Engg.	10-08-2010
106.	Ms Manisha Deb	Lab. Asstt.	Civil Engg.	13-08-2010
107.	Sri Prasenjit Dutta	Technical Asstt	Civil Engg.	06-12-2012
108.	Sri Sankar Paul	Technical Asstt	Civil Engg.	13-12-2012
109.	Sri Uddhab Ch.Nath	Technical Asstt	Civil Engg.	28-07-2015
110.	Sri Sukumar Sarkar	Office Asstt.	Civil Engg.	18-08-2016
111.	Sri Pramod Pal	Instructor	Production Engg.	04-09-2009
112.	Sri Biswanath Karmakar	Jr. Tech	Production Engg.	04-09-2009
113.	Sri Sukanta Das	Technical Asstt.	Production Engg.	08-09-2014
114.	Sri Prasenjit Debnath	Technician	Production Engg.	08-09-2014
115.	Ms. Puspoham Hrangkhawl	P.R. Asstt.	Production Engg.	21-02-2017
116.	Smt. Sima Das	Sr. Ins.	Elect. Engg.	19-08-2009
117.	Smt. Tapa Saha	Tech.Supp. Staff	Elect. Engg.	25-07-2008
118.	Sri Kabir Bhowmik	Sr. Ins.	Elect. Engg.	19-08-2009
119.	Sri Ajit Deb	Lab. Tech	Elect. Engg.	19-08-2009
120.	Sri Debabrata Bhattacharya	Technical Asstt	Elect. Engg.	09-08-2010
121.	Sri Pranab Majumder	Technical Asstt	Elect. Engg.	16-07-2012
122.	Ms. Sudipa Aine	Technical Asstt.	Elect. Engg.	30-07-2015
123.	Sri Subal Das	Technical Asstt.	Elect. Engg.	31-07-2015
124.	Ms. Ankita Pal	P.R. Asstt	Elect. Engg.	23-12-2016
125.	Sri Kamal Kn. Pal	System Admin.	CSE Deptt.	15-12-2008
126.	Mr. Rajib Debnath	Technician (N/W)	Networking	28-09-2016
127.	Mr. Pramatha Acharjee	Technician (N/W)	Networking	28-09-2016
128.	Sri Suman Saha	Lab / Tech Assistant	CSE Deptt.	09-08-2010
129.	Sri Viki Datta	Lab / Tech Assistant	CSE Deptt.	14-09-2011
130.	Sri Malay Paul	Lab / Tech Assistant	CSE Deptt.	13-03-2012
131.	Sri Saikat Bhattacharjee	Lab / Tech Asstt	CSE Deptt.	29-07-2015
132.	Sri Dhurjati Chakraborty	Lab / Tech Asstt	CSE Deptt.	29-07-2015
133.	Sri Joydip Deb	Lab / Tech Asstt	CSE Deptt.	29-07-2015
134.	Sri Ardhendu Gupta	Technical Asstt	CSE Deptt.	23-08-2016
135.	Sri Susanta Pal	Technical Asstt	CSE Deptt.	23-08-2016
136.	Ms. Mandira Bhowmik	Technical Asstt	CSE Deptt.	22-09-2016
137.	Sri Dhruba Narayan Das	Technical Asstt	Chemical Engg.	09-08-2010
138.	Sri Dipankar Goswami	Technical Asstt	Chemical Engg.	06-09-2011
139.	Sri Kaushik Das	Technical Asstt.	Chemical Engg.	28-07-2015
140.	Sri Mrinmoy Sarma	Technical Asstt.	Chemical Engg.	28-07-2015
141.	Mr. Samir Debbarma	Technician	Chemical Engg.	28-07-2015
142.	Mr. Biswajit Debbarma	Lab. Technician	Chemical Engg.	11-10-2017
143.	Mr. Khorshed Aalam	Lab. Technician	Chemical Engg.	17-10-2017
144.	Ms. Sangita Patari	Lab. Asstt	Physics	22-09-2011
145.	Mrs. Madhuri Debnath	Lab. Asstt.	Physics	17-07-2013
146.	Mr. Krishna Deb	Lab. Asstt.	Physics	17-07-2013
147.	Sri Sarit Chakraborty	Lab. Asstt	Physics	29-07-2015
148.	Sri Satyajit Ghosh	Lab,Asstt.	Chemistry	07-09-2012
149.	Sri Sudip Paul	Lab,Asstt.	Chemistry	31-07-2015
150.	Sri Himadri Paul	Lab,Asstt.	Chemistry	29-07-2015
151.	Sri Nitish Ranjan Nath	Lab. Asstt.	Chemistry	22-08-2016

152.	Mrs. Sarbani Das (Bhattacharjee)	Lab. Asstt.	Math.	20-07-2017
153.	Ms. Poulami Ghosh	Tech. Asstt.	ECE	09-12-2011
154.	Sri Dipesh Debnath	Technician	ECE	02-01-2012
155.	Sri Abhijit Chakraborty	Tech. Asstt.	ECE	10-08-2010
156.	Mrs. Poulomi Dey	Technical Asstt.	ECE	27-07-2015
157.	Sri Raju Majumder	Technical Asstt.	ECE	27-07-2015
158.	Sri Sanjib Das	Technician,	ECE	27-07-2015
159.	Sri Nirmal Sarkar	Technician	ECE	27-07-2015
160.	Sri Alvin Debbarma	Technical Asstt.	ECE	27-07-2015
161.	Sri Hriday Ranjan Lodh	Technical Asstt.	ECE	22-08-2016
162.	Sri Susovan Ghosh	Technical Asstt	ECE	23-08-2016
163.	Sri Prasenjit Paul	Technician	ECE	22-08-2016
164.	Sri Anjan Das	Technical Asstt.	EIE	06-02-2012
165.	Sri Samir Rajuyar	Technician	EIE	28-07-2015
166.	Sri Dilip Biswasarma	Technical Asstt.	EIE	22-08-2016
167.	Sri Suraj Das	Technical Asstt.	EIE	03-07-2017
168.	Sri Kailash Pratim Phukan	Technical Asstt.	EIE	04-07-2017
169.	Dr. Pankaj Kr. Deb	Medical Officer	Medical Unit	07-09-2020
170.	Sri Rajesh Karmakar	Pharmacist	Medical Unit	17-04-2008
171.	Ms. Supriya Das	Pharmacist	Medical Unit	27-09-2012
172.	Sri Dipen Majumder	Technician	Medical Unit	22-12-2008
173.	Mr. Rajat Saha	GDA cum Dresser	Medical Unit	04-03-2015
174.	Ms. Chayanika Das	Lab. Technician	Medical Unit	06-01-2014
175.	Sri Subrata Das	Staff Nurse (M)	Medical Unit	07-12-2016
176.	Smt. Mousami Das	Staff Nurse	Medical Unit	08-03-2019
177.	Sri Sanjit Debbarma	Helper	Guest House	15-07-2009
178.	Sri Sanjoy Ghosh	Supervisor	Guest House	05-09-2014
179.	Smt. Sulekha Sarkar	Cook	Transit House	06-05-2011
180.	Mrs. Sanju Debnath	Draftsman	Dean (P&D)	12-12-2008
181.	Sri Suman Rudra Pal	Off. Asstt.	Dean (P&D)	19-08-2008
182.	Sri Bappi Das	Helper/Cook	Transit camp	01-02-2011
183.	Ms. Subhra Chowdhury	Technical Asstt.	Bio-Engg.	24-12-2012
184.	Ms. Malabika Sarkar	Technical Asstt.	Bio Engg.	17-10-2017
185.	Sri Anojit Debbarma	Technician	Bio-Engg.	23-08-016
186.	Sri V.C. Mathai	Technical Asstt.	MHRD	12-11-2009
187.	Sri Sourabh Roy	Tech. Asstt.	Virtual Class Room	14-03-2014
188.	Sri Pramathesh Banik	Asst. Programmer (Technician)	MIS Section	03-11-2014
189.	Sri Sandanlal Saha	Cook-cum-Caretaker	Director's resi.	15-03-2016
190.	Sri Nirmal Debbarma	Security Guard	Director's office	02-02-2017

3.4 RTI and Vigilance Cell:

The Institute has an RTI Cell under the Appellate Authority of the Director, NIT Agartala. Mr. Tanmoy Ghosal, Deputy Registrar is the Central Public Information Officer.

Dr. Paritosh Bhattacharya is CVO (Chief Vigilance Officer) of the Institute.

4.0 ACADEMIC PROGRAMMES AND AWARD OF DEGREES

4.1 Introduction:

Tripura Engineering College (a State Govt. Institution) was established in 1965 with three branches (Civil, Electrical and Mechanical Engineering) at UG level. It was initially affiliated to University of Calcutta and had the same curriculum structure and examination system of Bengal Engineering College (presently Indian Institute of Engineering, Science and Technology, Shibpur, West Bengal). In the year 2006, Tripura Engineering College was converted into National Institute of Technology (NIT) Agartala. In spite of locational disadvantage in the North-Eastern Region where the connectivity is very poor, NIT, Agartala has excellent campus having 394 acres of land with the facilities of Academic Buildings, Library Building (known as Knowledge Centre), Auditorium, Multistoried Administrative Building, Building for Student's Activities, Staff Quarters, Banks, Post Office, Market Complex, Sports Complex and Kendriya Vidyalaya in the campus.

Intake of NITA per year has increased by three-fold to 1329 in comparison to annual intake till 2006. Presently, NITA has 9 B.Tech. programmes, 24 M.Tech. programmes, MBA programme, MCA programme, 3 BS-MS & 2 BT-MT programmes, 3 M.Sc. Programmes and Ph.D in relevant departments.

4.2 Admission Procedure:

- a. NIT Agartala follows the schedule of JoSAA-2022 for admission to under-graduate courses.
- b. Students are admitted in Undergraduate programmes under Home State and All India quota. In M.Tech. courses, candidates are admitted as per allotment of seats under common counseling, through CCMT, on the basis of results in GATE Examination. Candidates are also admitted to M.Tech. programmes of the Institute against the vacant seats left after admission through CCMT, based on a test and/or interview conducted by the Institute. Also, the Institute allows admission to candidates, having experience, under Sponsored Category to those employed in various organizations.
- c. In the MCA programme, candidates are admitted as per allotment of seats by NIMCET, based on the performance of the candidates in the NIMCET Examination conducted for the purpose.
- d. For programmes in M.Sc. in the Departments of Physics, Chemistry and Mathematics, eligible candidates are admitted as per allotment of seats by CCMN, based on the performance of candidates in the JAM examination conducted for the purpose of selection. Candidates are also admitted to the M. Sc. programmes of the Institute against the vacant seats left after admission through CCMN, based on a test and/or interview conducted by the Institute.
- e. Admission to the MBA programme is based on selection made by the Institute depending upon the performance of candidates in the qualifying examination like CAT, CMAT, etc. and also based on an Institute level test.
- f. For admission to the Ph.D. programme, candidates are admitted based on their performance in the test (written and oral) conducted by the Institute.

4.3 Admission 2022-23:

Table 1 – Fresh Admission (2022-23)

Sl. No.	Department	B. Tech.	BSMS	BTMT	M. Tech.	MCA	MBA	M. Sc.	Ph. D.
1.	Civil Engineering(CE)	112	--	--	47	--	--	--	09

2.	Mechanical Engineering(ME)	121	--	--	02	--	--	--	08
3.	Electrical Engineering(EE)	121	--	--	15	--	--	--	08
	Computer Sc. & Engineering(CSE)	148	--	--	16	--	--	--	15
4.	Electronics & Communication Engineering(ECE)	126	--	--	14	--	--	--	04
5.	Production Engineering(PE)	105	--	--	00	--	--	--	03
6.	Electronics & Instrumentation Engineering(EIE)	73	--	--	00	--	--	--	02
7.	Chemical Engineering(CHE)	74	--	--	00	--	--	--	03
9.	Bio Engineering (Biotechnology and Biochemical Engineering (BT & BC))	45	--	--	05	--	--	--	04
10	BS-MS(Physics, Chemistry, Mathematics)	--	58	--	--	--	--	--	--
11	BT-MT(Engg. Physic, Computational Mathematics)	--	--	46	--	--	--	--	--
12	Management, Humanities & Social Science	--	--	--	--	--	--	--	--
14	Physics	--	--	--	--	--	--	11	07
15	Chemistry	--	--	--	--	--	--	10	03
16	Mathematics	--	--	--	--	--	--	11	06
17	MCA	--	--	--	--	25	--	--	--
18	MHSS	--	--	--	--	--	26	--	03
Total		925	58	46	99	25	26	32	75

Total No. of students admitted during the year includes the following (2022-23):

Scheduled Castes	161(UG& Dual Degree), (PG=36), (Ph.D = 10)	Q.I.P.	M. Tech.	00
Scheduled Tribes	207(UG& Dual Degree), (PG=17), (Ph.D = 04)		Ph. D.	01
Physically Handicapped	8(UG& Dual Degree)	Sponsored	M. Tech.	01
Women	270(UG& Dual Degree), (PG=51), (Ph.D= 24)	Project	Ph. D.	05
EWS	106(UG& Dual Degree), (PG=07), (Ph.D= 03)	External Registration	Ph. D.	00

4.4 Course-wise enrollment with Sex and Caste break-up:

Table 2 – Admitted students in B. Tech, 1st Semester (2022-23)

		CE	ME	EE	CSE	ECE	PE	EIE	CHE	BT & BC	Total
From the State of Tripura:											
OP	Boys	15	20	20	17	21	10	9	11	7	130
	Girls	10	6	6	9	7	13	7	4	4	66
	Total	25	26	26	26	28	23	16	15	11	196
OPPH	Boys	0	0	0	1	0	0	0	0	0	1
	Girls	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	1	0	0	0	0	0	1
EWS	Boys	3	4	4	6	4	1	2	3	0	27
	Girls	2	1	2	2	2	1	1	1	0	12
	Total	5	5	6	8	6	2	3	4	0	39
EWS-PH	Boys	0	0	0	0	0	0	0	0	0	0
	Girls	0	0	0	0	0	0	0	0	0	0
	Total										0
OBC	Boys	0	0	0	0	0	0	0	0	0	0
	Girls	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0
OBCPH	Boys	0	0	0	0	0	0	0	0	0	0
	Girls	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0
SC	Boys	6	8	5	9	6	4	5	3	1	47
	Girls	4	3	5	5	5	5	1	3	3	34
	Total	10	11	10	14	11	9	6	6	4	81
SCPH	Boys	0	0	0	0	0	0	0	0	0	0
	Girls	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0
ST	Boys	13	15	12	20	13	11	8	7	3	102
	Girls	5	2	8	4	7	2	3	4	5	40
	Total	18	17	20	24	20	13	11	11	8	142
STPH	Boys	0	0	0	0	0	0	0	0	0	0
	Girls	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0
HS Total		58	59	62	73	65	47	36	36	23	459
From the Other State:											
OP	Boys	8	17	11	20	8	15	9	7	7	102
	Girls	2	6	5	7	6	4	3	3	0	36
	Total	10	23	16	27	14	19	12	10	7	138
OPPH	Boys	0	0	1	1	1	0	0	0	0	3
	Girls	0	0	0	0	0	0	0	0	0	0
	Total	0	0	1	1	1	0	0	0	0	3
EWS	Boys	6	6	5	6	6	9	3	3	4	48
	Girls	1	1	1	2	1	1	1	1	0	9
	Total	7	7	6	8	7	10	4	4	4	57
EWS-PH	Boys	0	0	0	0	0	0	0	0	0	0
	Girls	0	0	0	0	0	0	0	0	0	0

	Total	0	0	0	0	0	0	0	0	0	0
OBC	Boys	20	14	20	16	20	13	9	12	4	128
	Girls	5	3	4	4	4	4	2	2	2	30
	Total	25	17	24	20	24	17	11	14	6	158
OBCPH	Boys	0	0	0	2	1	0	0	0	0	3
	Girls	0	0	0	1	0	0	0	0	0	1
	Total	0	0	0	3	1	0	0	0	0	4
SC	Boys	6	6	6	8	8	4	5	5	2	50
	Girls	2	2	2	3	1	1	1	1	1	14
	Total	8	8	8	11	9	5	6	6	3	64
SCPH	Boys	0	0	0	0	0	0	0	0	0	0
	Girls	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0
ST	Boys	3	4	4	4	4	7	3	3	2	34
	Girls	1	3	0	1	1	0	1	1	0	8
	Total	4	7	4	5	5	7	4	4	2	42
STPH	Boys	0	0	0	0	0	0	0	0	0	0
	Girls	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0
OS & AI Total		54	62	59	75	61	58	37	38	22	466
Total intake capacity		118	125	125	150	128	113	75	75	50	959
Total admitted		112	121	121	148	126	105	73	74	45	925
Total vacant		6	4	4	2	2	8	2	1	5	34

Table 3 – Admitted students in M. Tech 1st Semester (2022-23)

		CE	ME	EE	CSE	EC	PE	CH	BE
OP	Boys	11	01	03	06	03	00	00	00
	Girls	07	00	03	03	01	00	00	01
	Total	18	01	06	09	04	00	00	01
OPPH	Boys	00	00	00	00	00	00	00	00
	Girls	00	00	00	00	00	00	00	00
	Total	00	00	00	00	00	00	00	00
OPEWS	Boys	00	00	00	00	01	00	00	00
	Girls	01	00	00	00	00	00	00	00
	Total	01	00	00	00	01	00	00	00
EWS PH	Boys	00	00	00	00	00	00	00	00
	Girls	00	00	00	00	00	00	00	00
	Total	00	00	00	00	00	00	00	00
OBC	Boys	03	00	02	03	07	00	00	01
	Girls	06	00	01	01	01	00	00	01
	Total	09	00	03	04	08	00	00	02
OBCPH	Boys	00	00	00	00	00	00	00	00
	Girls	00	00	00	00	00	00	00	00
	Total	00	00	00	00	00	00	00	00
SC	Boys	08	00	05	02	01	00	00	01
	Girls	05	00	00	00	00	00	00	00
	Total	13	00	05	02	01	00	00	01
SCPH	Boys	00	00	00	00	00	00	00	00
	Girls	00	00	00	00	00	00	00	00

	Total	00	00	00	00	00	00	00	00
ST	Boys	03	01	01	00	00	00	00	01
	Girls	03	00	00	01	00	00	00	00
	Total	06	01	01	01	00	00	00	01
STPH	Boys	00	00	00	00	00	00	00	00
	Girls	00	00	00	00	00	00	00	00
	Total	00	00	00	00	00	00	00	00
Total intake capacity		80	50	45	25	34	10	09	07
Total admitted (including sponsored)		47	02	14+(1) Sponsored)	16	14	00	00	05
Total vacant		33	48	31	09	20	10	09	02

Table 4 – Admitted students in BSMS, BTMT 1st Semester (2022-23)

		BSMS	BTMT
From the State of Tripura:			
	Boys	11	4
OP	Girls	4	6
	Total	15	10
	Boys	0	0
OPPH	Girls	0	0
	Total	0	0
EWS	Boys	0	0
	Girls	1	2
	Total	1	2
EWS-PH	Boys	0	0
	Girls	0	0
	Total	0	0
OBC	Boys	0	0
	Girls	0	0
	Total	0	0
OBCPH	Boys	0	0
	Girls	0	0
	Total	0	0
SC	Boys	7	2
	Girls	0	2
	Total	7	4
SCPH	Boys	0	0
	Girls	0	0
	Total	0	0
ST	Boys	2	6
	Girls	6	1
	Total	8	7
STPH	Boys	0	0
	Girls	0	0
	Total	0	0
Total		31	23
From various part of the country except the State of Tripura			
	Boys	7	5
OP	Girls	0	0
	Total	7	5

	Boys	0	0
OPPH	Girls	0	0
	Total	0	0
EWS	Boys	5	2
	Girls	0	0
	Total	5	2
EWS-PH	Boys	0	0
	Girls	0	0
	Total	0	0
OBC	Boys	8	9
	Girls	0	0
	Total	8	9
OBCPH	Boys	0	0
	Girls	0	0
	Total	0	0
	Boys	2	4
SC	Girls	0	0
	Total	2	4
SCPH	Boys	0	0
	Girls	0	0
	Total	0	0
ST	Boys	5	3
	Girls	0	0
	Total	5	3
STPH	Boys	0	0
	Girls	0	0
	Total	0	0
Total		27	23
Total intake capacity		75	50
Total admitted		58	46
Total vacant		17	4

Table 4A – Admitted students in M. Sc, MCA and MBA 1st Semester (2022-23)

		M. Sc. (Phy.)	M. Sc. (Chem.)	M. Sc. (Math.)	MCA	MBA
OP	Boys	04	03	04	10	11
	Girls	00	01	00	02	03
	Total	04	04	04	12	14
OPPH	Boys	00	00	00	00	00
	Girls	00	00	00	00	00
	Total	00	00	00	00	00
EWS	Boys	00	01	00	01	00
	Girls	01	01	00	00	01
	Total	01	02	00	01	01
EWS PH	Boys	00	00	00	00	00
	Girls	00	00	00	00	00
	Total	00	00	00	00	00
OBC	Boys	03	00	04	06	02
	Girls	02	01	01	00	00

	Total	05	01	05	06	02
OBCPH	Boys	00	00	00	00	00
	Girls	00	00	00	00	00
	Total	00	00	00	00	00
SC	Boys	01	02	01	03	04
	Girls	00	00	01	00	02
	Total	01	02	02	03	06
SCPH	Boys	00	00	00	00	00
	Girls	00	00	00	00	00
	Total	00	00	00	00	00
ST	Boys	00	01	00	03	03
	Girls	00	00	00	00	00
	Total	00	01	00	03	03
STPH	Boys	00	00	00	00	00
	Girls	00	00	00	00	00
	Total	00	00	00	00	00
Total intake capacity		13	13	13	30	38
Total admitted		11	10	11	25	26
Total vacant		02	03	02	05	12

Table 5 – Admission statistics: UG Programme: Course-wise (2022-23)

Sl. N o.	Name of the state	C E	M E	E E	C S E	E C E	EI E	C H E	P E	BI O	BS-MS (CHEM)	BS-MS (PHY)	BS-MS (MATH & COMPT.)	BT-MT (PHY)	BT-MT (COMPUTATIONAL MATHEMATICS)	TOTAL
1	AP	4	7	1	21	24	3	1	3	2	2	1	0	0	0	69
2	ARP	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
3	AS	1	1	0	0	0	0	1	1	0	0	0	0	1	0	5
4	BH	22	19	21	10	16	10	9	24	5	4	1	1	1	2	145
5	CG	0	2	1	1	0	0	1	0	0	0	0	0	0	0	5
6	DL	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2
7	GJ	0	0	0	1	0	0	0	0	0	0	0	0	0	1	2
8	HR	0	1	0	1	1	0	0	0	0	0	0	0	1	0	4
9	HP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	JR	5	7	3	2	0	2	2	1	1	0	0	1	1	1	26
11	J&K	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
12	KT	0	1	0	1	0	1	0	0	0	0	0	0	0	0	3
13	KL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	MP	0	0	3	3	1	0	0	2	1	0	0	0	1	0	11
15	MH	0	1	1	4	2	2	2	2	2	0	1	0	1	1	19

16	NG	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
17	OD	1	1	0	2	1	0	0	0	0	1	0	0	0	0	6
18	PON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	PNB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	RJ	5	3	3	2	2	3	6	5	2	1	1	2	0	2	37
21	TN	1	1	1	0	0	0	0	0	0	0	0	0	1	0	4
22	TE	0	4	8	7	2	4	4	6	3	1	3	2	1	0	45
23	TR	58	59	62	73	65	36	36	47	23	10	10	11	11	12	513
24	UP	8	5	12	15	8	6	11	6	2	0	2	2	1	5	83
25	UR	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
26	WB	3	9	5	4	4	4	1	7	4	0	1	0	2	0	44
Grand Total		112	121	121	148	126	73	74	105	45	18	21	19	22	24	1029
AP=ANDHRAPRADESH, ARP=ARUNACHAL PRADESH, AS=ASSAM, BH=BIHAR, CG=CHHATTISGARH, DL=DELHI, GJ=GUJARAT, HR=HARYANA, HP=HIMACHAL PRADESH, JR=JHARKHAND, J&K=JAMMU & KASHMIR, KT=KARNATAK, KL=KERLA, PB=PUNJAB MH=MAHARASHTRA, MP=MADHYA PRADESH, NG=NAGALAND, OD=ODISHA, PON= PONDECHERRY, PNB=PUNJAB, RJ=RAJASTHAN, SK=SIKKIM, TN=TAMIL NADU, TE=TELANGANA, TR=TRIPURA, UP=UTTAR PRADESH, UR=UTTARAKHAND, WB=WEST BENGAL																

4.5 Students/ Scholars Enrolment:

The total numbers of students on roll in various programmes of the Institute in the academic year 2022-23 are given below:

TABLE 6 – Students on roll

Sl. No.	Department	B. Tech (2019-22)	BS-MS (2018-22)	BT-MT (2018-22)	M. Tech.	MC A	M. Sc.	MHS S
1	Civil Engineering	427	-	-	109	-	-	-
2	Mechanical Engineering	471	-	-	11	-	-	-
3	Electrical Engineering	482	-	-	33	-	-	-
4	Computer Sc. & Engineering	608	-	-	31	64	-	-
	Electronics & Communication Engineering	507	-	-	34	-	-	-
5	Production Engineering	359	-	-	01	-	-	-
6	Electronics & Instrumentation Engineering	285	-	-	00	-	-	-
7	Chemical Engineering	262	-	-	03	-	-	-
8	Bio Engineering (Biotechnology &)	138	-	-	09	-	-	-

	Biochemical Engineering)							
10	BS-MS(Physics, Chemistry, Mathematics)	-	283	-		-	-	-
11	BT-MT	-	-	143		-	-	-
12	Management, Humanities & Social Science	-	-	-		-	-	57
13	Physics	-	-	-		-	20	
14	Chemistry	-	-	-		-	16	
15	Mathematics	-		-		-	20	
Total-		3539	283	143	231	64	56	57

The above total includes the following

DASA (Indian origin)	00	QIP	M. Tech.	
Scheduled Castes	576(UG),70 (Dual Degree), 71 (PG)			
Scheduled Tribes	696(UG), 79 (Dual Degree), 28(PG)	Sponsored	M. Tech.	02
Physically Handicapped	38(UG), 01(Dual Degree),			
Women Students	897(UG), 97(Dual Degree), 122(PG)			
EWS	313(UG), 29(Dual Degree), 17(PG)			

SC/ ST/ OBC/ PH Students on roll as on 31-03-2023:

Sl. No.	Programme	SC	ST	OBC	PH	EWS
1.	B. Tech.(2019-22)	576	696	843	38	313
2.	BS-MS(2018-22)	48	53	68	01	19
3.	BT-MT(2018-22)	22	26	34	00	10
4.	MCA(2020-2022)	05	04	23	00	07
5.	M. Tech.(2021-22)	45	18	56	00	03
6.	M. Sc.(2021-22)	10	00	20	00	04
7.	MBA(2021-22)	11	06	14	00	03
Total-		717	803	1058	39	359

The branch/ discipline-wise and year-wise details of students in B. Tech. and M. Tech. programmes are given below:

TABLE 7 – Students on roll at Bachelor's Degree level

Sl. No.	Branch	2022	2021	2020	2019	2018	others
1	Civil Engineering	427	493	533	566	644	00
2	Mechanical Engineering	471	448	419	377	363	00
3	Electrical Engineering	482	437	379	333	307	00
4	Computer Sc. & Engg.	608	527	467	399	367	00
5	Electronics & Comm. Engineering	507	457	417	366	325	00
7	Production Engineering	359	329	303	262	225	00

8	Electronics & Inst. Engg.	285	259	228	195	177	00
9	Chemical Engineering	262	236	213	200	184	00
10	Bio Engineering	138	119	105	84	68	00
12	Physics(BS-MS)	93	80	67	64	47	00
13	Chemistry(BS-MS)	93	85	67	58	40	00
14	Math(BS-MS)	15	27	39	46	47	00
15	Mathematics And Computing(BS-MS)	82	61	39	20	00	00
16	Engineering Physics(BT-MT)	95	83	76	66	50	00
17	Computational Mathematics (BT-MT)	48	24	00	00	00	00
Total		3965	3665	3352	3036	2844	00

TABLE 8 – Students on roll at Master's Degree level

Sl. No.	Department	Specialization	2021-22	2022-23	Total
1.	Civil Engineering Department	Geotechnical Engineering	23	20	43
		Structural Engineering	28	24	52
		Environmental Engineering	24	18	42
		Transportation Engineering	28	21	49
		Water Resources Engineering	07	07	14
		Seismic Science & Engineering	08	06	14
		Hydro Informatics Engineering	13	13	26
2.	Mechanical Engineering Department	Thermal Science & Engineering	08	02	10
		Manufacturing Technology	08	03	11
		Machine Design	05	01	06
		Automotive Engineering	04	03	07
		Material Science & Engg	06	02	08
3.	Electrical Engineering	Power Electronics & Drives	18	11	29
		Power System Engineering	16	09	25
		Instrumentation Engineering	10	08	18
		Integrated Energy System	05	05	10
4.	Computer Sc. & Engineering	Computer Sc. & Engineering	19	07	26
		Artificial Intelligence	15	15	30
		Data Science & Engineering	00	04	04
		Cyber Security	00	05	05
5.	Electronics & Comm. Engg.	VLSI Design	31	25	56
		Communication Engineering	14	09	23
6.	Production Engg.	Computer integrated manufacturing	01	01	02
7.	Chemical Engg.	Chemical Engg.	04	03	07
8.	Bio Engg.	Bio Chemical & Bio Technology	06	09	15
9.	M. Sc.	Physics	20	20	40
		Chemistry	13	16	29
		Mathematics and Computing	18	20	38
10.	MHSS	MBA	68	57	125
11.	MCA	MCA	48	64	112
TOTAL			468	408	876

4.6 Examination & Evaluation:

- Evaluation of the performance of the students is regarded as the most important academic activity in any educational institution. Evaluation of the students is made by both written examination and viva-voce test.
- Apart from this the performance of the students is also evaluated through internal assessment. In every semester one Mid-Term and End-Term examination is conducted. This apart, class tests and viva-voce tests for all subjects are also taken.
- Marks are awarded to the students in each subject and on the basis of that Semester Grade Point Average (SGPA) is calculated. Taking the result of both Odd and Even Semester, Cumulative Grade Point Average (CGPA) is calculated.
- In brief, the performance of a student is evaluated through written examination, class test, viva-voce test, practical examination, attendance and above all the behavior of the students.
- Institute accepts Academic Bank of Credit (ABC) and allows verification of degrees from Digilocker NAD.
- Students at the Institute can download their Grade Cards and Certificates from Digilocker.

4.7 Course Offered:**TABLE 9 – No. of Courses offered (UG)**

Sl. No.	Programme	Branch
1.	B.Tech	Civil Engineering (CE)
		Mechanical Engineering (ME)
		Electrical Engineering (EE)
		Electronics & Communication Engineering (ECE)
		Electronics & Instrumentation Engineering (EIE)
		Computer Sc. & Engineering (CSE)
		Production Engineering (PE)
		Chemical Engineering (CHE)
		Biotechnology & Biochemical Engineering(BT & BC)
2.	BS-MS	Physics
		Chemistry
		Mathematics and Computing
3.	BT-MT	Engineering Physics
		Computational Mathematics

Courses offered (PG)

Sl. No.	Programme	Department	No. of Courses	
			PG	Ph.D
1	M. Tech	Civil Engineering	07	01
		Mechanical Engineering	05	01
		Electrical Engineering	04	01
		Electronics & Communication Engineering	02	01
		Computer Sc. & Engineering	03	01
		Production Engineering	01	01
		Chemical Engineering	01	01
		Electronics & Instrumentation Engineering	--	01

		Bio Engineering	01	01
2	MBA	Management, Humanities & Social Sciences	01	01
3	M. Sc	Basic Science	03	03
4	MCA	Computer Sc. & Engineering	01	NA

4.8 Convocation: -

The National Institute of Technology Agartala organized its 15th Convocation on 12th November 2022.

In the 15th Convocation, Institute awarded B. Tech. Degree to a total number of 718 students.

Branch wise results are given as under: -

Civil Engineering: 29 students passed with Distinction, 143 passed with First class.

Mechanical Engineering: 35 students passed with Distinction; 66 students passed with First class.

Electrical Engineering: 37 students passed with Distinction, 49 students passed with First class and 02 students with Second class.

Computer Science & Engineering: 26 students passed with Distinction, 59 students passed with First class and 02 students with second class.

Electronics and Communication Engineering: 21 students passed with Distinction, 61 students passed with First class and 05 students with Second class.

Electronics and Instrumentation Engineering: 08 students passed with Distinction, 44 students passed with First class and 01 students with Second class.

Production Engineering: 08 students passed with Distinction, 50 students passed with First class and 01 student passed with Second class.

Chemical Engineering: 13 students passed with Distinction; 36 students passed with First class.

Bio Engineering: 03 students passed with Distinction, 14 students passed with First class.

BS & BT Degree was awarded to a total number of students in the 15th convocation.

Branch wise results are given as under: -

BS Physics : 14 Students passed.

BS Chemistry : 14 Students passed

BS Mathematics : 15. student passed

BT Engg. Physics : 15 students passed

BS-MS & BT-MT Degree was awarded to a total number of 24 students in the 15th convocation.

BS-MS Physics : 12 students passed

BS-MS Chemistry : 8 students passed

BS-MS Mathematics : 12 students passed

BT-MT Physics : 10 students passed

M. Tech Degree was awarded to a total number of 161 students in the 15th convocation.

Branch wise results are given as under: -

Civil Engineering : 64 students passed.

Mechanical Engineering : 22 students passed.

Electrical Engineering : 30 students passed.

Computer Sc. & Engineering : 19 students passed.

Electronics & Communication Engineering : 23 students passed.

Chemical Engineering : 01 students passed.

Bio Engineering : 02 students passed.

M. Sc Degree was awarded to a total number of 22 students in the 15th convocation.

Subject wise results are given as under: -

Physics : 09 students passed.

Chemistry : 05 students passed.

Mathematics : 08 students passed.

MCA Degree was awarded to a total number of 10 students.

MBA Degree was awarded to a total number of 34 students.

4.8.1 Introduction:

TABLE 10 – Degrees awarded in the 15th Convocation

Sl.No.	Department	B.Tech	BSMS	MCA	BTMT	M.Tech	M.Sc.	MBA	Ph.D
1	CIVIL	172	--	--	--	64	--	--	
2	MECHANICAL	101	--	--	--	22	--	--	
3	ELECTRICAL	86	--	--	--	30	--	--	
4	COMPUTER SC.	87	--	--	--	19	--	--	
5	ELECTRONICS & COMM.	87	--	--	--	23	--	--	
6	ELECTRONICS & INST.	53	--	--	--	--	--	--	
7	PRODUCTION	59	--	--	--	0	--	--	
8	CHEMICAL	49	--	--	--	1	--	--	
9	BIO	17	--	--	--	2	--	--	

10	CHEMISTRY	--	8	--	--	--	5	--	
11	MATHEMATICS	--	12	--	--	--	8	--	
12	PHYSICS	--	12	--	10	--	9	--	
13	MCA	--	--	10	--	--	--	--	
14	MBA	--	--	--	--	--	--	--	
15	PHD	--	--	--	--	--	--	--	

With this convocation, the total number of degrees awarded so far by the Institute is 1040 the details of which are given below:

Sl.No.	Programme	No. of Students
01	Ph.D	52
02	M.Tech	162
03	B.Tech	718
04	BS-MS	32
05	BT-MT	10
06	MCA	10
07	M.Sc	22
08	MBA	34

4.8.2 Convocation Prizes:

The following are the details of Prizes awarded to the students at the 15th Convocation:

Name of the Prize	Name of Student	Branch Name
Gold Medal for Institute Topper (UNDER GRADUATE)	PRIYABRATA SAHA	ME
Gold Plated Silver Medal to Branch Toppers (UNDER GRADUATE)	AMAN SINGH	CE
	DEBALINA DAS	EE
	UTKARSH TRIVEDI	CSE
	SUBHANKAR MAJUMDAR	ECE
	ANIK DATTA	EIE
	SAUMYA SINGH	PE
	PRATYUSHA PATNAIK	CH
	DILKASH GAZALA	BE

Name of the Prize	Name of Student	Branch Name
Gold Medal for Institute Topper (DUAL DEGREE) (UNDER GRADUATE)	PRASANJIT CHAKRABORTY	MA
Gold Plated Silver Medal to Branch Toppers (UNDER GRADUATE)	CHINMOY MAJUMDER	CY
	MADHURIMA DAS	PH
	INDRILA PAL	BTPH

Programme	Name of the Prize	Name of Students	Branch Name
M.Tech	Gold Medal for Institute Topper (Post-Graduate)	ASHISH KUMAR SINGH	Civil
	Gold Plated Silver Medal to Branch Toppers (Post-Graduate)	AVIJIT MAJEE	ME
		RAJ CHAKRABORTY	EE
		RAPTI CHAUDHURI	CSE
		DEBADRITA SAHA	ECE
		SUNIPA DEB	CH
		SWARNAVA GARAI	BE
MCA	Gold Plated Silver Medal to Branch Topper	DEBABRATA ROY	
MBA	Gold Plated Silver Medal to Branch Topper	RAHUL SAHA	
M.Sc	Gold Plated Silver Medal to Branch Topper	SUPARNA BHOWMIK	PHY
		PRIYABRATA MOHAPATRA	CHY
		DIPANJALI GHOSH	MATH & COMPU

5.0 BIO ENGINEERING DEPARTMENT

5.1 Introduction:

The Department of Bioengineering is one of the thirteen departments established in the year 2012 at National Institute of Technology Agartala. Vision of the department is to produce the bright young professionals by quality education & research in the emerging field of biotechnology & biochemical engineering to fulfill the societal commitments at par with global standards.

Mission is to impart quality education for fundamental knowledge in engineering science and technology (Biotechnology and Biochemical Engineering) with social responsibilities; to develop the engineering background of students towards employability, entrepreneurship, Research and higher studies; to develop continuous improvement in teaching learning process through interactive sessions, industry-academia interaction; to make good human beings possessing Professional Ethics; Provide a mechanism for students to increase their competitiveness in attaining admission for further studies including PhD Programs; Implementation of gained knowledge and technologies in the regions of North eastern state of India.

The Department of Bioengineering fosters Innovators, Trendsetters, Entrepreneurs and Leaders in the field of Biotechnology by offering UG, PG and PhD courses which imparts quality education and promotes research by integrating the fundamental knowledge of modern biology and applied engineering.

Course	Degree Name	Commenced Year	Course Period	Passed Out Batches
B.Tech	Bioengineering	July 2012- July 2018	04 years	07
B.Tech	Biotechnology & Biochemical Engineering	July 2019	04 years	01 (Will pass out by May 2023)
M.Tech	Biotechnology & Biochemical Engineering	July 2019	02 years	02 (01 more batch will pass out by May 2023)
PhD	Bioengineering	July 2018	02-05 years	Nil

Presently, Dr. Tarun Kanti Bandyopadhyay (Head of BioEngineering) is supervising all the activities to ensure the progress of this Department. The academic staff of this Department has different backgrounds in engineering. This reflects the multidisciplinary and integrative approach in BioEngineering research and education. The Department has framed the course curriculum based on the need of today's industries. The U.G., P.G., and PhD programmes provide strong fundamental knowledge and practical learning methodology in engineering and life sciences. The course includes Molecular Biology, Biochemical Engineering, Biosensors, Transport operations in living systems, Bioinformatics and Computational Biology, Tissue Engineering and Regenerative Medicine, Therapeutic Delivery Systems, Biomedical Imaging and Instrumentation, Drug Design and Development, Nano-Biotechnology, Bioprocess Engineering, Metabolic Engineering, etc. It imparts training for students to make them competent, motivated engineers and scientists. This course offers the next generation students' vast scope for a better career in India and abroad.

5.2 Academic Programme:

The Department offered courses in the undergraduate programme leading to B. Tech degree in Bioengineering (4 years) from July 2012 to till July 2018 (Total 07 batches) From July 2019 the B.Tech course in Bioengineering has been modified to B.Tech in Biotechnology and Biochemical Engineering (4-years).

Students Enrolled:

Programme	1 st semester	3 rd semester	5 th semester	7 th semester	Others	Total
B. Tech.	40	30	25	32	--	125
Total	40	30	25	32	--	125

The Department offers courses in Post Graduate programme leading to M. Tech degree in Biotechnology and Biochemical Engineering (2 years) from July 2019.

Students Enrolled:

Programme	1 st year (2022-2023)	2 nd year (2022-2023)
M.Tech	05	03

The Department offers PhD programme under Bio Engineering from July 2018.

Students Enrolled:

Programme	Name	Supervisor(s)	Total
PhD	Pinku Chandra Nath	Dr. Tarun Kanti Bandyopadhyay Dr. Biswanath Bhunia	9
	Ramesh Sharma	Dr. Tarun Kanti Bandyopadhyay Dr. Biswanath Bhunia	
	Chandrani Debnath	Dr. Tarun Kanti Bandyopadhyay Dr. Muthusivaramapandian Muthuraj	
	Bhabatush Biswas	Dr. Tarun Kanti Bandyopadhyay Dr. Tridib Kumar Bhowmick	
	Pradip Sarkar	Dr. Tarun Kanti Bandyopadhyay Dr. Muthusivaramapandian Muthuraj	
	Subhankar Debnath	Dr. Tarun Kanti Bandyopadhyay Dr. Biswanath Bhunia	
	Biswajit Sarkar	Dr. Tarun Kanti Bandyopadhyay Dr. Biswanath Bhunia	
	Kheerthana R	Dr. V.C Padmanaban	
	Amiya Ojha	Dr. Tarun Kanti Bandyopadhyay Dr. Deeplina Das	

5.3 Faculty and their Activities:

Sl. No	Name	Designation	Qualification	Major Area of Specialization
1	Dr. Tarun Kanti Bandyopadhyay	Assistant Professor & HOD	B.Tech(CU), M.Tech (CU), Ph.D (C.U)	Computational Fluid Dynamics, Multiphase Flow phenomena, Petroleum & Refinery Engg., Transport Phenomena
2	Dr. Biswanath Bhunia	Assistant Professor	B.Pharm (Jadavpur University),	Bioprocess Engineering, Enzyme and Microbial

			M.Tech(Jadavpur University), Ph.D (NIT Durgapur)	Technology, Bioinformatics and Pharmaceutical Technology
3.	Dr. V C Padmanaban	Assistant Professor	B.Tech(AU), M.Tech(AU), Ph.D(AU)	Bioprocess Engineering, Environmental Engineering
4	Dr. Tridib Kumar Bhowmick	Assistant Professor	B.Pharm (Jadavpur University), M.Tech(Jadavpur University), Ph.D (IIT Bombay)	Nano-Particle mediated drug delivery, Indian traditional medicine, Bio-analytical Techniques, Biomaterials, Optical and electron microscopy, Upstream and downstream processing of recombinant proteins.
5	Dr. Deeplina Das	Assistant Professor	PhD, (IIT Guwahati), M. Tech (WBUT), B.Tech (WBUT)	Applied Microbiology, Bioinformatics, Protein Engineering and Food Biotechnology.
6	Dr. Abhijit Chatterjee	Assistant Professor	Ph.D. (University of Alaska Fairbanks, USA), M.Tech. (Jadavpur University), B.Tech.(Jadavpur University)	Environmental Engineering, Adsorptive removal of pollutants from water, Bioremediation, Food waste treatment
7	Dr. Muthusivaramapandian M	Assistant Professor	PhD (IIT Guwahati), M. Tech (Annamalai University), B. Tech (Anna University)	Biotechnology for Energy & Fuels, Bioprocess Engineering, Algal Biotechnology, Microbiology
8	Ms. Hrijuta Datta	Assistant Professor	B.Tech. (Sathyabama University), M.Tech.(SRM University)	Bioinstrumentation, Troubleshooting in medical devices, Biomechanics, Micro devices, Image processing

Short-Term Courses/ Workshops/ Seminar/ Symposia/ Conferences/ Webinar organized by the faculty members:

Sl. No.	Co-ordinators	Title	Period
Workshop (International)			

1.	Dr. VC Padmanaban (Coordinator); Dr. Muthusivaramapandian M (Co-coordinator); Dr. Tarun Kanti Bandyopadhyay (Convenor)	Challenges and opportunities in Water, Sanitation & Hygiene (WASH); Sponsored by DST-STUTI	Jan 23 to 29, 2023
Training			
1	Dr. Tarun Kanti Bandyopadhyay (Coordinator), Dr. Biswanath Bhunia (Co-Cordinator), Dr. Muthusivaramapandian M (Co-coordinator);	1 st Beneficiary Training Program on Spirulina biomass cultivation , organized by Bioproducts processing Research Lab (BPRL), Department of Bioengineering, NIT Agartala, and sponsored by DST, GoI	6-7 th August, 2022
2	Dr. Tarun Kanti Bandyopadhyay (Coordinator), Dr. Biswanath Bhunia (Co-Cordinator), Dr. Muthusivaramapandian M (Co-coordinator);	2 nd Beneficiary Training Program on “ Value added products from Spirulina biomass ”, organized by Bioproducts processing Research Lab (BPRL), Department of Bioengineering, NIT Agartala, and sponsored by DST, GoI	15 th January 2023 (Sunday) to 17 th January 2023 (Tuesday)

Short-Term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the Faculty in Academic Institutions and Public Sector Undertakings:

Sl. No.	Name of Faculty	Title	Period
Seminar/ Workshop			
1	Dr. Tridib Kumar Bhowmick	CeNSE DBT Nano-biotechnology Alliance (C-DNA) organized by Centre for Nano Science and Engineering (CeNSE), Indian Institute of Science, Bangalore	May 23rd to May 25th, 2022.
Conference:			
1	Dr. Tridib Kumar Bhowmick	Delivery of anti-tubercular drug with biocompatible silver nanocarriers” in the North East Research Conclave-2022, Sustainable Science and Technology at IIT Guwahati, Assam. Oral Presentations on 21st May, 2022.	20th May, 2022 to 22nd May, 2022

Fellowships of Academics and Professional Societies:

Sl. No.	Name of Faculty	Level	Year
ISTE/ CSI and others			
1.	Dr. Deeplina Das	Life Member LIFE MEMBER-(LM 1309), Biotech Research Society, India-(BRSI).	From 2013

2.	Dr. Deeplina Das	LIFE MEMBER-(LM 3228), Society of Biological Chemists India-(SBC).	From 2013
3.	Dr. Deeplina Das	Corporate Life Member of Institute of Engineers (India)-(IEI)	From 2014
4.	Dr. Tridib Kumar Bhowmick	Member of Institute of Engineers (India)-(IEI)	From 2015
5.	Dr. Biswanath Bhunia	Associate Member, Indian Institute of Chemical Engineers (IChE) (Reg. No: - LAM-41982)	Life member
6.	Dr. Biswanath Bhunia	Member, The Institution of Engineers (India) (Reg. No: - M-151091-0)	Life member
7.	Dr. Biswanath Bhunia	Chartered Engineer (India), The Institution of Engineers (India) (Reg. No: - M-151091-0)	Life member
8.	Dr. Tarun Kanti Bandyopadhyay	Member, Indian Institute of Chemical Engineers (IChE) Corporate Life Member of Institute of Engineers (India)-(IEI)	Life member
9	Ms. Hrijuta Datta	Member, Institute for Engineering Research and Publication (IFERP)	Life member
10	Ms. Hrijuta Datta	Member, International Association of Engineers.	Life member
11	Dr V C Padmanaban	Member, International Water Association	Member
12	Dr V C Padmanaban	Member, The Institution of Engineers (India)	Member
13	Dr V C Padmanaban	Member, American Chemical Society	Member

5.4 Design and Development Activities:

Brief and specific details of Process/ Instruments/ Equipment/ Software Designed and developed:

- Cellulose nanofibre (CNF) is a sustainable and nanostructured eco-friendly material. The high cost of CNF, on the other hand, limits its use in a variety of applications, which can be overcome by developing a suitable extraction technique and employing low-cost biomass. Bioproducts Processing Research Lab (BPRL), Department of Bioengineering, NIT Agartala developed a technology to extract higher crystallinity index cellulose nanofibre from *Imperata cylindrica*, often known as cogon grass and widely available in Tripura. The purity of CNFs obtained from *Imperata cylindrica* is 94.36%, with a sellable cost of Rs. 115.86 per mg
- Prodigiosin (PG) is a pigment that has been found to have antimicrobial, anti-cancer, and immunosuppressive properties. The high cost of PG, on the other hand, limits its use in a variety of applications, which can be overcome by developing a suitable production technique and employing low-cost downstream process. Bioproducts Processing Research Lab (BPRL), Department of

Bioengineering, NIT Agartala developed a technology to produce higher amounts of PG from *Serratia marcescens*, which is available in Lab. The PG was almost pure, with a sellable cost of Rs. 9229 per mg

5.5 Research and Consultancy:

Sponsored Research Projects:

Sl. No.	Title	Period	Funding Agency	Amount (in lakhs)	Co-ordinators	Status as on March 2023
1.	Edible coating from waste biomass for increasing shelf-life periods of fruits and vegetables.	2022-2025	Defence Research & Development Organisation, Govt. of India.	65.43 lakhs	Dr. Tridib Kumar Bhowmick (PI) Dr. Kalyan Gayen (Co-PI)	In progress
2	Entrepreneurship development through setting up of pilot scale unit on Production and packaging of tender jackfruit ready to cook at Bio-village.	2023-2024	Directorate of Biotechnology, Govt. of Tripura.	5.5 Lakhs	Dr. Kalyan Gayen (PI), Dr. Tridib Kumar Bhowmick (Co-PI)	In progress
3.	Characterization and popularization of Spirulina biomass cultivation as viable product and commercial exploitation of Spirulina biomass towards product development	March 2022 to March 2025	DST, GOI	155.8196 Lakhs	Dr. Tarun Kanti Bandyopadhyay (Co-ordinators); Dr. Biswanath Bhunia, Dr. Muthusivaramapandian M, and Dr. P Dutta	Ongoing
4	Real time non-contact pulse vibration measurement system of radial artery for vata, pitta, kapha diagnosis using CMOS camera	7 th March, 2023 to 6 th March, 2026	SERB –CRG Project	51.33832 Lakh	Dr. Ardhendu Saha (PI) & Dr. Biswanath Bhunia (Co-PI)	Ongoing

Research Publications:

Total No. of papers published in Refereed International Journals : 17
Total No. of Books published : 01

In Refereed International Journals:

1. S. Chakaraborty, S. Garai, A. Ghosh, N. Mukherjee, and D. Das, 'Bioactive plantaricins as potent anti-cancer drug candidates: double docking, molecular dynamics simulation and in vitro cytotoxicity analysis', Journal of Biomolecular Structure and Dynamics. 12(1), 1-11, (2023).

2. S. Garai, J. Thomas, P. Dey, and D. Das, 'LGBM-ACp: an ensemble model for anticancer peptide prediction and in silico screening with potential drug targets', *Molecular Diversity*, <https://doi.org/10.1007/s11030-023-10602-0>, (2023).
3. M.S. Manna, A. Mazumder, T. K. Bhowmick, and K. Gayen, 'Economic analysis of biobutanol recovery from the acetone-butanol-ethanol fermentation using molasses', *Journal of the Indian Chemical Society*, 100(1), 100809, (2022).
4. S. Sarkar, T. K. Bhowmick, and K. Gayen, 'Simultaneous extraction of chlorophylls, proteins, and carbohydrates from isolated *Chlorella thermophila* using a triphasic separation technique: A biorefinery approach', *Biofuels, Bioproducts and Biorefining*, 17(4), 904-920, (2023).
5. B. Biswas, T.K. Misra, D. Ray, T. Majumder, T.K. Bandyopadhyay, and T.K. Bhowmick, 'Current therapeutic delivery approaches using nanocarriers for the treatment of tuberculosis disease', *International Journal of Pharmaceutics*, 123018. (2023). Accepted for Publication.
6. P. Jeyakumar, C. Debnath, R. Vijayaraghavan. 'Trends in Bioremediation of Heavy Metal Contaminations', *Environmental Engineering Research*, 28(4), 220631, (2023).
7. U. Mahapatra, A. Chatterjee, C. Das, A.K. Manna, 'Chemically activated carbon preparation from natural rubber biosludge for the study of characterization, kinetics and isotherms, thermodynamics, reusability during Cr(VI) and methylene blue adsorption', *Water Science & Technology*, 87(3), 635-659, (2023).
8. S. Abiramasundari, G. Madhubala, K. L. Jesintha, S. Shalini, J. Juliana, P. Senthil Kumar, V.C. Padmanaban, M. Sillanpää, 'Thermal and Radiation Based Catalytic Activation of Persulfate Systems in the Removal of Micropollutants: A Review,' *Industrial & Engineering Chemistry Research*, 62(11), 4554-4572, (2022).
9. U. Surendran, M. Jayakumar, P. Raja, G. Gopinath, and V.C. Padmanaban, 'Microplastics in terrestrial ecosystem: Sources and migration in soil environment,' *Chemosphere*, 318, 137946, (2023).
10. T. Paul, A. Mondal, T. K. Bandyopadhyay, B. Bhunia, 'Prodigiosin production and recovery from *Serratia marcescens*: process development and cost-benefit analysis', *Biomass Conversion and Biorefinery*, <https://doi.org/10.1007/s13399-022-02639-2>, (2022).
11. R. Sharma, P.C. Nath, S. Pabbi, T. K. Bandyopadhyay, K. Vanitha, N. Mahata, B. Bhunia, O. N. Tiwari, 'Production of *Oscillatoria* sp. BTA-170 biomass in photobioreactor: Analysis of composition, drying behavior, sorption isotherm, and powder flow characteristics,' *Journal of Food Process Engineering*, 45(10), e14044, (2022).
12. P. Choudhury, T. K. Bandyopadhyay, N. Mahata, B. Bhunia, 'Optimization for the improvement of power in equal volume of single chamber microbial fuel cell using dairy wastewater,' *Journal of the Indian Chemical Society*, 99(6), 100489, (2022).
13. N. Patel, A. L. Srivastav, A. Patel, A. Singh, S. K. Singh, V. K. Chaudhary, P. K. Singh, B. Bhunia, 'Nitrate contamination in water resources, human health risks and its remediation through adsorption: a focused review,' *Environmental Science and Pollution Research*, **29**, 69137–69152, (2022).
14. P.C. Nath, T. K. Bandyopadhyay, N. Mahata, S. Pabbi, O. N. Tiwari, M. Indira, B. Bhunia, 'Optimization and kinetic study of ultrasonic-mediated phycoerythrin extraction from *Anabaena* sp.,' *Biomass Conversion and Biorefinery*, <https://doi.org/10.1007/s13399-022-03329-9>, (2022).
15. R. Majumdar, U. Mishra, N. Mahata, A. Mondal, B. Bhunia, 'Delignification kinetics, colloidal behaviour, and cost-benefit analysis of cellulose nanofiber from *Imperata cylindrica*,' <https://doi.org/10.1007/s13399-022-03450-9>, (2022).
16. T. Paul, A. Mondal, T. K. Bandyopadhyay, B. Bhunia, 'Downstream Process Development for Extraction of Prodigiosin: Statistical Optimization, Kinetics, and Biochemical Characterization,' *Applied Biochemistry and Biotechnology*, **194**, 5403–5418, (2022).
17. T. Paul, P. Bharadwaj, A. Mondal, T. K. Bandyopadhyay, N. Mahata, B. Bhunia, 'Identification of Novel Protein Targets of Prodigiosin for Breast Cancer Using Inverse Virtual Screening Methods', *Applied Biochemistry and Biotechnology*, <https://doi.org/10.1007/s12010-023-04426-9>, (2023).

Books Published:

Name of the Authors published	Title of the Books	Date of publication of the Book	Issue/ Volume No./ Page No.
Dr. Biswanath Bhunia & Dr. Muthusivaramapandian M	Recent Trends and Innovations in Sustainable Treatment Technologies for Heavy Metals, Dyes and Other Xenobiotics	2 nd December 2022	NA

Distinguished Visitors to the Departments:

Sl. No.	Name of the Visitors and Designation	Date of Visit	Purpose of Visit
1.	Prof. O.N. Tiwari , Principal Scientist & PI DST Project, Centre for Conservation and Utilisation of Blue Green Algae (CCUBGA), Division of Microbiology, ICAR-Indian Agricultural Research Institute (IARI), New Delhi-110012, INDIA	7 th -9 th August 2022 14-17 th Jan 2023	1 st and 2 nd beneficiary training programme under the DST project
2	Prof. Sunil Pabbi, Head of the Division & Investigator of DST Project, Division of Microbiology, ICAR-Indian Agricultural Research Institute (IARI), New Delhi-110012, INDIA	7 th -9 th August 2022	1 st beneficiary training programme under the DST project

5.6 Placement Data:

Number of students participated in Placements	29
Number of students got selected in on campus placements	19
Maximum Salary Obtained	12.88 LPA
Companies recruited our students	15
Number of students cleared GATE	01

5.7 Other Activities:**Visiting Faculty**

Date	Name of the Faculty	Subject for Teaching	Host Institution
13.06.2022 to 17.06.2022	Dr Biswanath Bhunia	Bioprocess Engineering, and Technology	Department of Biotechnology & Bioinformatics at

			North Eastern Hill University, Shillong
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Invited Lectures by Faculties:

Date	Name of the Faculty	Title of the talk	Host Institution
10.10.2022	Dr V C Padmanaban	Marine Pollution	Government College of Technology, Coimbatore
09/01/2023 to 13/01/2023	Dr V C Padmanaban	Hands on Training cum Workshop “Interdisciplinary Translational Science and Engineering”	Sethu Institute of Technology, Tamilnadu
19.01.2023	Dr V C Padmanaban	DST STUTI Training Programme on Advances in Chemical Sciences	Department of Chemistry, NIT Agartala
24.06.2022	Dr. Biswanath Bhunia	“Process development of secondary metabolite production and cost benefit analysis” in One week online FDP/SDP “Recent Advances in Science and Technology Innovations”	Department of Biotechnology, Vignan’s Foundation for Science Technology and Research (Deemed to be University), in collaboration with ICAR-Indian Agricultural Research Institute, New Delhi
18.08.2022	Dr. Biswanath Bhunia	“Development of an optimal ultrasound-assisted extraction (UAE) condition for phycobiliproteins (PBPs) extraction using statistical tool” on in 3 days online Hands-on-training: “Recent Advances in Microbes & Plants: Basic to Applied Aspects”	Department of Biotechnology, Vignan’s Foundation for Science, Technology and Research (Deemed to be University) Vadlamudi, Guntur, A.P. in collaboration with STI HUB, VFSTR

Editorial Activities

- Dr. Biswanath Bhunia served as Editorial Board Member of Protein & Peptide Letters under Bentham Science (SCI)
- Dr. Biswanath Bhunia served as Editorial Board Member, Current Pharmaceutical Biotechnology under Bentham Science (SCI)

6.0 CIVIL ENGINEERING DEPARTMENT

6.1 Introduction:

The Department of Civil Engineering has started its journey since the inception of the institute (erstwhile Tripura Engineering College) in 1965. Initially, the institute was affiliated to University of Calcutta and thereafter re-affiliated to Tripura University in 1987. The Civil Engineering Department offers B. Tech program in Civil Engineering, M.Tech in Civil Engineering in different specialization (Structural Engineering, Geotechnical Engineering, Transportation Engineering, Water Resources Engineering, Environmental Engineering, Seismic Science & Engineering and Hydro Informatics Engineering) and PhD Program. Every year around 200 technocrats in total (both undergraduate and postgraduate) graduate from this department who are serving the country successfully. The department has 24 (Twenty-four) regular and 08 (Eight) on contract faculty members along with a number of technical and administrative staff. Besides teaching, the department offers consultancy services to various technical and societal problems of the region and research and development activities through active participation of Faculty, Technical staff and Scholars. In addition, the department organises several national and international level conferences, seminars and workshops from time to time. National and International recognised academicians, industrialists and alumnus often visit the department in connection with various programs organised in the department. The department has been involved with many research works and produced some excellent outcomes.

6.2 Academic Programme:

Four Year B. Tech Program (Civil Engineering), Two Year M. Tech. program (Structural Engineering, Geotechnical Engineering, Transportation Engineering, Environmental Engineering, Water Resources Engineering, Seismic Science & Engineering and Hydro Informatics Engineering) and Ph. D program.

Programme (2022-23)	2 nd semester	3 rd semester	4 th semester	5 th semester	7 th semester	Total
B.Tech.	-	107	-	106	107	320
M.Tech.	43	-	56	-	-	99
Ph. D.	-	-	-	-	-	47
Total						466

6.3 Faculty and their Activities:

Sl. No.	Name	Designation	Qualification	Major area of Specialization
1	Prof. (Dr.) Umesh Mishra	Professor	M. E. Civil Engineering (IIT Roorkee), Ph. D. Civil Engineering (IIT Kgp)	Water quality & Water Treatment, Domestic & Industrial Wastewater Treatment, Heavy Metal Removal and Recovery, Solid waste Management, Groundwater pollution modeling.
2	Prof. (Dr.) Richi Prasad Sharma	Professor	M. E., Ph. D. (Structural Engineering)	Dynamic friction phenomenon, Dynamic stability of Blocky rock mass, high strength concrete.

3	Prof. (Dr.) Sujit Kumar Pal	Professor	B.E. (CE), KREC, Surathkal (Presently, NITK, Surathkal). M. Tech. (SMFE), I.I.T., Kharagpur. Ph. D. (Engg.), BESU, Shibpur (Presently, IEST, Shibpur).	Soil Characterization; Soil-structure interaction; Ground Improvement; Environmental Geotechnique; Highway and Railway Geotechnology; Shallow and Deep Foundations; Geotextiles; Stability of Slopes; and Soil Dynamics.
4	Prof. (Dr.) Manish Pal	Professor	B.E., M. E. (Highway and Traffic Engineering), Ph. D.	Traffic Engineering, Traffic Planning, Urban Transport Planning, Water Management, Water Transportation
5	Prof. (Dr.) Ratul Das	Professor	B.Tech, M. E. (Water Resources Engineering), Ph. D. (Hydraulics & Water Resources Engineering)	Applied Hydrodynamics, Turbulent Flow, Fluvial Hydraulics, Sediment Transport and scour, Urban Drainage Watershed Management.
6	Dr. Rama Debbarma	Associate Professor	B.E(C.E), M. E and Ph. D. (Structural Engineering) BESU, Shibpur (Presently, IEST, Shibpur).	Structural Dynamics and Earthquake Engineering; Probabilistic seismic response control using Passive vibration control devices; Seismic Fragility analysis of structures; Soil- Structure Interaction; Properties of High strength concrete/ Geo Polymer concrete; Corrosion problem in RC Structures.
7	Dr. Sima Ghosh	Associate Professor	B.E., M. Tech., (Geotechnical Engineering IIT Rookee), Ph. D	Soil Dynamics and Earthquake Engineering, Analysis and design of Footings, Retaining Wall and Slope under Seismic Loading Condition, Machine Foundation, Liquefaction and Seismic Hazard Analysis , Applied Soft Computing, Structural Health Monitoring, Granular

				Mechanics via Discrete Element Modelling
8	Dr. Rajib Saha	Associate Professor & Head	B.E., M. E. (Geotechnical Engineering), Ph.D (IIT Bhubaneswar)	Geotechnical Engineering, Computational Geo-mechanics, Earthquake Geotechnical Engineering, Structural Dynamics, Probabilistic Analysis
9	Dr. Debdulal Tripura	Associate Professor	B. E. (Civil), M.Tech., Ph.D. (IIT Guwahati)	Alternative Building Materials and Technology, Low Cost Housing Technology, Earthquake Resistant Design of Structures, Finite Element Modelling, Highway Traffic Noise Modelling.
10	Dr. Partha Pratim Sarkar	Associate Professor	B. Tech (NERIST)/M.Tech - IIT Kharagpur PhD - IIT Guwahati	Urban Transportation Planning Pavement Materials Pavement Analysis & Design
11	Dr. Lipika Halder	Assistant Professor	B.E., M. E. (Structural Engineering), PhD .	Structural Engineering, Wind Structure Interaction.
12	Dr. Gopinandan Dey	Assistant Professor	B.E., M. Tech., (Structural Engineering) Ph.D (IIT Delhi)	Structural Mechanics, Soil Structure Analysis, Project, Planning and Management.
13	Dr. Joyanta Pal	Assistant Professor	B.Tech, M. Tech. (Structural Engineering), Ph. D.	Structural Engineering, Soil Structure Analysis, Environmental Engineering, Surveying and application of GIS.
14	Dr. Nilotpal Debbarma	Assistant Professor	B. E. (Civil), M. Tech, PhD	Engineering Hydrology.
15	Dr. Dipankar Sarkar	Assistant Professor	B. E. (Civil), M.Tech., Ph.D Transportation Engineering	Pavement Evaluation, Alternative material for Pavement, Traffic noise at intersection, Use of geocell in pavement, Nano Material.
16	Dr. Tara Sen	Assistant Professor	B. E. (Civil), M. Tech. (Structural Engineering), Ph.D.	Structural Engineering - Retrofitting and Rehabilitation of Structures, Structural Failures and Different strengthening techniques,

				Fabrication and analysis of bio-composites, FRP and its applications, Nonlinear Finite Element Analysis of Structures.
17	Dr. Sanjay Paul	Assistant Professor	B. E., M. Tech., Ph.D.	Soil Dynamics & Earthquake Engineering, Geotechnical Engineering
18	Dr. Sushant Kumar Biswal	Assistant Professor	BE., M.E., PhD.	Fluvial Hydraulics, Sediment transport, Flood inundation modelling, Bank erosion.
19	Dr. Surajit Das	Assistant Professor	B. E., M. E., Ph.D.	Nonlinear Solid Mechanics, Smart Materials and structures, Numerical Methods
20	Dr. Animesh Debnath	Assistant Professor	B. E. Civil (TEC, presently NIT Agartala), M. Tech. in Water Resources Utilization and Environmental Management (IIT Guwahati), Ph.D. in Environmental Engg (NIT Agartala), Faculty Postdoc (IIT Madras)	Water and waste water treatment, Adsorption process. Biochar, Conducting polymer Nanotechnology. Optimization, Multi-criteria Decision making (MCDM). AHP, FUZZY, TOPSIS, ELECTRE.
21	Dr. Mrinmoy Majumder	Assistant Professor	B.E (Electrical), ME(Water Resources), PhD(Engg.)	Nature Inspired Optimization Algorithms, Climate change and Natural Resource Management, Decision sciences.
22	Dr. Manu S Nadesan	Assistant Professor	B. Tech., M. Tech., Ph.D	Concrete Technology, Non Destructive Testing, Performance assessment of construction materials.
23	Dhirendra Kr. Pandey	Assistant Professor	B. E., M. Tech., Ph.D. (IIT Kanpur)	Structural Engineering, Vibration control, Earthquake Engineering, Disaster Management

24	Sagarika Panigrahi	Assistant Professor	B. Tech., M. Tech., Ph.D	Anaerobic Digestion Pre-treatment technology Life Cycle Analysis In-Situ Biomethanation Power-to-X
25	Mr. Subhajit Deb	Assistant Professor	B. E. (Civil), M. E. (Structural Engineering)	Seismic Analysis of Asymmetric Building, Pavement Engineering, Geo- technical Investigation.
26	Ms. Nabanita Bhowmik	Assistant Professor	B.E., M.Tech	Mechanics of Solid Design of RCC Structure
27	Dr. Tilottama Chakraborty	Assistant Professor	B. Tech (Electrical Engineering), M.E (Water Resources and Hydraulic Engineering), Ph. D (Hydro-Informatics Engineering)	Water Power Energy, Hydrology and Hydrological Modelling, Multiscriteria Decision Making, Optimization Technique
28	Mrs. Sadria Begam	Assistant Professor	B.E, M. Tech	Water Resource Engineering
29	Ms. Dipika Debnath	Assistant Professor	B. Tech., M. Tech	Structural Engineering
30	Mr. Ratnadeep Modak	Assistant Professor	B.E., M. Tech	Geotechnical Engineering
31	Mrs. Nabina Khanam	Assistant Professor	B.E., M. Tech	Water Resource Engineering
32	Mr. Debashish Karmakar.	Assistant Professor	B.E., M. Tech	Highway Engineering, Pavement Engineering and Pavement Materials

Short-Term Courses/ Workshops/ Seminar/ Symposia/ Conferences/ Webinar organized by the faculty members:

Sl. No.	Name of the Faculty	Title	Period
Workshop Organized:			
1	Dr. Umesh Mishra	DST-Sponsored 3 week National Workshop on “Capacity Building in Geospatial Technology”	25 th May - 14 th June, 2022
Conference organized:			
1.	<p>Organizing Chairman: Dr. Rajib Saha, HOD & Associate Professor, Civil Engg. Deptt. NIT Agartala</p> <p>Organizing Secretaries: 1. Dr. Sanjay Paul, Assistant Professor, Civil Engg. Dept. NIT Agartala 2. Dr. Dipankar Sarkar, Assistant Professor, Civil Engg. Dept. NIT Agartala 3. Sahil Sharma, AVS INNO INFRA, New Delhi</p>	One Day National Conference on EMERGING TECHNIQUES IN PAVEMENT STABILIZATION	10 th March, 2023

Short-Term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the Faculty in Academic Institutions and Public Sector Undertakings:

Sl. No.	Name of the Faculty	Title	Period
Symposia:			
1	Sushant K Biswal	9th International Symposium on Hydraulic Structures (ISHS 2022)	24-27 October, 2022, IIT Roorkee, India
Conference:			
1	Dr. Umesh Mishra	International Conference on Agriculture and Rural Development (AGRI VISION-2023) from January 27-29, 2023 at Centurion University of Technology & Management, Bhubaneswar, Odisha	27 th to 29 th January , 2023
2	Dr. (Mrs.) Tara Sen	Advances in Biopolymers and Composites: Health,	20 - 22, October 2022 (Hybrid Mode)

		Environment and Energy (ABC-HEE,2022)	
3	Sushant K Biswal	2 nd Int. Con. on River Corridor Research and Management (RCRM 2022),	30 th May-01 st June, 2022, IIT Guwahati
4	Sushant K Biswal	14 th International Conference on Hydrosience and Engineering (ICHE 2022),	26-28 May, 2022, Izmir-Turkey.

Honours and Awards obtained:

Sl. No.	Name of Faculty	Name of Award	Awarded by	Award For	Date
1.	List of Auth ors: Diptesh Chanda, Upasana Nath, Rajib Saha and Sumanta Haldar	IGS – YGE Best Paper Biennial Award – 2022 on “Deep Foundations”	IGS-Kochi Chapter during IGC December 2022	Biennial Award on Best Technical Paper on Deep Foundation	17 th December 2022 at Kochi
2.	Dr. Rajib Saha	National Member in BIS codal committee	BIS	For framing new IS Code on Piled raft foundation.	December 12, 2022
3.	Dr. (Mrs.) Tara Sen	Best Paper Award	8 th Asian Conference on Mechanics of Functional Materials and Structures (ACMFMS- 2022)	Paper	11-14, December 2022

Fellowships of Academics and Professional Societies:

Sl. No.	Name of Faculty	Level	Year
ISTE/ CSI and others			
1	Dr.Umesh Mishra	<ul style="list-style-type: none"> A life member of Indian society for Technical Education with No LM 18347 A senior member of IACSIT –No 80336897 Fellow of Institution of Members –No F-113657-3 Indian Water Works Association. 2012 	1999 2009 2009

		<ul style="list-style-type: none"> Institute of Public health Engineering Kolkata 	2012 2012
2	Dr. Richi Prasad Sharma	<ul style="list-style-type: none"> The Institution of Engineers (India),(Fellow) The Indian Society for Technical Education(Life Member) ASCE(Member) Indian Building Congress(Life Member) 	
3	Prof. (Dr.) Sujit Kumar Pal	<ul style="list-style-type: none"> Member of the American Society of Civil Engineers (Aff.M.ASCE) (Member No.11886909). Life Fellow member of Indian Geotechnical Society (LFIGS) (LF – 0584). FIE (India), Institution of Engineers (India) (F-017838-8) Life membership of Indian Building Congress (ML-5008) Life membership of Indian Society for Technical Education (LM-19358) Member of International Society for Soil Mechanics and Geotechnical Engineering during 2010 – 2013 and 2022 – 2025 Life member of Indian Roads Congress (LMIRC) (LM-250990). National Executive Committee member, Indian Geotechnical Society, New Delhi (HQ) during 2023-2024 Chartered Engineer (Civil Engineering), Institution of Engineers (India) Student Chapter member of Institution of Engineers (India) during UG Course in KREC, Surathkal (Presently, NITK, Surathkal) during 1983-1986 	

		<ul style="list-style-type: none"> Executive Committee member, Agartala Local Centre, IE (I) (Presently, Tripura State Centre IE (I)) during 1999-2001 	
4	Dr. Manish Pal	<ul style="list-style-type: none"> Life membership of IRC since 2008 Life membership of IBC since 2010 	
5	Dr. Ratul Das	<ul style="list-style-type: none"> Life Member of Indian Water Resources Society (IWRS), INDIA Life Member of Indian Society for Earthquake Technology (ISET), INDIA Life member of Indian Buildings Congress (IBC),INDIA FIE, INDIA 	
6	Dr. Rama Debbarma	<ul style="list-style-type: none"> Member, American Society of Civil Engineers (ASCE) since 2014. FIE (India), Institution of Engineers (India) since 2014. 	
7	Dr.Sima Ghosh	<ul style="list-style-type: none"> The Institution of Engineers (India) (Associate member) Indian Geotechnical Society(Member) 	
8	Dr. Rajib Saha	<ul style="list-style-type: none"> FIE, Institution of Engineers India (Since 2023) Associate Member, Institution of Engineers India Life Member, Indian Geotechnical Society Member, ISSMGE Society Coordinator, State Resource Institute Earthquake Training for Engineers Panel member for preparation of a BIS code 	
9	Dr. Sanjay Paul	<ul style="list-style-type: none"> Member, Indian Geotechnical Society Member, Institute of Engineers (India) 	
10	Dr. .Lipika Halder	<ul style="list-style-type: none"> Associate Member of IEI, Membership No. AM/093049/3 IEI 	
11	Dr. Gopinandan Dey	<ul style="list-style-type: none"> Life membership of IBC since 2010 Life membership of ICI since 2009 	
12	Dr. Joyanta Pal	<ul style="list-style-type: none"> Life membership of IBC since 2010 Life membership of ICI since 2009 	

13	Dr. Debdulal Tripura	<ul style="list-style-type: none"> • Indian Society for Technical Education (ISTE), India, Life Member • American Society of Civil Engineer (ASCE), USA • American Society for Testing & Materials (ASTM), USA • Structural Engineering Institute (SEI), USA • American Concrete Institute (ACI), USA • Earthquake Engineering Research Institute (EERI), USA • Architectural Engineering Institute (AEI), USA • National Information Centre of Earthquake Engineering (NICEE), India 	
14	Dr. Partha Pratim Sarkar	<ul style="list-style-type: none"> • Life membership of IRC 	
15	Dr. Dipankar Sarkar	<ul style="list-style-type: none"> • Life membership of Indian Road Congress • Life member of ISTE 	From 2008 From 2010
16	Dr. Tara Sen	<ul style="list-style-type: none"> • The Institution of Engineers (India) 	
17	Dr. Susant Kumar Biswal	<ul style="list-style-type: none"> • ISH • NFMFP • IAHR 	
18	Mr. Nilotpal Debbarma	<ul style="list-style-type: none"> • ISH • IWRS 	
19	Dr. Mrinmoy Majumdar	<ul style="list-style-type: none"> • Institute of Engineers India, Corporate Member • International Water Association, Member • IEEE Member • Member, International Hydropower Association 	
20	Dr. Animesh Debnath	<ul style="list-style-type: none"> • Life member of Indian Desalination Association (Membership No: LM-516) • Member of Institute of Engineers (Membership No: M-166170-6) 	
21	Dr. Tilottama Chakraborty	<ul style="list-style-type: none"> • Member of Institute of Engineers India 	

6.4 Design and development Activities:

Different laboratories under the department are actively engaged in designing and development of various instrumental facilities every year. Some of these salient facilities are highlighted here.

- Rainfall Simulation for Landslide prediction and Early Warning Sensor Development
- Bi-directional and Unidirectional Shake table set up (Seismic Science and Engineering laboratory and Advance Geotechnical Engineering laboratory)
- Flexible laminar shear box and T-bar Penetrometer (Geotechnical Engineering laboratory and Seismic Science and Engineering laboratory)
- Locally Fabricated combined Load Test set up (Geotechnical Engineering laboratory)
- Diagonal shear test set up for masonry wallets (Structural Engineering Laboratory)
- Developed "A SENSOR-BASED OPTIMAL WATER SELECTION SYSTEM FOR CROP CULTIVATION" in Hydro-informatics Lab.

6.5 Research and Consultancy:

The department is engaged in performing various testing related to the Railway Department, PWD, NCCL, PMGSY projects, NBCC, CPWD, Airport Authority of India, Agricultural Department, BRO and many more. Faculties are engaged in research works and publishing research papers in different national and international reputed journals.

Sponsored Research Projects:

Sl. No.	Title	Period	Funding agency	Amount (in lakhs)	Co-ordinators
1	Inclusive Technology Business Incubator (i-TBI) at National Institute of Technology Agartala,	2022-2026	DST	Rs 419.9 Lakhs	PI: Dr. U. Mishra Co-PI: Dr P P Sarkar
2	Sustainable production of algal biomass for production of bio-fuels: A holistic approach with bioremediation & economical harvesting technique.	2019-22	NECBH, DST, GOI	Rs 16.0 Lakhs	PI: Dr. U. Mishra Co-PIs: Dr. B. Bhunia & Dr. M. Pandian
3	Knowledge Guided GIS based Hydrogeochemical modeling to understand the sources & control of Arsenic (As) in contamination in Groundwater of Tripura.	2019-24	STIC- ISRO, GOI	Rs 21.0 Lakhs	PI: Dr. U. Mishra Co-PIs: Dr. S. Biswal & Dr. P. Choudhury

4	Long term trend in weather parameters and atmospheric chemistry and its effect on tea cultivation over north-east India	2019-24	STIC- ISRO, GOI	Rs 19.8 Lakh	PI: Dr. P. Bhattacharjee Co-PI: Dr. U. Mishra
5	Capacity Building on Geo spatial Technology	2021-2023	NRDMS ,DST, GOI	Rs 10 Lakhs	PI: Dr. U. Mishra
6	Vulnerability study of Borcherra Hostel complex and adjoining buildings due to rainfall induced landslides	July to December; 2022	Rural Development Department, Government of Tripura	1.43 lakhs	Dr. Rajib Saha; Dr. Lipika Halder; Dr. Sima Ghosh
7	A Low-Cost Seismic Vibration Control Mechanism for RC Buildings using Compliant Tuned Liquid Dampers	2022-25	DST SERB, India	25.52 Lakhs	Co PI: Dr. Dharendra Kumar Pandey

Industrial Consultancy:

Sl. No.	Name of the faculty	Title	Industry	Amount (Rs.)
1	Dr. Partha Pratim Sarkar, Dr. Gopinandan Dey, Dr. Rama Debbarma, Dr. Surajit Das.	Bituminous Mix Design	Lion Engineering Consultancy Pvt. Ltd.	59000.00
2	Dr. Manish Pal, Dr. Partha Pratim Sarkar, Dr. Dipankar Sarkar	DBM Mix Design	Lion Engineering Consultancy Pvt. Ltd.	118000.00
3	Dr. Partha Pratim Sarkar, Dr. Gopinandan Dey, Dr. Rama Debbarma, Dr. Surajit Das.	Mix Design M-25	PWD	29500.00
4	Dr. Jayanta Pal, Dr. Manish Pal, Dr. Rajib Saha, Dr. Sushant Kumar Biswal,	Mix Design and Testing	N F Railway	196293.00
5	Dr. Partha Pratim Sarkar, Dr. Dipankar Sarkar	Mix Design	Power Grid	89916.00
6	Dr. Sujit Kumar Pal, Dr. Animesh Debnath, Dr. Dipankar Sarkar, Dr. Deb Dulal Tripura.	Mix Design and Testing	IOCL	137542.000

7	Dr. Sanjay Paul, Dr. Rajib Saha	Vetting	Denfab Engineering Pvt.	118000.00
8	Dr. Partha Pratim Sarkar, Dr. Gopinandan Dey, Dr. Rama Debbarma, Dr. Surajit Das.	Mix Design and Testing	N F Railway	196293.00
9	Dr. Jayanta Pal, Dr. Manish Pal, Dr. Rajib Saha, Dr. Sushant Kumar Biswal,	Mix Design	NBCC	29500.00
10	Dr. Sujit Kumar Pal, Dr. Animesh Debnath , Dr. Dipankar Sarkar, Dr. Deb Dulal Tripura.	Mix Design	Power Grid	29500.00
11	Dr. Sujit Kumar Pal, Dr. Dipankar Sarkar	Mix Design	IOCL	137542.00
12	Dr. Dipankar Sarkar, Dr. Rajib Saha, Dr. Partha Pratim Sarkar,	Bituminous Mix Design	VCPL	113280.00
13	Dr. Gopinandan Dey, Dr. Partha Pratim Sarkar,	Mix Design	TCIL	29500.00
14	Dr. Gopinandan Dey, Dr. Rajib Saha,	Mix Design	N F Railway	106200.00
15	Dr. Deb Dulal Tripura., Dr. Gopinandan Dey,, Dr. Partha Pratim Sarkar,	Mix Design	MANIDCO	29500.00
16	Dr. Deb Dulal Tripura., Dr. Gopinandan Dey,, Dr. Partha Pratim Sarkar	Mix Design	MANIDCO	59000.00
17	Dr. Deb Dulal Tripura., Dr. Gopinandan Dey,, Dr. Partha Pratim Sarkar,	Mix Design	MANIDCO	29500.00
18	Dr. Partha Pratim Sarkar, Dr. Gopinandan Dey, Dr. Surajit Das.	Bituminous Mix Design	IBC	89680.00
19	Dr. Manish Pal, Dr. Partha Pratim Sarkar, Dr. Dipankar Sarkar	Bituminous Mix Design	MES	53100.00
20	Dr. Sima Ghosh, Dr. Deb Dulal Tripura, Dr. Dipankar Sarkar, Dr. Sagarika Pani Grahi.	Mix Design	Power Grid	29500.00
21	Dr. Manu S Nadesan, Dr. Rajib Saha	Mix Design	M/S, Sawpan Ch. De.	29500.00
22	Dr. Rajib Saha, Dr. Gopinandan Dey,,	Mix Design	PWD	29500.00
23	Dr. Rajib Saha, Dr. Dipankar Sarkar,	Integrated Pile test	Sadguru Engineering & Allied Services Pvt. Ltd.	257270.00
24	Dr. Manish Pal, Dr. Rajib Saha, Dr. Sushant Kumar Biswal, Dr. Manu S Nadesan, Dr. Joyanta Pal.	Mix Design	Lumina Developers	29500.00
25	Dr. Lipika Halder, Dr. Dhirandra Kumar Pandey, Dr. Sagarika Pani Grahi, Dr. Sima Ghosh,	Mix Design	PTPL	29500.00

26	Dr. Animesh Debnath, Dr. Gopinandan Dey, Dr. Rajib Saha	NDT Test	Aukso Consulting Pvt. Ltd.	109740.00
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Research Publications:

Total No. of papers published in Refereed International Journals	: 36
Total No. of papers presented in International Conferences	: 36
Total No. of papers presented in National Conference	: 18
Total No. of Book Chapter Published	: 24

In Refereed International Journals:

1. S.S. Pradhan, U. Mishra, S.K. Biswal, Parveen, T.M. Pham, Y.Y. Lim, Saloni, Effects of crumb rubber inclusion on strength, permeability and acid attack resistance of alkali-activated concrete incorporating different industrial wastes, *Struct. Concr.* (2022) 1–15. <https://doi.org/10.1002/suco.202100640>.
2. S.S. Pradhan, U. Mishra, S.K. Biswal, Influence of RHA on strength and durability properties of alkali activated concrete, *Materials Today: Proceedings.* (2023) 3–8. <https://doi.org/10.1016/j.matpr.2023.03.504>.
3. Mallik, S., Chakraborty, A., Mishra, U. et al. Prediction of irrigation water suitability using geospatial computing approach: a case study of Agartala city, India. *Environ Sci Pollut Res* (2022). <https://doi.org/10.1007/s11356-022-21232-8>.
4. Pradhan, S. S., Mishra, U., & Biswal, S. K. (2023). Influence of RHA on strength and durability properties of alkali activated concrete. *Materials Today: Proceedings.* <https://doi.org/10.1016/j.matpr.2023.03.504>
5. Majumdar, R., Mishra, U., Mahata, N., Shah, M. P., Mondal, A., & Bhunia, B. (2023). Preparation, characterization, and performance evaluation of composite films of polyvinyl alcohol/ cellulose nanofiber extracted from *Imperata cylindrica*. *Chemosphere*, 337, 139370. <https://doi.org/10.1016/j.chemosphere.2023.139370>.
6. Majumdar, Ria & Mishra, Umesh & Bhunia, Biswanath & Mondal, Abhijit & Mahata, Nibedita. (2022). Delignification kinetics, colloidal behavior, and cost benefit analysis of cellulose nanofiber from *Imperata cylindrica*. *Biomass Conversion and Biorefinery.* <https://doi.org/10.1007/s13399-022-03450-9>.
7. Majumdar, R., Mishra, U., & Bhunia, B. (2022). Advanced Functional Membranes for Microfiltration and Ultrafiltration. *Adv. Funct. Membr. Mater. Appl*, 120, 43-71.
8. Santanu Mallik, Saikat Das, Abhigyan Chakraborty, Umesh Mishra, Swapan Talukdar, Somnath Bera & G. V. Ramana (2023) Prediction of non-carcinogenic health risk using Hybrid Monte Carlo-machine learning approach, *Human and Ecological Risk Assessment: An International Journal*, 29:3-4, 777-800, <https://doi.org/10.1080/10807039.2023.2188417>.
9. Shukla, Arun Kumar, et al. "Effect of Cu-doped GO Nanoparticles on Polyphenylsulfone Nanocomposite Membrane Surface and Its Application for The Removal of Organic Pollutants and Antibacterial Analysis." *Materials Today Communications* (2023): 106326.
10. "Influence of surcharge strip loads on the behavior of cantilever sheet pile walls: a numerical study", *Journal of Engineering Research*, Published on 17th February 2023, Volume 11, Issue 1. <https://doi.org/10.36909/jer.19217>, (Abhijit Debnath and Dr. Sujit Kumar Pal). (SCI INDEX).
11. "A numerical analysis on anchored sheet pile wall subjected to surcharge strip loading", *Journal of Engineering Research*, Published on 11th May 2023. <https://doi.org/10.1016/j.jer.2023.100088>, (Abhijit Debnath and Dr. Sujit Kumar Pal). (SCI INDEX).
12. 1. Karmakar, D., Pal, M., Majumdar, K., Suresh, M., & Roy, P. K. (2022). Utilization of porous asphalt material in road construction for reducing the vehicular noise. *Materials Today: Proceedings*, 65, 3602-3609.
13. Karmakar, D., Majumdar, K., Pal, M., & Roy, P. K. (2022). Experimental Analysis on Engineering Properties of Pervious Concrete with GGBS as a Partial Replacement for Cement. *International Journal on Emerging Technologies*, 14(1): 52-58(2023).
14. Debnath, C., Sarkar, D., Pal, M., (2023), "Intelligent Prediction Model on Soil Bamboo Fibre Mix for Road Construction", *Advances in Engineering Software*, Vol. 177, 103400.

15. Verma, Y. and Debbarma, R. (2023), "Influence of Soil Flexibility on Seismic Behavior of RC Buildings with Shear Wall", *Pract. Period. Struct. Des. Constr.*, ASCE, <https://doi.org/10.1061/PPSCFX.SCENG-1226>, (Science Citation Index, SCI)
16. Ghosh, R., Debbarma, R. and Chakraborty, S. (2022), "Magnification required by open ground storey column to mitigate stiffness deficiency of reinforced concrete structures under earthquake excitation", **Innovative Infrastructure solution (SPRINGER)**, <https://doi.org/10.1007/s41062-022-00884-y>, **SCI**
17. Chanda, D., Saha, R., Halder S. and Choudhury D. (2023). "State-of-the-art review on responses of combined piled raft foundation subjected to seismic loads using static and dynamic approaches", **Soil Dynamics and Earthquake Engineering, ELSEVIER** 85:251–268.
18. Debnath R, Saha, R. and Halder, S. (2022) "Assessment of small strain dynamic soil properties of railway site Agartala, India by Bender Element tests" **Arabian Journal of Geosciences** Volume 15, 1500 Pages 1-21.
19. DebRoy, S., and Saha, R. (2022) "Probabilistic seismic design of pile supported building structure incorporating inherent variability of subsoil and ground motion uncertainty", **Earthquake Engineering and Engineering Vibration** (<https://doi.org/10.1007/s11803-023-2159-y>).
20. Sen, B., and Saha, R. (2022) "Experimental and numerical investigation of mechanical strength characteristics of natural fiber retrofitted rammed earth walls", *Geotextiles and Geomembranes*, ELSEVIER, Volume 50, Issue 5, Pages 970-993.
21. Debbarma, K., Debnath, B., & Sarkar, P. P. (2022). A comprehensive review on the usage of nanomaterials in asphalt mixes. *Construction and Building Materials*, 361, 129634.
22. Acharjee, A., & Sarkar, P. P. (2022). Longitudinal study of travel attitude and travel activities on residential self-selection: A case study of small-sized Indian city. *Cities*, 129, 103934.
23. Debnath, B., & Sarkar, P. P. (2022). Application of nano SiO₂ in pervious concrete pavement using waste bricks as coarse aggregate. *Arabian Journal for Science and Engineering*, 47(10), 12649-12669.
24. Paul, S., Sarkar, D., (2022), "Performance evaluation of natural fiber reinforced Laterite soil for road pavement construction", *Materials Today: Proceedings*, Vol. 62 (2), pp. 1246-51
25. Das, Payel, Saimatun Nisa, Animesh Debnath, and Biswajit Saha. "Enhanced adsorptive removal of toxic anionic dye by novel magnetic polymeric nanocomposite: optimization of process parameters." *Journal of Dispersion Science and Technology* 43, no. 6 (2022): 880-895.
26. Rudra Paul, Sajal, Nahakpam Hitler Singh, and Animesh Debnath. "Quick and enhanced separation of Eosin Yellow dye from aqueous solution by FeCl₃ interaction: thermodynamic study and treatment cost analysis." *International Journal of Environmental Analytical Chemistry* (2022): 1-21.
27. Das, Payel, and Animesh Debnath. "Fabrication of MgFe₂O₄/polyaniline nanocomposite for amputation of methyl red dye from water: Isotherm modeling, kinetic and cost analysis." *Journal of Dispersion Science and Technology* (2022): 1-12.
28. Saha, Bibek, Animesh Debnath, and Biswajit Saha. "Fabrication of PANI@ Fe–Mn–Zr hybrid material and assessments in sono-assisted adsorption of methyl red dye: uptake performance and response surface optimization." *Journal of the Indian Chemical Society* 99, no. 9 (2022): 100635.
29. Nath, Aishi, and Animesh Debnath. "A short review on landfill leachate treatment technologies." *Materials Today: Proceedings* (2022).
30. Bhowmik, Mahashweta, Animesh Debnath, and Biswajit Saha. "Scale-up design and treatment cost analysis for abatement of hexavalent chromium and metanil yellow dye from aqueous solution using mixed phase CaFe₂O₄ and ZrO₂ nanocomposite." *International Journal of Environmental Research* 16, no. 5 (2022): 80.
31. Paul, Sajal Rudra, Rahul Das, and Animesh Debnath. "Sequential coagulation/flocculation and sonolytic oxidation using persulfate and hydrogen peroxide for real rubber processing industry wastewater treatment: Kinetic modelling and treatment cost analysis." *Materials Today: Proceedings* 77 (2023): 247-253.
32. Ghosh, Suman, Animesh Debnath, and Mriganka Sekhar Manna. "Kinetic modeling and cost analysis of coupled ultrasonic processes for the treatment of dairy wastewater." *Journal of Water Process Engineering* 54 (2023): 104031.

33. Das Debajit, Tilottama Chakraborty, Mrinmoy Majumder, and Tarun Kanti Bandyopadhyay, “Estimation of Runoff under changed climatic scenario of a Meso Scale River by Neural Network Based Gridded Model Approach” in Water Resources Management” in Water Resources Management. <https://doi.org/10.1007/s11269-022-03211-3>.
34. Panigrahi, S., Kundu, D., Banjee, R., & Dubey, B. K. (2022). Enzyme pre-treatment of yard waste to improve anaerobic biodegradability: Modeling the interactive effects of enzyme dose, treatment temperature and treatment duration on delignification. *Fuel*, 317, 123313. <https://doi.org/10.1016/j.fuel.2022.123313> (Impact Factor: 8.035)
35. Panigrahi, S., Tiwari, B. R., Brar, S. K., & Dubey, B. K. (2022). Thermo- Chemo-Sonic pretreatment of lignocellulosic waste: Evaluating anaerobic biodegradability and environmental impacts. *Bioresource Technology*, 127675. <https://doi.org/10.1016/j.biortech.2022.127675> (Impact Factor: 11.889)
36. Debnath, P., **Halder, L.**, Dutta, S. C., (2022), “Damage survey and seismic vulnerability assessment of unreinforced masonry structures in low-intensity Ambasa earthquake of northeast India”, *Structures, SCIE*, <https://doi.org/10.1016/j.istruc.2022.08.005>

In Refereed International Conference:

1. Sagar Aditya, Santanu Mallik, Umesh Mishra, Paritosh Bhattacharya, and Jugal Kishore Moni “Utilization of different models to predict tea crop yield: A critical review”, 27-29 Jan, 2023, International Conference on Agriculture and Rural Development (AGRI VISION- 2023) from January 27-29, 2023 at Centurion University of Technology & Management, Bhubaneswar, Odisha.
2. Tushar Das, Debodityuti Sengupta, Santanu Mallik, Umesh Mishra, Ishwar Chandra Das and Rajarshi Saha, “Groundwater Quality Evaluation Using Various Heavy Metal Indices & Associated Health Risk Assessment”, 11-12 March, 2023, 2nd International Conference on “Advances in Water Treatment and Management (ICAWTM-23)”.
3. Sagar Aditya, Santanu Mallik, Umesh Mishra, Paritosh Bhattacharya, and Jugal Kishore Moni, “A review on the quality and yield improvement of tea through water treatment, management, and the control of other relevant parameters in the tea gardens.”, 11-12 March, 2023, 2nd International Conference on “Advances in Water Treatment and Management (ICAWTM-23)”.
4. “An experimental analysis of the uplift behaviour of a single belled pile embedded in the sand”, International Conference on Recent Developments in Civil Engineering, RDC-2022 (in association with Indian Concrete Institute (Prayagraj Centre) & Indian Geotechnical Society (Prayagraj Centre)) at Motilal Nehru National Institute of Technology (MNNIT) Allahabad, India, 20 - 21 October 2022 (Manoj Kumar Bhowmik, Abhijit Debnath and Dr. Sujit Kumar Pal).
5. “A comparative study on consolidation of soil using laboratory oedometer and fabricated 3-D consolidation apparatus”, International Conference on Recent Developments in Civil Engineering, RDC-2022 (in association with Indian Concrete Institute (Prayagraj Centre) & Indian Geotechnical Society (Prayagraj Centre)) at Motilal Nehru National Institute of Technology (MNNIT) Allahabad, India, 20 - 21 October 2022 (Soumi Koley, Abhijit Debnath and Dr. Sujit Kumar Pal)
6. “The uplift capacity of circular and square batter piles: a numerical study by PLAXIS 3D”, International Conference on Recent Developments in Civil Engineering, RDC-2022 (in association with Indian Concrete Institute (Prayagraj Centre) & Indian Geotechnical Society (Prayagraj Centre)) at Motilal Nehru National Institute of Technology (MNNIT) Allahabad, India, 20 - 21 October 2022 (Amal Mondal, Abhijit Debnath and Dr. Sujit Kumar Pal).
7. “Effect of soil layers on laterally loaded single cement-fly ash-gravel pile: a numerical study”, International Conference on Recent Developments in Civil Engineering, RDC-2022 (in association

with Indian Concrete Institute (Prayagraj Centre) & Indian Geotechnical Society (Prayagraj Centre)) at Motilal Nehru National Institute of Technology (MNNIT) Allahabad, India, 20 - 21 October 2022 (Pritam Debnath, Abhijit Debnath and Dr. Sujit Kumar Pal)

8. “A Numerical and Experimental Study of Inclined Pile Under Uplift Load”, International Conference on Transportation Geotechnics, GeoTrans-2022 (in association with Indian Geotechnical Society Thiruvananthapuram Chapter) at LBS Institute of Technology for Women, Thiruvananthapuram, India, 01-03 June 2022, (Amal Mondal, Abhijit Debnath and Dr. Sujit Kumar Pal)

9. “A Study of the Settlement Behaviour of Simple and Under Reamed Pile under Axial Compression Loading”, International Conference on Transportation Geotechnics, GeoTrans-2022 (in association with Indian Geotechnical Society Thiruvananthapuram Chapter) at LBS Institute of Technology for Women, Thiruvananthapuram, India, 01-03 June 2022, (Anand Kumar, Abhijit Debnath and Dr. Sujit Kumar Pal)

10. “Lateral load capacity of CFG pile in layered soil: A numerical study”, International Conference on Transportation Geotechnics, GeoTrans-2022 (in association with Indian Geotechnical Society Thiruvananthapuram Chapter) at LBS Institute of Technology for Women, Thiruvananthapuram, India, 01-03 June 2022, (Pritam Debnath, Abhijit Debnath and Dr. Sujit Kumar Pal)

11. “Experimental and Numerical investigation on soil reinforcement using Jute Geotextile”, International Conference on Transportation Geotechnics, GeoTrans-2022 (in association with Indian Geotechnical Society Thiruvananthapuram Chapter) at LBS Institute of Technology for Women, Thiruvananthapuram, India, 01-03 June 2022, (Jharna Debbarma, Abhijit Debnath and Dr. Sujit Kumar Pal)

12. Datta, A., Ratul Das Pressure Energy Diffusion Rates in the Wall-Wake Region of Immobile Solid Sphere in Open Channel Flows-Numerical Simulation and Experimental Study. *Water Resour* 49, 413–421 (2022). <https://doi.org/10.1134/S0097807822030022>.

13. Ghosh, M., Das, R. Turbulent Flow Fields and Macro-Turbulent Flow Structures around the Roughness Elements in Gravel Bed Stream. *Water Resour* 49, 984–992 (2022). <https://doi.org/10.1134/S0097807822060045>.

14. D.Tripura (2022). “Failure pattern of non-engineered earthen buildings during 2017 Tripura earthquake.” *Socio-Technological Aspects of Seismic Disaster and its Mitigation (STASDM)*, IIT Guwahati, June 23-24, 2022.

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19. Saha, Bibek, Gourav Shil, Pulak Sinha, Sonali Bhowmik, Sandip Debnath, and Animesh Debnath. "Evaluation of air quality and its variation due to COVID-19 lockdown in Hyderabad, Telangana, India." In AIP Conference Proceedings, vol. 2716, no. 1. AIP Publishing, 2023.
20. Saha, Bibek, Debadrita Chowdhury, Sagar Anand, Afzal Khan, and Animesh Debnath. "Assessment of changes in air quality in Bangalore, India, during the Covid-19 pandemic lockdown: Statistical modelling." In AIP Conference Proceedings, vol. 2716, no. 1. AIP Publishing, 2023.
21. Dr. Tara Sen, "Numerical verification of FEM model for jute FRP wrapped RC beams under shear failure criteria", 25 - 26, February 2022, Recent Advances in Sustainable Environment (RAiSE 2022), Shobhit University Gangoh, Uttar Pradesh, India.
22. Dr. Tara Sen, "Sustainable strengthening of RC beams using bio-jute FRP under flexural failure mode", 25 - 26, February 2022, Recent Advances in Sustainable Environment (RAiSE 2022), Shobhit University Gangoh, Uttar Pradesh, India.
23. P. Maheswar Reddy, Dr. Tara Sen, Dr. Joyanta Pal, "Biopolymer's Impact on Mortar's Performance – A review", 19 - 21 October 2022, Advanced materials for environmental protection (ICAME-2022), Sathyabama Institute of Science and Technology, Chennai, India.
24. Dr. Tara Sen, "Discrete FEM Model Analysis of Shear Deficit Jute FRP Bonded RC Beam and its Coda Verification", 20 - 22, October 2022, Advances in Biopolymers and Composites: Health, Environment and Energy (ABC-HEE 2022), MNNIT Allahabad, India.
25. Dr. Tara Sen, "Flexural Resistance Upgradation of Structural Beams using Bio-Degradable Jute 3D Woven Composites", 20 - 22, October 2022, Advances in Biopolymers and Composites: Health, Environment and Energy (ABC-HEE 2022), MNNIT Allahabad, India.
26. P. Maheswar Reddy, Dr. Tara Sen, Dr. Joyanta Pal, "Bio Polymers (Cochorus Olitorius, Linum Usitatissimum L., Agave Sisalana, Panicum Miliaceum, and Bambusoideae) as Bio Composites in Ancient Plasters and Mortars", 20 - 22, October 2022, Advances in Biopolymers and Composites: Health, Environment and Energy (ABC-HEE 2022), MNNIT Allahabad, India.
27. Subhajit Deb, Dr. Tara Sen, Dr. Manish Pal, "A Study on the usage of Bamboo as Reinforcement in Ferrocete", 20 - 22, October 2022, Advances in Biopolymers and Composites: Health, Environment and Energy (ABC-HEE 2022), MNNIT Allahabad, India.
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29. Bhanita Deka, Dr. Tara Sen, "Study of NSM and EBR Technique using Carbon and Glass FRPs for Upgradation of Concrete Beams having lower Flexural Strength Parameters", 20 - 22, October 2022, Advances in Biopolymers and Composites: Health, Environment and Energy (ABC-HEE 2022), MNNIT Allahabad, India.

30. P. Maheswar Reddy, Dr. Tara Sen, Dr. Joyanta Pal, “Ancient Indian Plasters and Mortars: A Review on Traditional Organic Composites”, 11 - 14, December 2022, 8th Asian Conference on Mechanics of Functional Materials and Structures (ACMFMS-2022), Indian Institute of Technology Guwahati, India.
31. P. Maheswar Reddy, Dr. Tara Sen, Dr. Joyanta Pal, “A review on biocomposites in ancient mortars through material characterization in case studies (modern reverse engineering technique)”, 19 – 20, January 2023, International Conference on Materials Science and Mechanical Engineering (ICMSME 2023), Regent Education and Research Foundation, Barrackpore, West Bengal, India.
32. “Determination of Most Significant Factor in Minimization of Energy consumption at Water treatment plant”, Purba Das, Tilottama Chakraborty, Mrinmoy Majumder in Fourth International Conference on Innovation in Engineering Sciences (ICIES), 25th - 26th February 2023.
33. “Identification of the Most Influencing Factors for Developing a Low-Cost Water Filter”, Sampari Jamatia, Tilottama Chakraborty, Mrinmoy Majumder in 27th International Conference on Hydraulics, Water Resources, Environmental and Coastal Engineering, 22nd-24th December, 2022.
34. MCDM approach in determination of priorities of water quality Parameters, Priyanka Banerjee, Raja Ghosh, Tilottama Chakraborty, Mrinmoy Majumder, in 27th International Conference on Hydraulics, Water Resources, Environmental and Coastal Engineering, 22nd-24th December, 2022.
35. Impact of Climate Change on the total Water availability of the Haora River, Dhritiman Saha, Tilottama Chakraborty, Mrinmoy Majumder, in 27th International Conference on Hydraulics, Water Resources, Environmental and Coastal Engineering, 22nd-24th December, 2022.
36. Selection of optimal quality water for specific uses by ANP-MCDM based Auto-Selector, Arnab Bhattacharjee, Tilottama Chakraborty, Mrinmoy Majumder in 27th International Conference on Hydraulics, Water Resources, Environmental and Coastal Engineering, 22nd-24th December, 2022.

National Conference

1. “A Two-Dimensional Numerical Study on Cantilever Sheet Pile Wall Embedded in Dense Sand”, Ninth Indian Young Geotechnical Engineers Conference (9IYGEC 2023), (Indian Geotechnical Society, Aurangabad Chapter, in association with Marathwada Institute of Technology, Aurangabad, & Dr. Babasaheb Ambedkar Technological University, Lonere (MS)) at Marathwada Institute of Technology, Aurangabad, India, 21 - 22 March 2023 (Abhijit Debnath and Dr. Sujit Kumar Pal)
2. “3-D Consolidation Characteristics of Silty-Sand with Clay Soil with Six Possible Drainage Paths and its Comparison with the Laboratory 1-D Oedometer Apparatus: An Experimental Study”, Ninth Indian Young Geotechnical Engineers Conference (9IYGEC 2023), (Indian Geotechnical Society, Aurangabad Chapter, in association with Marathwada Institute of Technology, Aurangabad, & Dr. Babasaheb Ambedkar Technological University, Lonere (MS)) at Marathwada Institute of Technology, Aurangabad, India, 21 - 22 March 2023 (Soumi Koley, Abhijit Debnath and Dr. Sujit Kumar Pal)
3. “An Experimental Study on 3-D Consolidation of soil with Lateral Drainage Condition under the action of Varying Surcharge Loads”, Ninth Indian Young Geotechnical Engineers Conference (9IYGEC 2023), (Indian Geotechnical Society, Aurangabad Chapter, in association with Marathwada Institute of Technology, Aurangabad, & Dr. Babasaheb Ambedkar Technological University, Lonere (MS)) at Marathwada Institute of Technology, Aurangabad, India, 21 - 22

- March 2023 (Soumi Koley, Abhijit Debnath and Dr. Sujit Kumar Pal)
4. “Effect of Layered Combination of Soil on the 3-D Consolidation Characteristics: An Experimental Study, Ninth Indian Young Geotechnical Engineers Conference (9IYGEC 2023), (Indian Geotechnical Society, Aurangabad Chapter, in association with Marathwada Institute of Technology, Aurangabad, & Dr. Babasaheb Ambedkar Technological University, Lonere (MS)) at Marathwada Institute of Technology, Aurangabad, India, 21 - 22 March 2023 (Soumi Koley, Abhijit Debnath and Dr. Sujit Kumar Pal)
 5. “Improvement of Soil Load Carrying Capacity Using Geotextile Reinforcement”, Ninth Indian Young Geotechnical Engineers Conference (9IYGEC 2023), (Indian Geotechnical Society, Aurangabad Chapter, in association with Marathwada Institute of Technology, Aurangabad, & Dr. Babasaheb Ambedkar Technological University, Lonere (MS)) at Marathwada Institute of Technology, Aurangabad, India, 21 - 22 March 2023 (Sayan Saha, Tanmoy Shil and Dr. Sujit Kumar Pal)
 6. “Influence of Surcharge Strip Loads on the Behavior of Cantilever Sheet Pile Walls: A Numerical Study by ABAQUS”, Indian Geotechnical Conference, IGC- 2022 at Kochi, Kerala, India, 15 - 17 December 2022 (Abhijit Debnath and Dr. Sujit Kumar Pal)
 7. “A Numerical Study on Laterally Loaded Single CFG Pile Embedded in Layered Soil”, Indian Geotechnical Conference, IGC- 2022 at Kochi, Kerala, India, 15 - 17 December 2022 (Pritam Debnath, Abhijit Debnath and Dr. Sujit Kumar Pal)
 8. “Lateral deflection and bending moment on sheet pile walls under variable surcharge strip loads: a numerical study”, National Conference on Structural and Geotechnical Engineering, NCSGE 2022 at National Institute of Technology Jamshedpur, India, 11 - 12 November 2022 (Abhijit Debnath and Dr. Sujit Kumar Pal)
 9. “A numerical analysis on single cement-fly ash-gravel pile in layered soil subjected to lateral load”, National Conference on Structural and Geotechnical Engineering, NCSGE 2022 at National Institute of Technology Jamshedpur, India, 11 - 12 November 2022 (Pritam Debnath, Abhijit Debnath and Dr. Sujit Kumar Pal)
 10. “The uplift capacity of steel and wooden batter pile with different pile geometries: a numerical study”, National Conference on Structural and Geotechnical Engineering, NCSGE 2022 at National Institute of Technology Jamshedpur, India, 11 - 12 November 2022 (Amal Mondal, Abhijit Debnath and Dr. Sujit Kumar Pal)
 11. “An experimental study on 3-D consolidation of silty-sand with clay soil by varying the boundary conditions”, National Conference on Structural and Geotechnical Engineering, NCSGE 2022 at National Institute of Technology Jamshedpur, India, 11 - 12 November 2022 (Soumi Koley, Abhijit Debnath and Dr. Sujit Kumar Pal)
 12. “Characteristics of a bell pile embedded in the sand under uplift loading: an experimental study”, National Conference on Structural and Geotechnical Engineering, NCSGE 2022 at National Institute of Technology Jamshedpur, India, 11 - 12 November 2022 (Manoj Kumar Bhowmik, Abhijit Debnath and Dr. Sujit Kumar Pal)
 13. “An Experimental Evaluation of Behaviour of Square Footing Resting on Non-Woven Geotextile Reinforced Sand”, National Conference on Structural and Geotechnical Engineering, NCSGE 2022 at National Institute of Technology Jamshedpur, India, 11 - 12 November 2022 (Tanmoy Shil, Sayan Saha and Dr. Sujit Kumar Pal)
 14. Tushar Das, Santanu Mallik, Umesh Mishra and Niladri Paul, “River-Soil Interactions in the Manu River Basin of Tripura, India: Implications for Soil Carbon and Nitrogen Content Variability”, 28-

- 29 April, 2023, National Seminar on Climate Resilient Millet Production Technologies for Sustainable agriculture.
15. Das P., Debnath R., and **Saha R.** (2023). "Static And Dynamic Characterization Of Hemic Peat At Kailashar, Tripura," *Proceedings of the Ninth Indian Young Geotechnical Engineers Conference 2023 (9IYGEC 2023)* Aurangabad, 21-22 March 2023.
 16. Bhattacharjee S., Debnath R., and **Saha R.** (2023). "Geotechnical Characterization Of Soft Clay Of Holocene Age At Tripura," *Proceedings of the Ninth Indian Young Geotechnical Engineers Conference 2023 (9IYGEC 2023)* Aurangabad, 21-22 March 2023.
 17. Sakshi, Chanda D., and **Saha R.** (2023). "Lateral Load-Sharing Response of Piled Raft Foundation Under Seismic Loading in Sandy Soil," *Proceedings of the Ninth Indian Young Geotechnical Engineers Conference 2023 (9IYGEC 2023)* Aurangabad, 21-22 March 2023.
 18. P. Maheswar Reddy, Dr. Tara Sen, Dr. Joyanta Pal, "Traditional Organic composites in ancient Indian plasters and mortars – a review", 28-30, July 2022, Research and innovations in civil Engineering and architecture, RV College of Engineering and RV College of Architecture, Bengalore, India.

Book Chapter:

1. Pramanik, Subhadip, Shashwati Soumya Pradhan, and Umesh Mishra. "Effect of Fly Ash Inclusion on Fresh and Hardened Properties of Concrete: A Review." *Recent Advances in Civil Engineering: Proceedings of the 2nd International Conference on Sustainable Construction Technologies and Advancements in Civil Engineering*. Singapore: Springer Nature Singapore, 2022.
2. Chakma, A., Bhowmik, T., Mallik, S., Mishra, U. (2022). Application of GIS and Geostatistical Interpolation Method for Groundwater Mapping. In: Rao, C.M., Patra, K.C., Jhajharia, D., Kumari, S. (eds) *Advanced Modelling and Innovations in Water Resources Engineering. Lecture Notes in Civil Engineering*, vol 176. Springer, Singapore. https://doi.org/10.1007/978-981-16-4629-4_2.
3. Saha, S., Mallik, S., Mishra, U. (2022). Groundwater Depth Forecasting Using Machine Learning and Artificial Intelligence Techniques: A Survey of the Literature. In: Das, B.B., Hettiarachchi, H., Sahu, P.K., Nanda, S. (eds) *Recent Developments in Sustainable Infrastructure (ICRDSI-2020)—GEO-TRA-ENV-WRM. Lecture Notes in Civil Engineering*, vol 207. Springer, Singapore. https://doi.org/10.1007/978-981-16-7509-6_13.
4. Pramanik, S., Pradhan, S.S. & Mishra, U. (2022). Effect of fly ash inclusion on fresh and hardened properties of concrete: A Review. *Recent Advances in Civil Engineering. Lecture Notes in Civil Engineering*, vol 233. Springer, Singapore. https://doi.org/10.1007/978-981-19-0189-8_41.
5. Majumdar, R., Mishra, U., Bhunia, B. (2022), "Advanced Functional Membranes for Microfiltration and Ultrafiltration", *Advanced Functional Membranes: Materials and Applications*, v. 120, pp. 43-71, DOI: [10.21741/9781644901816-1](https://doi.org/10.21741/9781644901816-1)
6. Majumdar, R., Mishra, U., Bhunia, B. (2022), "Recent Advances in enzyme assisted hydrolysis of waste biomass to value-added products", *Enzymes in Valorization of Waste (VOL 2): Enzymatic hydrolysis of Waste for Development of Value-added Products*, pp. 155-182, DOI: [10.1201/9781003187684-7](https://doi.org/10.1201/9781003187684-7).
7. Chatterjee, A. and Ghosh, S. (2021). 'An energy-based approach towards liquefaction potential analysis: Agartala City', Indian Geotechnical Conference (IGC) 2021, Geotechnics for Infrastructure Development and Innovative Applications (Geo-India), *Lecture Notes in Civil Engineering*, Springer.

8. Jana, K., Hazari, S., Ghosh, S. (2022). Experimental and Numerical Studies of Three-Layered Reinforced Soil Slope Under Dynamic Loading Condition. In: Satyanarayana Reddy, C.N.V., Saride, S., Krishna, A.M. (eds) Ground Improvement and Reinforced Soil Structures. Lecture Notes in Civil Engineering, vol 152. Springer, Singapore.
9. “Behavior of Cantilever Concrete Diaphragm Wall under Sequential Excavation of Front-fill Soil: A Numerical Study”, In Earth Retaining Structures and Stability Analysis: Lecture Notes in Civil Engineering, Vol. 303, pp. 395 – 407, 2023 (Abhijit Debnath and Dr. Sujit Kumar Pal)
10. “Seismic response of RC Buildings with Shear Wall incorporating soil-structure interaction”, Proceedings of 17th Symposium on Earthquake Engineering (Vol.1) :Lecture Notes in Civil Engineering (Vol.329) SPRINGER , Year 2023, Pages:487-500. (Verma,Y and Debbarma, R.)
11. “Seismic Pounding Mitigation of Two Adjacent Reinforced Concrete Buildings with Bracing System”, Proceedings of 17th Symposium on Earthquake Engineering (Vol.1): Lecture Notes in Civil Engineering (Vol. 329), SPRINGER, Year 2023, Pages 351-368. (Debbarma, R. and Saxena, N.)
12. “Seismic Response of Setback RC Buildings with Shear Wall”, Recent Advances in Sustainable Environment:Lecture Notes in Civil Engineering, SPRINGER, Volume 285, Year 2023, Pages 97-108(Yash Verma and Rama Debbarma)
13. Seismic Response Mitigation of Elevated Water Storage Tank Using Base Isolation System”, Advances in Structural Mechanics and Applications: Structural Integrity, SPRINGER, Vol. 26, Year; 2023, Pages: 383–392, (Sourav Mitra and Rama Debbarma)
14. “Seismic Response of Reinforced Concrete Buildings Considering Soil Structure Interaction” Advances in Structural Mechanics and Applications: Structural Integrity, SPRINGER, Vol. 26, Year; 2023, Pages: 338–351, (Ishita Kalsi and Rama Debbarma).
15. Debnath, B., Sarkar, P.P. (2022). Performance of Pervious Concrete as a Sustainable Alternative toward Green Infrastructure Using Marginal Aggregates. In: Kumar, P.G., Subramaniam, K.V.L., Santhakumar, S.M., Satyam D., N. (eds) Recent Advances in Civil Engineering. Lecture Notes in Civil Engineering, vol 233. Springer, Singapore. https://doi.org/10.1007/978-981-19-0189-8_18
16. Dey, N., Debnath, B., & Sarkar, P. P. (2022). Finite Element Analysis of Flexible Pavement with Non-linear Material Behaviour. In *Recent Trends in Civil Engineering: Select Proceedings of ICRAE 2021* (pp. 789-795). Singapore: Springer Nature Singapore.
17. Gopalam, P., Debnath, B., & Sarkar, P. P. (2022). Effect of Stabilized Subgrade on Rutting Resistance of Asphalt Concrete Pavement. In *Recent Advances in Transportation Systems Engineering and Management: Select Proceedings of CTSEM 2021* (pp. 465-476). Singapore: Springer Nature Singapore.
18. Paul, S., Sarkar,D., (2022), “Chemically Stabilized Laterite Soil Using Rice Husk Ash”, Recent Advances in Transportation Systems Engineering and Management, DOI: [10.1007/978-981-19-2273-2_29](https://doi.org/10.1007/978-981-19-2273-2_29).
19. Sen, T. (2023). Nonlinear Computational Crack Analysis of Flexural Deficit Carbon and Glass FRP Wrapped Beams. In: Castillo, O., Bera, U.K., Jana, D.K. (eds) Applied Mathematics and Computational Intelligence. ICAMCI 2020. Springer Proceedings in Mathematics & Statistics, vol 413. Springer, Singapore. https://doi.org/10.1007/978-981-19-8194-4_14.
20. Sen, T. (2023). Numerical Verification of FEM Model for Jute FRP Wrapped RC Beams Under Shear Failure Criteria. In: Reddy, K.R., Kalia, S., Tangellapalli, S., Prakash, D. (eds) Recent Advances in

Sustainable Environment. Lecture Notes in Civil Engineering, vol 285. Springer, Singapore. https://doi.org/10.1007/978-981-19-5077-3_35.

21. Venna, S., Panigrahi, S., Reddy, H. P., & Dubey, B. K (2022). Gate-to-Gate Life Cycle Assessment of Hydrothermal Carbonization Process for Food and Yard Waste. In Effective Waste Management and Circular Economy (pp. 65-75). CRC Press.
22. Panigrahi, S., Sharma, H. B., & Dubey, B. K. (2022). Optimization of F/M Ratio During Anaerobic Codigestion of Yard Waste with Food Waste: Biogas Production and System Stability. In Treatment and Disposal of Solid and Hazardous Wastes (pp. 185-192). Springer, Cham. (ISBN 978-3-030-29642-1).
23. Sharma, H. B., Panigrahi, S., & Dubey, B. K. (2022). The Treatment of Landfill Leachate and Other Wastewaters Using Constructed Wetlands. In Treatment and Disposal of Solid and Hazardous Wastes (pp. 27-53). Springer, Cham. (ISBN 978-3-030-29642-1).
24. Bajaj, R., Garg, K., Panigrahi, S., & Dubey, B. K. (2022). Improvement in Biogas Production by Direct Interspecies Electron Transfer Technique: Current Aspects and Diverse Prospects. In Biomethane through Resource Circularity (pp. 75-82). CRC Press. (eBook ISBN9781003204435).

Distinguished Visitors to the Departments:

Sl. No.	Name of the Visitors and Designation	Date of Visit	Purpose of Visit
1	The Chief Engineer. Brahmaputra Board.	26th July, 2022	Symposium on “Soft measures for flood and erosion control”
2	Prof. Nagesh Kumar D from (IISC Bangalore)	16th Jan, 2023	Delivering of lecture
3	Mr. Sahil Sharma, AVS INNO INFRA, New Delhi	10th March, 2023	One Day National Conference
4	Prof. Sudip Kumar Roy, Professor Civil Engg. Dept. & Dean (Academic) IIST Shibpur	5th & 6th July, 2023	Official Work
5	Prof. D.N. Singh, IIT Bombay	5th & 6th July, 2023	Official Work
6	Prof. S.K. Deb IIT Bombay	5th & 6th July, 2023	Official Work
7	Prof. K. Darunkumar Singh, IIT Guwahati	5th & 6th July, 2023	Official Work

6.6 Institute –Industry Collaboration:

The department is engaged in R&D activities in collaboration with different eminent industrial houses. Both the undergraduate and postgraduate students are actively participating in these collaborative activities.

6.7 Industrial Consultancy and Sponsored Research:

Sponsored research and industrial consultancy works are being taken up by the department to find out innovative strategies to mitigate natural disasters and also for the upliftment of the society at large.

6.8 Other Activities:

- I. This department is acting as State Referral Institute (SRI) of the Disaster Management Programme.
- II. STA, Tripura in PMGSY works.
- III. Department is acting as Expert department of Water Action Plan for the state.

7.0 CHEMICAL ENGINEERING DEPARTMENT

7.1 Introduction:

Being a part of the National Institute of Technology Agartala, this department starts its journey in the academic year of 2009-10. Subsequently, the department started offering Ph.D. in Engineering from July, 2012 and M. Tech in Chemical Engineering from July 2013.

Presently, the department has a student strength of 274, of which 259 are undergraduate, 02 are masters and 13 are Ph.D. research scholars.

The department presently has a dynamic team of 09 (08+01) faculty members, of which 01 faculty newly joined in September 2022. The faculties continuously upgrade themselves to stay abreast with the latest information and teaching styles. Other than teaching, the faculty members are engaged in research in various dimensions of chemical engineering which include fluid dynamics, numerical simulation, catalysis and reaction engineering, environmental engineering, biofuel, bioenergy, renewable energy, sustainable engineering, energy and fuel technology, materials engineering, nanotechnology, and polymer technology, as well as many other emerging and pressing areas of chemical engineering.

In the last year alone, the department has published 17 peer-reviewed journals, 14 book chapters and 02 conference papers. The faculties of the department received sponsored research grants worth 5.50 lakhs in the last one year. 02 patents granted in favour of a faculty member of the Department in the last one year. The Department is also routinely engaged in providing testing and consultancy services to local and national clients.

The department has elaborate laboratory facilities which are routinely upgraded and revamped. In the last year, the department has upgraded chemical engineering laboratories and has added few equipments in other research laboratories, for a total worth of around 8.00 Lakhs.

7.2 Academic Programme

The Department offers BTech in Chemical Engineering degree at the undergraduate level, MTech in The mission of the Department is to provide high quality technical education and produce globally competent chemical engineers capable of advancing chemical engineering research in desired fields and provide industrial solution and decisive management.

With that mission, the department started to offer BTech in Chemical Engineering degree in the undergraduate level from 2009-10 and presently has an intake capacity of 75 students. At the postgraduate level, the department is offering MTech in Chemical Engineering with an intake capacity of 10 seats since 2012-13. The department is also offering PhD in Engineering program since 2012-13.

The BTech curriculum has 160 credits spanning over 4 years including 43 credits common engineering curriculum in 1st year, 41.5 credits in 2nd year, 45 credits in 3rd year and 31.5 credits in 4th and final year with options to undertake 6 months' project in the industry in the final semester of the BTech program.

The MTech curriculum has 80 credits spanning over 2 years including 50 credits in 1st year, 30 credits in 2nd year, with options to undertake full 1 year (2 semester) research in the final year of the MTech program.

As an outcome of quality learning experience, the students graduate as competent Chemical Engineers and find placements. Last year, all the students registering for placement are successful in securing placements in reputed national and multinational companies and institutions. The graduated students of the department have joined higher studies in reputed institutions, graduating research scholars have secured post-doctoral and faculty positions in other institutes. The students of the Dept. have also received prestigious scholarships like DAAD-WISE (Germany). All eligible students secured industrial internships of which 07 students received pre-placement offers from industry. 05 students qualified in GATE 2023.

7.3 Faculty and their activities:**Short-term Courses/ Workshops/ Seminar/ Symposia/ Conferences/ Training attended by the faculty in Academic Institutions and Public sector Undertakings:**

Sl. No	Name of Faculty	Title	Period
Workshop (Organized)			
1.	Dr. Srimanta Ray Asst. Prof. (Gr-1) Dr. Bibhab Kumar Lodh Temp. Asst. Prof.	“Recent trends in Engineering on Emerging Technologies” Organized by Chemical Engineering Department, NIT, Agartala	17th – 22nd October, 2022

Short-term Courses/Workshops/Seminar/Symposia/Conferences/Training attended by the faculty in Academic Institutions and Public sector Undertakings:

Training program			
1	Dr. Tarun Kanti Bandyopadhyay Asst. Prof. (Gr-1)	1st Beneficiary Training Program As an investigator of the DST project of Collaborative Institute, and subject expert, training program and enlighten the beneficiaries with the knowledge of Spirulina cultivation and its prospects at National Institute of Technology, Agartala	7th August, 2022
National Symposium			
Sl No	Name of the Faculty	Title	Period
1	Dr. Kalyan Gayen Asst. Prof. (Gr-1)	National symposium on “Recent Trends in Sustainable Technology - Techno - Commercial Developments”, IICChE, IQAC and Heritage Institute of Technology, Kolkata, India Commercial Developments"	9th – 10th September, 2022
2	Dr. Bibhab Kr Lodh Temp. Asst. Prof.	National symposium on “Recent Trends in Sustainable Technology - Techno - Commercial Developments”, IICChE, IQAC and Heritage Institute of Technology, Kolkata, India Commercial Developments	9th – 10th September, 2022

Invited Speaker			
Name	Lecture	Program	Date
Dr. Suresh Mamidi	“Li-ion batteries”	“Seven Day Workshop on Advances in Chemical Sciences, Department of Chemistry, Nit, Agartala. (Invited Speaker).	18 th -24 th January
Dr. Soma Nag Asst. Prof. (Gr-1)	“Bioremediation based on approaches towards heavy metal removal”	“Seven Day Workshop on Advances in Chemical Sciences, Department of Chemistry, Nit, Agartala. (Invited Speaker).	18 th -24 th January”
Dr. Srimanta Ray Asst. Prof. (Gr-1)	“Gender, Academia & Innovation”	One week training program on “DigitAll: Innovation & technology for gender equality”, Nit Agartala organized by Mathematics Department.	27th -28th March 2023
Dr. Tarun Kanti Bandyopadhyay Asst. Prof. (Gr-1)	“Challenges in monitoring the flow pattern of pollutants in water bodies”	Hands-on & Lecture based Training program on “Challenges and opportunities in Water, Sanitation & Hygiene (WASH)” organized by Bio Engineering Department, NITA, Under STUTI.	23rd - 29th January 2023

7.4 Design and development Activities:

List of in-house projects/developed technologies for commercialization for Chemical Engg. Dept as below:

Sl. No.	In-house projects/Developed Technologies for commercialization	Faculty Member
1	Method for alternative processing of rubber latex	Dr. Srimanta Ray Asst. Prof. ChE
2	Method for isolation of nutritional constituents from lignocellulosic biomass	
3	Low-cost bio-based fuel for replacement of petroleum diesel	
4	Low-cost catalyst for upgradation of liquid waste to bio-based fuel	
5	Low-cost waste derived blend fuel for replacement of petroleum diesel	

7.5 Research and Consultancy:**Sponsored Research Projects:**

Sl No	Title	Period	Funding Agency	Amount (in lakhs)	Co-ordinators
1	“Entrepreneurship Development through Setting up of Pilot Scale Unit on Production and Packaging of Tender Jackfruit Ready to Cook at Biovillage”.	2023-2024	DBT - Tripura	5.5	Dr. Kalyan Gayen Asst. Prof. (Gr-1) of ChE Dept. (PI) and Dr. Tridib Kumar Bhowmick (Co-PI) Temp. Asst. Prof. of Bio Engg. Dept.

Testing:

Sl No	Name of the Faculty	Title	Industry	Amount (INR)
1	Chemical Engineering Department	Testing of Arsenic, June 2022	ISRO Project	15,000.00
2	Chemical Engineering Department	Testing of Arsenic, August 2022	ISRO Project	9,500.00
3	Chemical Engineering Department	Testing of Arsenic, October 2022	ISRO Project	9,250.00
Total				33,750.00

Research Publications

Total No. of papers published in refereed International journals	:	24
Total No of Book Chapters Published	:	17
Total No. of papers presented in International Conference	:	04
Total No of Books Published	:	01

In refereed International Journals:

1. Uttara Mahapatra, Ajay Kumar Manna, Abhijit Chatterjee, “A critical evaluation of conventional kinetic and isotherm modeling for adsorptive removal of hexavalent chromium and methylene blue by natural rubber sludge-derived activated carbon and commercial activated carbon”, Bio resource Technology, Volume 343, Pages 126135, January 2022.
2. Uttara Mahapatra, Abhijit Chatterjee, Chandan Das, Ajay Kumar Manna, “Adsorptive removal of hexavalent chromium and methylene blue from simulated solution by activated carbon synthesized from natural rubber industry bio sludge”, Environmental Technology & Innovation, Volume 22, Pages 101427, May 2021

3. Biplab Roy, Stabak Roy, Saptarshi Mitra, Ajay Kumar Manna, "Evaluation of groundwater quality in West Tripura, Northeast India, through combined application of water quality index and multivariate statistical techniques", *Arabian Journal of Geosciences*, Volume 14, Issue 19, Pages 1-18, Oct 2021
4. Sambit Sarkar, Jaivik Mankad, Nitin Padhiar, Mriganka Sekhar Manna, Tridib Kumar Bhowmick, Kalyan Gayen, "Enhancement of growth and biomolecules (carbohydrates, proteins, and chlorophylls) of isolated *Chlorella thermophila* using optimization tools", *Preparative Biochemistry & Biotechnology*, Pages 1-17, Feb 2022
5. Sreya Sarkar, Kalyan Gayen, Tridib Kumar Bhowmick, "Green extraction of biomolecules from algae using subcritical and supercritical fluids" *Biomass Conversion and Biorefinery*, Pages 1-23, Jan 2022
6. Satyajit Bhattacharjee, Dibyajyoti Haldar, Mriganka Sekhar Manna, Kalyan Gayen, Tridib Kumar Bhowmick, "A sustainable approach to enhance fruit shelf-life: Edible coating from pineapple fruit waste biomass", *Journal of Applied Polymer Science*, Volume 138, Issue 15, Pages 50388, April 2021.
7. Satyajit Bhattacharjee, Dibyajyoti Haldar, Mriganka Sekhar Manna, Kalyan Gayen, Tridib Kumar Bhowmick, "Cover Image", *Journal of Applied Polymer Science*, Volume 138, Issue 15, Pages 50497.
8. Sambit Sarkar, Mriganka Sekhar Manna, Tridib Kumar Bhowmick, Kalyan Gayen, "Effect of different illumination patterns on the growth and biomolecular synthesis of isolated *Chlorella Thermophila* in a 50 L Pilot-scale photobioreactor" *Process Biochemistry*, Volume 109, Pages 87-97, October 2021.
9. Susanta Ghanta, Chanchal Bhaumik, Mriganka Sekhar Manna, "Process development for isolation of dietary eugenol from leaves of basil (*Ocimum sanctum*) in combination of optimization of process variables and modeling by artificial neural network", *Journal of the Indian Chemical Society*, Volume 99, Issue 1, Pages 100280, Jan 2022.
10. Mriganka Sekhar Manna, Chandan Kumar Das, Susanta Ghanta, "Design of CHNO based new heterocyclic high energy density molecules: a theoretical survey", *Structural Chemistry*, Volume 32, Issue 3, Pages 1095-1104, June 2021.
11. Anirban Banik, Mrinmoy Majumder, Sushant Kumar Biswal, Tarun Kanti Bandyopadhyay, "Polynomial neural network-based group method of data handling algorithm coupled with modified particle swarm optimization to predict permeate flux (%) of rectangular sheet-shaped membrane" *Chemical Papers*, Volume 76, Issue 1, Pages 79-97, Jan 2022.
12. Ramesh Sharma, Pinku Chandra Nath, Kondi Vanitha, Onkar Nath Tiwari, Tarun Kanti Bandyopadhyay, Biswanath Bhunia, "Effects of different monosaccharides on thermal stability of phycobiliproteins from *Oscillatoria* sp. (BTA-170): Analysis of kinetics, thermodynamics, colour and antioxidant properties", *Food Bioscience*, Volume 44, Pages 101354, Dec 2021.
13. Pinku Chandra Nath, Onkar Nath Tiwari, Indrama Devi, Tarun Kanti Bandyopadhyay, Biswanath Bhunia, "Biochemical and morphological fingerprints of isolated *Anabaena* sp.: a precious feedstock for food additives", *Biomass Conversion and Biorefinery*, Volume 11, Issue 6, Pages 2723-2733, Dec 2021.
14. Payel Choudhury, Ria Majumdar, Tarun Kanti Bandyopadhyaya, "Comparative study between synthetic and dairy wastewaters in single chamber microbial fuel cell for power generation" *Journal of Electrochemical Science and Engineering*, Volume 11, Issue 4, Pages 279-289, Oct 2021
15. Chandrani Debnath, Tarun Kanti Bandyopadhyay, Biswanath Bhunia, Umesh Mishra, Selvaraju Narayanasamy, Muthusivaramapandian Muthuraj, "Microalgae: Sustainable resource of carbohydrates in third-generation biofuel production" *Renewable and Sustainable Energy Reviews*, Volume 150, Pages 111464, Oct 2021.
16. Payel Choudhury, Rup Narayan Ray, Tarun Kanti Bandyopadhyay, Onkar Nath Tiwari, Biswanath Bhunia, "Kinetics and performance evaluation of microbial fuel cell supplied with dairy wastewater with simultaneous power generation", *International Journal of Hydrogen Energy*, Volume 46, Issue 31, Pages 16815-16822, May 2021.
17. Payel Choudhury, Biswanath Bhunia, Tarun Kanti Bandyopadhyay, "Screening technique on the selection of potent microorganisms for operation in microbial fuel cell for generation of power", *Journal of Electrochemical Science and Engineering*, Volume 11, Issue 2, Pages 129-142, April 2021.

18. Pritam Dey, R Koiyam, Srimanta Ray, "Valorization of waste potato peel as iron adsorbent and catalyst in photo-oxidation: a sustainable waste management strategy", *International Journal of Environmental Science and Technology*, vol 19, Issue 3, pages 1945-1956, 23/03/2022.
19. Rupak Roy, Debika Debnath, Srimanta Ray, "Comprehensive Assessment of Various Lignocellulosic Biomasses for Energy Recovery in a Hybrid Energy System", *Arabian Journal for Science and Engineering*, 11/06/2021.
20. Rita Banik, Priyanath Das, S. Ray, "Prediction of electrical energy consumption based on machine learning technique", *Electrical Engineering*, vol 103, pages 909-920.
21. Fatemeh Saadat, Ghareh Bagh, Srimanta Ray Rajesh Seth, "Optimizing lignin extraction from Kraft black liquor using protic Ionic liquids", *Biomass and Bioenergy*, pages 106249, 11/2021.
22. Pritam Dey, Srimanta Ray, "Valorization of waste vegetable oil-based blend fuels as sustainable diesel replacement: comparison between blending with diesel versus kerosene", *Clean Technologies and Environmental Policy*, 17/10/2021.
23. Rupak Roy, Srimanta Ray, "Up gradation of an Agro-residue by Acid Pretreatment into a Solid Fuel with Improved Energy Recovery Potential: An Optimization Study", *Arabian Journal for Science and Engineering*, 25/10/2021.
24. Fatemeh Saadat, Ghareh Bagh, Srimanta Ray, Rajesh Seth, "Characteristics of acetate and lactate protic ionic liquids and their suitability to extract lignin from black liquor", *Journal of Ionic Liquids*, Volume 1, Issue 1, Pages 100005, September 2021

Chapters in Edited Books:

1. Anirban Banik, Mrinmoy Majumder, Sushant Kumar Biswal, Tarun Kanti Bandyopadhyay, "Development of Self-Organized Group Method of Data Handling (GMDH) Algorithm to Increase Permeate Flux (%) of Helical-Shaped Membrane", *Research Advancements in Smart Technology, Optimization, and Renewable Energy*, Publisher-IGI Global, Pages 170-182.
2. Anirban Banik, Mrinmoy Majumder, Sushant Kumar Biswal, Tarun Kanti Bandyopadhyay, "Application of Group Method of Data Handling-Based Neural Network (GMDH-NN) for Forecasting Permeate Flux (%) of Disc-Shaped Membrane", *Handbook of Intelligent Computing and Optimization for Sustainable Development*, Pages 135-148, 2022/2/25.
3. Susmita Datta, Soma Nag, "Application of biosurfactant as antibiotics for the management of diseases affecting livestock", *Applications of Biosurfactant in Agriculture*, Pages 127-150, 2022/1/1.
4. Susmita Datta, Dijendra N Roy, Soma Nag, "Role of biofilm in waste management system", *A Complete Guidebook on Biofilm Study*, Pages 177-198, 2022/1/1.
5. Susmita Datta, Dijendra N. Roy, Soma Nag, "Role of Biofilm in waste management", *A complete Guide Book of Biofilm Study*, Pages 177-197, 2022.
6. Susmita Datta, Soma Nag, Dijendra N. Roy, "Biofilm: Design of experiments and relevant protocols" *A complete Guide Book of Biofilm Study*, Pages 1-26, 2022.
7. Sunipa Deb, Soma Nag, "Use of microalgae for the removal of emerging contaminants from wastewater", *Biodegradation and Detoxification of Micro pollutants in Industrial Wastewater*, Pages 193-209, 2022.
8. Rahul Saha, S. Nag, "Microbial remediation of petroleum hydrocarbons in liquid wastes", *Development in Wastewater Treatment Research and Processes*, Pages 117-129, 2022.
9. Rahul Saha, Soma Nag, 'Application of biosurfactant for the management of mycotoxins, *Applications of Biosurfactant in Agriculture*, 2022.
10. Soma Nag, Swarup Biswas, "Removal of emerging contaminants through bio nanotechnology", *Development in Wastewater Treatment Research and Processes*, Pages 291-310, 2022.
11. Joydeep Das, Soma Nag, "Viability of Membrane Separation Techniques in the Detoxification of Recalcitrant Pollutants", *Removal of Refractory Pollutants from Wastewater Treatment Plants* edited by Maulin P. Shah, Pages 289-298, 2021.
12. Suparna Sen, Sambit Sarkar, Tridib Kumar Bhowmick, Kalyan Gayen, "The choice of algae strain for the biofuel production: Native, genetically modified, and microbial consortia", *3rd Generation Biofuels*, Pages 3-32, 2022/1/1.

13. Sreya Sarkar, Sambit Sarkar, Mriganka Sekhar Manna, Kalyan Gayen, Tridib Kumar Bhowmick, "Extraction of carbohydrates and proteins from algal resources using supercritical and subcritical fluids for high-quality products", Innovative and Emerging Technologies in the Bio-marine Food Sector, 2022/1/1.
14. Kalyan Gayen, "Metabolic engineering approaches for high-yield hydrocarbon biofuels", Hydrocarbon Biorefinery, Pages 253-270, 2022/1/1.
15. Uttara Mahapatra, Ajay Kumar Manna, Abhijit Chatterjee, "Recent Technological Advances in Tannery Wastewater Treatment", Removal of Refractory Pollutants from Wastewater Treatment Plants, Pages 249-266, 2021.
16. Debika Debnath, Srimanta Ray, "Hybrid Energy System for an Academic Institution: A Case Study", Renewable Energy Optimization, Planning and Control.
17. Rita Banik, Priyanath Das, Srimanta Ray & Ankur Biswas, "An Improved ANN Model for Prediction of Solar Radiation Using Machine Learning Approach", Applications of Internet of Things.

In refereed international Conference:

1. Sumata Das, Pritam Dey, Srimanta Ray, "Mechanistic study on adsorption of aqueous pollutants on waste biomass derived activated carbon", ICAWTM-22: 1st International Conference on Advances in Water Treatment and Management, Pandit Deendayal Energy University (PDEU) Gandhinagar, Gujarat, India, March 25-26, 2022.
2. Monjit Roy, Srimanta Ray, "Petroleum Waste water treatment case study & comparative analysis on membrane bio-reactors", INTERNATIONAL CONFERENCE ON TECHNOLOGICAL INTERVENTIONS FOR SUSTAINABILITY, MNIT, Allahabad, Prayagraj, April 2022.
3. Dr. Tarun Kanti Bandyopadhyay, "Effect of preservatives for edible c-phycoerythrin from cyanobacterium anabaena sp. Bta-903", International Conference on emerging technologies in food processing-II (ETFP 2022) 22-26 March 2022, Dept. of Food processing Technology, Ghani Khan Choudhury Institute, Malda, W.B.
4. Dr. Tarun Kanti Bandyopadhyay, "Comparative study of Blood flow through Normal, Stenosis affected and Bypass grafted artery using Computational Fluid Dynamics", 4th International Conference on Intelligent Computing & Optimization 2021, Dec 30-31, 2021, ICO 2021-Hybrid Conf. (Zoom Webnair + Hua Hin)

Books Published:

<i>Name of the authors published</i>	<i>Title of the Books</i>	<i>Date of Publication of the book</i>	<i>Issue/Volume No/ Page No</i>
Sunil Kumar Maity, Kalyan Gayen, Tridib Kumar Bhowmick	Hydrocarbon biorefinery: Sustainable processing of biomass for hydrocarbon biofuels	September 2021	ISBN: 9780128233061

Distinguished Visitors to the Department:

Sl No	Name of the Visitors and Designation	Date of Visit	Purpose of Visit
1.	Mr. Ram Prasad Das, Branch Manager, Haritsons Mintech Pvt. Ltd & Executive member of All India Rubber Industries, Pune	November, 11 th 2021	Chemical Engineering Laboratory visit.

7.6 Institute – Industry Collaboration:

Internship organized for students in various industries including ONGC, IOCL, etc.

7.7 Placement Data:

41 students, of 41 eligible students from the batch 2018-22, graduating in 2022, were placed. 2 students qualified in GATE 2022.

7.8 Other Activities:

- i) Curriculum of the PG programme thoroughly revised including structure and contents of several theory and laboratory courses.
- ii) Started a course named Technical Writing and Seminar to promote development of employability skills and students.
- iii) Conducting a course on Entrepreneurship Management at UG and PG level to promote Entrepreneurship among students.

8.0 CHEMISTRY DEPARTMENT

8.1 Introduction:

The Department of Chemistry aims to be the best provider of chemical education within the Northeast region and to be a leader in research, publications and scholastic excellence. We are committed to providing a stimulating learning environment for our students, courses that are relevant and an experience that is world-class whether judged by local or international standards. Our goal is to present the content of chemistry set in a current and relevant context for engineers. As this is a support course taken usually in the first year, we also have goals related to the improvement of skill levels pertaining to the use of technology and communication. We add to this a conscious effort to foster attitudes of lifelong learning and appreciation for chemistry as a core of knowledge.

Department consists of students, research scholars, teachers and staff. Students and research scholars are the backbone of the department. Success of our students and research scholars at the national and international level is thus the motivation of teachers to guide them better and better. All faculties in the department are highly educated with all having PhD degrees and a good number of publications. We are strongly motivated to impart and enhance the advanced knowledge and skills of students and professionals to meet the global challenges, to address rural needs through research and to offer effective solutions to the industries through research and consultancies.

The Chemistry department believes in and supports the study, teaching and understanding of chemical principles across a wide spectrum of areas: inorganic, organic, physical. Dedicated to excellence in graduate and undergraduate education, the chemistry faculty teaches all lab sections and evaluates and grades all assignments. Our department believes chemistry occupies a central position in the physical sciences. The faculty and staff of the Chemistry department complement their love of teaching and learning with a strong sense of community. Our department functions as an active community of educators and interacts closely with our students. Working collaboratively, we strive to develop better capabilities in science and a better understanding of the learning process. Most importantly, we sincerely hope our students acquire the skills and confidence to become lifelong learners.

8.2 Academic Programme

The Department of Chemistry has offered Engineering Chemistry for first and second semester students of various engineering branches along with 5-year integrated BS-MS and 2 years M.Sc. program in Chemistry. The course curriculum and syllabus were formulated with the help of Professors from reputed institutions of our country like IISc. Bangalore, IIT Kharagpur etc. The Department has an intake capacity of 13 students per session for MSc. program and 25 students per session for dual BS-MS program. Department has also enrolled for Ph.D. programs in chemistry every year depending on the availability of seats.

Semester wise number of students

Course	Semester	Number of students
M.Sc	I	13
M.Sc	III	07
BSMS Dual	I	25
BSMS Dual	III	19
BSMS Dual	V	19
BSMS Dual	VII	16
BSMS Dual	IX	15

The Chemistry Department has developed infrastructure for carrying out the research work in various fields such as natural product chemistry, organic synthesis, organometallic chemistry, coordination chemistry, green chemistry, bioinorganic and nanotechnology.



8.3 Faculty and their Activities:

Short-Term Courses/ Workshops/ Seminar/ Symposia/ Conferences organized by the faculty members:

Sl. No.	Co-ordinators	Title	Period
1	Dr. Mitali Saha	Seven days lectures and hand -on-training on “Chemistry of Nanomaterials” by Prof. Panchanan Pramanik, Ex-Professor, IIT Kharagpur	24 th -30 th January 2023
2.	Dr. Abhishek Koner (Co-ordinator) and Dr. Venkata Bharat Nishtala (Convener)	Seven-Day Workshop on Advances in Chemical Sciences	18-01-2023 to 24-1-2023

Honours and Awards obtained:

Sl. No.	Name of Faculty	Honours	Honoured by	Honoured for	Date
1.	Dr. Tarun Kumar Misra	Resource Person	Manipur University	Refreshers course Talk in Chemical Sciences	25.11.2022
2.	Dr. Tarun Kumar Misra	Resource Person	NEHU	Refreshers course Talk in Chemistry	31.10.2022

Fellowships of Academics and Professional Societies:

Sl. No.	Name of Faculty	ISTE/ CSI and others	Level	Year
1.	Dr. Saroj Kr. Das	Indian Chemical Society	Life Member	1995
2.	Dr. Tarun K. Misra	Indian Science Congress Association; Indian Chemical Society	Life Member	2013; 2014
3.	Dr. Mitali Saha	Indian Chemical Society; Indian Carbon Society	Life member	2016; 2011

8.4 Research and Consultancy:**Sponsored Research Projects:**

Sl. No.	Title	Period	Funding Agency	Amount (in lakhs)	Co-ordinators
1.	Development of metal nanocomposites for the enhancement of efficiency of solar cell	Jan 2022- December 2023	Central Power Research Institute, Bangalore	16.86	Dr. Mitali Saha (PI)

Honours and Awards obtained:

Sl. No.	Name of Faculty	Honours	Honoured by	Honoured for	Date
1	Dr. Tarun Kumar Misra	Resource Person	Manipur University	Refreshers course Talk in Chemical Sciences	25.11.2022
2	Dr. Tarun Kumar Misra	Resource Person	NEHU	Refreshers course Talk in Chemistry	31.10.2022

Fellowships of Academics and Professional Societies:

Sl. No.	Name of Faculty	ISTE/ CSI and others	Level	Year
1	Dr. Saroj Kr. Das	Indian Chemical Society	Life Member	1995
2	Dr. Tarun K. Misra	Indian Science Congress Association; Indian Chemical Society	Life Member	2013; 2014

3	Dr. Mitali Saha	Indian Chemical Society; Indian Carbon Society	Life member	2016; 2011
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Research Publications:

Total No. of papers published in Refereed International Journals	: 39
Total No. of papers presented in National Conference	: 02
Total No. of papers presented in International Conferences	: 01
Total No. of Books published	: 01

In Refereed International Journals:

1. J Debbarma, M Naik, M Saha*, A Bhargava, N-Graphene derivatives from papaya seeds: Synthesis and Chemistry, *Journal of Scientific & Industrial Research* 79 (3), (2022) 246-249
2. J Debbarma, S Banik, M Saha*, Valorization of sugarcane bagasse to sulfur containing graphene: chemistry and mechanism, *Journal of Natural Fibers* 19 (14), (2022) 9776-9781
3. Peetam Mandal, Jhuma Debbarma, Mitali Saha*, Graphene assisted photodegradation of pollutant dyes and its pragmatic effect on Lemna Minor and Eichhornia crassipes, *International Journal of Nanoscience and Nanotechnology*, Volume 18, issue 2 (2022), 109-122.
4. P Mandal, M Saha*, "Photodegradation Behaviour of Nitrogen-Containing Graphene Derivatives Towards Pollutant Dyes and Real-Time Assessment on Aquatic Weed," *Biointerface Research in Applied Chemistry*, Volume 12, Issue 4 (2022), 4357-4373
5. Jhuma Debbarma, Udayan Debnath, Mitali Saha*, One-Step Synthesis of N/N-S Graphene from Fruitwastes: Chemistry and Mechanism, *Biointerface Research in Applied Chemistry*, Volume 13, Issue 2 (2023), 115.
6. Jhuma Debbarma, Ranjit Debnath, Mitali Saha*, Nitrogen-Containing Graphene for Electrochemical Sensing of Glucose, *Biointerface Research in Applied Chemistry*, Volume 13, Issue 3 (2023), 250.
7. Peetam Mandal, Jhuma Debbarma, Mitali Saha*, Critical Review on the Photodegradation Ability of Graphene and its Derivatives against Malachite Green, Methylene Blue, and Methyl Orange, *Biointerface Research in Applied Chemistry*, Volume 12, Issue 1 (2023), 1-30.
8. J Debbarma, R Debnath, M Saha*, Graphene from sugarcane bagasse for electrochemical sensing of glucose, *Lett. Appl. NanoBioSci* 10, (2023) 115.
9. R Debnath, P Sutradhar, M Saha, Design of porous materials from organic precursors, *Crystal Research and Technology* 58 (3), (2023) 2200186.
10. Dibutyltin(IV) complex of 2-[(E)-(4-hydroxy-3-[(E)-[(quinolin-2-yl)imino] methyl]phenyl) diazenyl]benzoic acid: Synthesis, spectroscopy and in vitro antifungal activity. Roy, M.; De, J. *Iran. J. Chem. Chem. Eng.*, 2022, 41, (7), 2263- 2269.
11. Trilochan Baral, Chitrani Datta, and Subhojit Das, Cu Nanoparticle-Based Solution and Paper Strips for Colorimetric and Visual Detection of Heavy Metal Ions. *ACS Omega*, 2022; 7: 37279-37285 (I.F: 4.132)
12. Sumati Malik; Susmita Saha; Samir Kumar Sil; Chitrani Datta; Subhojit Das, A silver iodide nanoparticle containing plant extract-based gelatinous composite for antibacterial coating applications. *Applied Nanoscience*, 2022; 12: 3901–3908 (I.F: 4.288)
13. Manashi Rudra Paul & Chitrani Datta, Homodinuclear tetradentate Schiff base complexes of nickel(II), cadmium(II) and mercury(II): synthesis, photophysical and mesophase investigation. *Phase Transitions*, 2023, 96, 290–300 (I.F: 1.452)
14. Subham Nath, Rohit Kumar, Shweta Bhargava, Subhojit Das & Chitrani Datta, A novel nanocomposite comprising Schiff base ligand functionalized zinc sulphide nanoparticles for heavy metal detection and photocatalytic dye degradation. *Phase Transitions*, 2023, 96, 1–11 (I.F: 1.452)
15. Synthesis and structures of polynuclear organotin(IV) complexes of a polyaromatic carboxylate ligand and cytotoxic evaluation in tumor cell lines. Tushar S. Basu Baul,

- Bietlaichhai Hlychho, Maheswara Rao Addepalli, Sajal Kundu, Dick de Vos, Anthony Linden. *Journal of Organometallic Chemistry*, 985(2023) 122592
16. P. Debnath, P. Debnath, M. Roy, L. Siero, W. Maniukiewicz, T. Aktar, D. Maiti, A.S. Novikov, and T.KMisra, "Novel Organotin(IV) Complexes of 2-[4-Hydroxy-3-((2-hydroxyethylimino)methyl)phenylazo]benzoic Acid: Synthesis, Structure, Noncovalent Interactions and In Vitro Antibacterial Activity", *Crystals* 2022, Vol.12, 1582
 17. P. Debnath, P. Debnath, T.S.Devi, S.S.K.Singh, A. Bhattacharya, K.S.Singh, M. Roy, T. K. Misra, "Synthesis, structures, antioxidant, and antifungal activities of organotin(IV) complexes derived from 1-(3'-carboxyphenylhydrazono)naphthalene-2-one", "*Journal of Coordination Chemistry*", 2022, Vol. 75, 19-24
 18. A silver iodide nanoparticle containing plant extract-based gelatinous composite for antibacterial coating applications *Applied Nanoscience* 2022, 12, 3901–3908 (Published on: 22 October 2022)
 19. Cu Nanoparticle-Based Solution and Paper Strips for Colorimetric and Visual Detection of Heavy Metal Ions *ACS Omega* 2022, 7, 37279–37285 (Published on: 25 October 2022)
 20. Sabbir Ahamed, Manas Mahato, Najmin Tohora, Tuhina Sultana, Rajkumar Sahoo, Susanta Ghanta and Sudhir Kumar Das, "A PET and ESIPT-communicated Ratiometric, Turn-on Chromo-fluorogenic Sensor for Rapid and Sensitive Detection of Sarin gas Mimic, Diethylchlorophosphate"; *Talanta*, 258 (2023) 124448. IF=6.556.
 21. Ziaur Rahman, Najmin Tohora, Manas Mahato, Tuhina Sultana, Prabal Pramanik, Susanta Ghanta, Ankita Das, Pallab Dutta and Sudhir Kumar Das, "A 4-Aminophthalimide Derive Smart Molecule for Sequential Detection of Aluminum Ions and Picric Acid" *Journal of Photochemistry & Photobiology, A: Chemistry* 439 (2023) 114593. IF=5.141
 22. Tuhina Sultana, Manas Mahato, Najmin Tohora, Sabbir Ahamed, Prabal Pramanik, Susanta Ghanta and Sudhir Kumar Das, "A Phthalimide-based Turn on Fluorosensor for Selective and Rapid Detection of G-Series Nerve Agent's Mimics"; *Journal of Photochemistry & Photobiology, A: Chemistry* 439 (2023) 114584. IF=5.141
 23. Susanta Ghanta, "Design of derivatives of FOX-7 based new four member hetero cyclic insensitive high energy density molecules: A Theoretical Prospectives" *Journal of Molecular Modeling* (2023) 29:18. <https://doi.org/10.1007/s00894-022-05414-2> . IF= 2.172.
 24. Ziaur Rahman, Manas Mahato, Sukumar Mardanya, Najmin Tohora, Susanta Ghanta* and Sudhir Kumar Das*, "Spectroscopic and density functional studies on the interaction of a naphthalene based salen derivative with anions" *Journal of Fluorescence*. (2023) 33:1027–1039. IF=2.525 <https://doi.org/10.1007/s10895-022-03092-0>
 25. Manas Mahato, Sabbir Ahamed, Najmin Tohora, Tuhina Sultana, Susanta Ghanta and Sudhir Kumar Das "A Coumarin151 Derived Ratiometric and Turn on Chemosensor for Rapid Detection of Sarin Surrogate" *Microchemical Journal* 185 (2023) 108240. IF=5.304
 26. Nishithendu Bikash Nandi, Susanta Ghanta, Julia Kłak, Lesław Sieroń, Waldemar Maniukiewicz, Tarun Kumar Misra; "Pseudohalide Coligands Guided Structural Motifs, Electrochemistry, Magnetism, and BSA-Interactions of Copper(II) Complexes Derived from 1,3-Dimethy-6-Aminouracil"; *Polyhedron* 230 (2023) 116215 . IF=2.975
 27. Manas Mahato; Pallobi Sarkar; Tuhina Sultana; Najmin Tohora; Susanta Ghanta; Ankita Das; Pallab Dutta and Sudhir Kumar Das; "Target Analyte Interaction with a New Julolidine Coupled Benzoxazole-based Dyad: A combined Photophysical, Theoretical (DFT), and Bioimaging Study"; *Chemistry Select* 7 (2022) e202204033. IF=2.307
 28. Manas Mahato, Sukumar Mardanya, Ziaur Rahman, Najmin Tohora, Prabal Pramanik, Susanta Ghanta, Avik Acharya Chowdhury, Tapan Kumar Shaw and Sudhir Kumar Das; "A Coumarin

- Coupled Electron Donor-Acceptor Dyad for Cascade Detection of Aluminium Ions and Explosive Nitroaromatic Compounds”; *Journal of Photochemistry and Photobiology A: Chemistry*, 433 (2022) 114168 . IF=5.141
29. Manas Mahato, Najmin Tohora, Ziaur Rahman, Tuhina Sultana, Susanta Ghanta, Sudhir Kumar Das; A benzoxazole-based smart molecule for relay detection of zinc and phosphate ions and its implication towards molecular logic gate constructions,” *Journal of Photochemistry and Photobiology A: Chemistry*, 432 (2022) 114113. IF=5.141
 30. Ziaur Rahman, Madan Rajbanshi , Manas Mahato , Susanta Ghanta , Sudhir Kumar Das, “A phthalimide scaffold smart molecule for visualization of acid-base equilibrium and determination of acid dissociation constants in the non-aqueous medium” ; *Journal of Molecular Liquids*, 359 (2022) 119365. IF=6.633
 31. Ziaur Rahman , Manas Mahato , Najmin Tohora , Susanta Ghanta , Sudhir Kumar Das; “Reversible acidochromism of a benzoxazole based scaffold and construction of reconfigurable dual output molecular logic gates”; *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 278 (2022) 121310. IF=4.831
 32. Miji E. Joy, Neeraj Kumar Sah, Shankab Jyoti Phukan, Vellaichamy Ganesan, Manas Roy, Piyush Kumar Sonkar, Somenath Garai, and Kamatchi Sankaranarayanan. “Ultrafast Detection of Ammonia at Room Temperature and Subsequent Electrochemical Water Splitting via the Ionic Liquid Templated Nano Nickel Oxide.” *Materials Chemistry and Physics* 290 (October 2022): 126537. <https://doi.org/10.1016/j.matchemphys.2022.126537>. (SCIE and SCOPUS Indexing).
 33. Bose, Reshmi, Abdullah K Alanazi, Soumalya Bhowmik, Somenath Garai, Manas Roy, Bholanath Pakhira, and Tanay Pramanik. “Applications of Graphene and Graphene Oxide as Versatile Sensors: A Brief Review,” (December 2022): <https://doi.org/doi.org/10.33263/BRIAC135.457>. (SCOPUS Indexing)
 34. S. A. Khan and T. K. Misra (2023), 5-Aminoisophthalate Capped Gold Nanoparticles for Size Dependent Degradation of Azo-Dyes. *Colloid Journal* (Springer, SCI, IF: 1.1) (Accepted)
 35. B. Biswas, T. K. Misra, D. Ray, T. Majumder, T. K. Bandyopadhyay, T. K. Bhowmick (2023), Current therapeutic delivery approaches using nanocarriers for the treatment of tuberculosis disease. *International Journal of Pharmaceutics*, 640, 123018. (Elsevier SCI, IF: 5.8).
 36. D. C. Patra, N. Deka, A. Dash, S. A. Khan, T. K. Misra, and S. P. Mondal (2023). Noninvasive Electrochemical Nitric Oxide Detection in Human Saliva Using Pt and TiO₂ Nanoparticle Composite Electrodes. *ACS Applied Electronic Materials*, 5, 832-845. (ACS, SCI, IF: 4.7)
 37. P. Debnath, P. Debnath, Th. S. Devi, S. S. K. Singh, A. Bhattacharya, K. S. Singh, M. Roy, T. K. Misra (2022). Synthesis, structures, antioxidant, and antifungal activities of organotin(IV) complexes derived from 1-(3'-carboxyphenylhydrazono)naphthalene-2-one. *Journal of Coordination Chemistry*, 75, 3015 – 3032. (Taylor & Francis, SCIE, IF: 1.9)
 38. P Debnath, P Debnath, M Roy, L Sieroń, W Maniukiewicz, T Aktar, D Maiti, A. S. Novikov, T. K. Misra (2022). Novel Organotin(IV) Complexes of 2-[4-Hydroxy-3- ((2-hydroxy ethylimino)methyl)phenylazo]benzoic Acid: Synthesis, Structure, Noncovalent Interactions and In Vitro Antibacterial Activity. *Crystals* 12, 1582 (MDPI, SCIE, IF: 2.7)
 39. SC Biswas, P Kumar, R Kumar, S Das, TK Misra, D Dey (2022). Nutritional Composition and Antioxidant Properties of the Wild Edible Fruits of Tripura, Northeast India. *Sustainability* 14, 12194. (MDPI, SCIE, IF: 3.9)

In Proceedings of National Conference:

1. Jhuma Debbarma and Mitali Saha, Synthesis of N/N-Containing Graphene from fruit wastes: Chemistry and mechanism, National Conference on Advances in Chemical Research (ACR-2022) Manipur University 22-23 April, 2022.
2. Ranjit Debnath and Mitali Saha, Synthesis of porous graphene from phloroglucinol, National conferences on “Emerging Challenges in the Frontiers of Chemical Science (NC-ECFCS-2023)” held on March 29-30, 2023 at Manipur University, Manipur, India.

In Proceedings of International Conference:

1. Ranjit Debnath and Mitali Saha, Porous graphene from 2-Amino-3-hydroxy pyridine, International conference on “Emerging Trends in Chemistry (ICETC-2023)” held on March 16-17, 2023 at Assam Don Bosco University, Assam, India.

Books Published:

<i>Name of the authors published</i>	<i>Title of the books</i>	<i>Date of publication of the books</i>	<i>Issue/ Volume No./ page no.</i>
Dr. Jhinuk De, Dr. Mamta Goyal, Dr. Jyotsna Pandit and Mrs. Jenifer Robinson	Engineering Chemistry; ISBN No. 978-93-5625-611-8	Month of Dec-2022	Issue-1 Page-1-500

8.5 Placement Data:

Sl No	Name of the student	Enrollment No.	Company Name
1.	Souradip Sarkar	21PCY003	Akash Byzus
2.	Abhisekh Kumar	18DSCY013	Chandrayan
3.	Achismita Das	19DSCY005	The affordable organic store

9.0 COMPUTER SCIENCE AND ENGINEERING DEPARTMENT

9.1 Introduction:

The Department of Computer Science and Engineering of National Institute of Technology Agartala offers undergraduate and postgraduate programmes & PhD programme in Computer Science and Engineering where students are encouraged to acquire knowledge with an integrated thinking on education, research & development, application and training. The students are provided knowledge to understand the fundamentals of basic sciences and humanities, knowledge in inter-disciplinary areas, innovation, problem solving abilities, intellectual, honest and professional ethics and capacity for team work in national and international environments. The first undergraduate batch rolled out in the year 2003. Since its inception in 1999, the department has always been recognized for excellence.



9.2 Academic Programme:

This Institute offers courses of study and facilities for research leading to B. Tech, M. Tech, MCA and Ph.D under Computer Science & Engineering.

The department currently offers the following programmes: -

Undergraduate Programmes:

- B.Tech in Computer Science & Engineering (Total 8 Semesters / 4 years).

Postgraduate Programmes:

- M.Tech in CSE (Total 4 Semesters/2 years)
- M.Tech in Artificial Intelligence (Total 4 Semesters/2 years)
- MCA (Total 6 Semesters / 3 years)
- Ph.D

Students Enrolled :

<i>Programme</i>	<i>1ST sem</i>	<i>3rd sem</i>	<i>5th sem</i>	<i>7th sem</i>		<i>Total</i>
B.Tech		143	153	131		427
M.Tech (CSE)	-	7				29
M.Tech (AI)	7	6				
M.Tech (DSE)	4	-				

M.Tech (CS)	5	-			
MCA	25	26	12		63
PhD	11 (Jul)	4 (Jan)			15
Total					534

9.3 Faculty and their Activities:

Short-Term Courses/ Workshops/ Seminar/ Symposia/ Conferences organized by the faculty members:

Sl. No.	Co-ordinators	Title	Period	Funded Agency
FDP				
1	Dr. Suyel Namasudra	Online FDP on Blockchain Solution Architect funded	05/09/2022 to 11/09/2022	Ministry of Electronics and Information Technology
3	Dr. Suyel Namasudra	Online FDP on AWS Solution Architect Associate	16/05/2022 to 27/05/2022	Ministry of Electronics and Information Technology

Short-Term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the Faculty in Academic Institutions and Public Sector Undertakings

Sl. No.	Name of Faculty	Title	Period
1	Dr Kunal Chakma	FDP on “10 Days Online Master Training under the Cyber Gyan Project” organized by CDAC Noida and sponsored by Ministry of Electronics and Information Technology (MeitY)	12-23 Sep, 2022
2	Dr. Suyel Namasudra	Webinar on “IP Awareness/Training”	6 th April, 2022

Fellowships of Academics and Professional Societies:

Sl. No.	Name of Faculty	Level / Membership Details
1.	Dr. Mrinal Kanti Deb Barma	Member, IEEE
		Corporate Member, IEI(I)
		Member, IAENG
		Member, IACSIT
		Member, SCIEI
2	Dr. Ashim Saha	Member, IEEE
		Member, IEI (I)
		Member, IAENG
		Member, CSTA
3	Dr Suman Deb	Member, IEEE
		Member, ACM
		CSI Life Member
		IEI(Institute of Engineers India)- Member

		ISTE(Indian Society for Technical Education) –Life Member, Chairman , IIC and Startup NIT Agartala Chairman SCID
4	Dr Munesh Chandra	Senior Member, IEEE
		Executive Committee Member of IEEE, Region-10
		Life Member, CSI
		Senior Member, IACSIT
		Senior Member, ACM
5	Dr. Dwijen Rudrapal	Member, Institute of Engineers (India) Member, IACSIT Member, UACEE Member of NLP Association of India (NLP AI), Member of ACL Special Interest Group on the Lexicon
6	Dr. Anupam Jamatia	Member, IEEE IEEE Computer Society Membership, IEEE Computational Intelligence Society Membership, IEEE Young Professionals, Member, ACL Special Interest Group on the Lexicon, Member, ACL Special Interest Group on the Typology, Member of Natural Language Processing Association of India (NLP AI)
7	Dr Nirmalya Kar	Member IEEE,
		Life Member, CRSI Member IE(I)
8	Mr. Tribid Debbarma	Member IEEE Member ACM
9	Dr. Ranjitha Das	Member, ACM
10	Dr. Suyel Namasudra	Member, IEEE Member, ACM Member, IEI
11	Dr. Jayakumar L	Member, ACM
12	Dr. Tannistha Pal	Member, IEEE
		Member, IEI(I)
		Member, IAENG
13	Dr. Prashant Bhardwaj	Associate member of The Institution of Engineers (India)
14	Dr. Kishore Kumar Dhar	Member, IEI(I)

9.4 Design and Development Activities:***Brief and specific details of Process/ Instruments/ Equipment/ Software Designed and developed:***

- Dr Munesh Chandra, Dr Kunal Chakma, Dr Dwijen Rudra Pal, Mr. Harivans Pratap Singh, and Ms. Adhya Trivedi have designed and developed “FRICTIONLESS EXTENDABLE ROAD BARRIERS dated 22/3/2023 with Design No. 382118-001”. Date of issue: 31/5/2023 Status: Design Accepted and Published, Journal No is 22/2023 and Journal Date is 02/06/2023.
- N Kar, S Das, S Deb and Udit M. have designed and developed "IoT Based Wearable Device for Monitoring of Vital Information", Indian Design Patent, Status: Design Accepted and Published, Journal No is 21/2023 and Journal Date is 26/05/2023.

9.5 Research and Consultancy:***Research Publications:***

Total No. of papers published in Refereed International Journals:	:	45
Total No. of papers presented in National Conference:	:	01
Total No. of papers presented in International Conferences:	:	14
Total No. of Books/Book Chapters published:	:	19
Total No. of patents Published / Granted:	:	11

In Refereed International Journals:

Sl. No.	Author (S) Name as per the Journal sequence	Title of the paper	Name of the journal	Year of Publ d	Index ed In	Impa ct factor	DOI
1	Subhrajyoti Deb, Bubu Bhuyan, Nirmalya Kar and K. Sudheer Reddy	Colour image encryption using an improved version of stream cipher and chaos	International Journal of Ad Hoc and Ubiquitous Computing	July 2022	SCIE	0.7	https://doi.org/10.1504/IJAHUC.2022.125428
2	K. Manjari, M. Verma, G. Singal, and S. Namasudra	QEST: Quantized and efficient scene text detector using deep learning	ACM Transactions on Asian and Low-Resource Language Information Processing	2022	SCIE	1.47	https://doi.org/10.1145/3526217
3	S. Das and S. Namasudra	MACPABE: Multi authority-based CP-ABE with efficient attribute revocation for IoT-enabled healthcare infrastructure	International Journal of Network Management	2022	SCIE	1.914	10.1002/NEM.2200

4	S. Das and S. Namasudra	Multi-authority CP-ABE-based access control model for IoT-enabled healthcare infrastructure	IEEE Transactions on Industrial Informatics	2022	SCIE	11.648	10.1109/TII.2022.3167842
5	S. Das and S. Namasudra	A novel hybrid encryption method to secure healthcare data in IoT-enabled healthcare infrastructure	Computers and Electrical Engineering	2022	SCIE	4.152	https://doi.org/10.1016/j.compeleceng.2022.107991
6	S. Malviya, P. Kumar, S. Namasudra, and U. S. Tiwary	Experience replay-based deep reinforcement learning for dialogue management optimisation	ACM Transactions on Asian and Low-Resource Language Information Processing	2022	SCIE	1.47	https://doi.org/10.1145/3539223
7	S. Namasudra, R. G. Crespo, and S. Kumar	Introduction to the special section on advances of machine learning in cybersecurity (VSI-mlsec)		2022	SCIE	4.152	https://doi.org/10.1016/j.compeleceng.2022.108048
8	S. Muhuri, S. Kumari, S. Namasudra, and S. Kadry	Analysis of the pertinence of Indian women's institutions in collaborative research	IEEE Transactions on Computational Social Systems,	2022	SCIE	5.357	10.1109/TCSS.2022.3183949
9	S. Debnath, P. Roy, S. Namasudra, and R. G. Crespo	Audio-visual automatic speech recognition towards education for disabilities	Journal of Autism and Developmental Disorders	2022	SCIE	4.345	10.1007/s10803-022-05654-4
10	S. Namasudra and P. Sharma	Achieving a decentralized and secure cab sharing system using blockchain technology	IEEE Transactions on Intelligent Transportation Systems	2022	SCIE	9.551	10.1109/TITS.2022.3186361
11	M. Bhatia, S. Bhatia, M. Hooda, S. Namasudra, and D. Taniar	Analyzing and classifying MRI images using robust mathematical modeling	Multimedia Tools and Applications	2022	SCIE	2.577	10.1007/s11042-022-13505-8
12	P. Pavithran, S. Mathew, S.	Enhancing randomness of the ciphertext	Cluster Computing	2022	SCIE	2.303	10.1007/s10586-022-03653-9

	Namasudra, and A. Singh	generated by DNA-based cryptosystem and finite state machine					
13	A. Singh, A. Kumar, and S. Namasudra	DNACDS: Cloud IoE big data security and accessing scheme based on DNA cryptography	Frontiers of Computer Science	2022	SCIE	2.669	https://doi.org/10.1007/s11704-022-2193-3
14	S. Namasudra	A secure cryptosystem using DNA cryptography and DNA steganography for the cloud-based IoT infrastructure	Computers and Electrical Engineering	2022	SCIE	4.152	https://doi.org/10.1016/j.compeleceng.2022.108426
15	S. Das and S. Namasudra	A lightweight and anonymous mutual authentication scheme for medical big data in distributed smart healthcare systems	IEEE/ACM Transactions on Computational Biology and Bioinformatics	2022	SCIE	3.702	10.1109/TCBB.2022.3230053
16	P. Sharma, S. Namasudra, N. Chilamkurti, B. G. Kim, and R. G. Crespo	Blockchain-based privacy preservation for IoT-enabled healthcare system	ACM Transactions on Sensor Networks		SCIE	2.56	https://doi.org/10.1145/3577926
17	S. Das and S. Namasudra	Lightweight and efficient privacy-preserving mutual authentication scheme to secure IoT-based smart healthcare	Transactions on Emerging Telecommunications Technologies	2022	SCIE	3.31	10.1002/ETT.4716
18	P. Sharma, S. Namasudra, R. G. Crespo, J. P. Fuente, and M. C. Trivedi	EHDHE: Enhancing security of healthcare documents in IoT-enabled digital healthcare ecosystems using blockchain	Information Sciences	2023	SCIE	8.233	https://doi.org/10.1016/j.ins.2023.01.148
19	S. Namasudra, S. Dhamodharavadhani, R. Rathipriya, R. G. Crespo, and N. R. Moparthy	Enhanced neural network-based univariate time series forecasting model for big data	Big Data	2023	SCIE	4.426	10.1089/big.2022.0155

20	S. Namasudra, P. Lorenz, and U. Ghosh	Editorial: The new era of computer network by using machine learning	Mobile Networks and Applications	2023	SCIE	3.077	10.1007/s11036-023-02114-w
21	R. Khamkar, P. Das, and S. Namasudra	SCEOMOO: A novel Subspace Clustering approach using Evolutionary algorithm, Off-spring generation and Multi-Objective Optimization	Applied Soft Computing	2023	SCIE	8.263	https://doi.org/10.1016/j.asoc.2023.110185
22	Ngangbam Herojit Singh, Anuradha Laishram, Khelchandra Thongam	Optimal Path Planning for Mobile Robot Navigation Using FA-TPM in Cluttered Dynamic Environments	Procedia Computer Science	2023	Scopus		https://doi.org/10.1016/j.procs.2023.01.043
23	Maibam Mangalleibi Chanu, Ngangbam Herojit Singh, Khelchandra Thongam	An automated epileptic seizure detection using optimized neural network from EEG signals	Expert Systems	2023	SCIE	3.3	https://doi.org/10.1111/exsy.13260
24	Srivastava, AK, Tripathi, V, Pant, B, Singh, DP, Trivedi, Munesh Chandra	Automatic and multimodal nuisance activity detection inside ATM cabins in real time	Multimedia Tools and Applications,	2022	SCI		-
25	Swati Vashisth, Praveen Kumar, Munesh Chandra Trivedi	Crop Yield Prediction Using Improved Extreme Learning Machine	Communications in Soil Science and Plant Analysis	2023	SCI		Volume 54, Issue, 1, Page, 1-21, JAN 2023
26	Jain S.;Ramesh D.;Trivedi Munesh Chandra, Edla D.R,	Evaluation of metaheuristic optimization algorithms for optimal allocation of surface water and groundwater resources for crop production	Agricultural Water Management,	2023	SCI		Volume 279, Year 2023, DOI:10.1016/j.agwat.2023.108181
27	Shobhan Kumar, Munesh Chandra Trivedi, Arun Chauhan	Real Time Air-Written Mathematical Expression Recognition for	Neural Processing Letters	2023	SCI		https://doi.org/10.1007/s11063-022-11012-3

		Children's Enhanced Learning					
28	D Debnath, R Das & P Pakray	Single document text summarization addressed with a cat swarm optimization	Applied Intelligence	2022	SCI	5.3	https://doi.org/10.1007/s10489-022-04149-0
29	A Achom, R Das and P Pakray	An improved Fuzzy based GWO algorithm for predicting the potential host receptor of COVID-19 infection	Computers in Biology and Medicine	2022	SCI	7.7	https://doi.org/10.1016/j.compbiomed.2022.106050
30	J Kolluri and R Das	Intelligent multimodal pedestrian detection using hybrid metaheuristic optimization with deep learning model	Image and vision computing	2023	SCI	4.7	1. https://doi.org/10.1016/j.imavis.2023.104628 .
31	M Rajesh, B Senapati, R Das, S Martha	Identifying Colorectal Tumor For Single Cell RNA Sequence Using Rectified Linear Unit With Stochastic Gradient Descent	Procedia Computer Science	2023	Scopus		https://doi.org/10.1016/j.procs.2023.01.001
32	J Kolluri and R Das	<i>An Evaluation of Deep Learning-Based Object Identification. International Journal on Recent and Innovation Trends in Computing and Communication</i>	International Journal on Recent and Innovation Trends in Computing and Communication	2022	Scopus		https://doi.org/10.17762/ijritcc.v10i1s.5795
33	D Debnath, R Das, P Pakray and R Laskar	<i>. Extractive single-document summarization using adaptive binary constrained multi-objective</i>	Innovations in Systems and Software Engineering	2022	Scopus		1. https://doi.org/10.1007/s11334-022-00474-2

		<i>differential evaluation</i>					
34	Mili Dhar, Bidyut K. Hattacharyya, Mrinal Kanti Debbarma, Swapan Debbarma	A comprehensive study of different objectives and solutions of controller placement problem in software-defined networks	Transactions on Emerging Telecommunication	2022	SCI		https://doi.org/10.1002/ett.4316
35	R. Padmanaban, M. Thirumaran, R. Aruna, L. Jayakumar	PIRAP: Security Assessment Framework for Heterogeneous Web Service Composition	International Journal of Cooperative Information Systems, ISSN: 1793-6365	2023	SCI	1.5	https://doi.org/10.1142/S0218843022500034
36	K. Meena, Veeramakali, T. Singh. N.H., L. Jayakumar, Muthuvel P	Deep learning techniques for prediction of pneumonia from lung CT images	Soft Computing, ISSN: 1433-7479	2023	SCI	4.1	https://doi.org/10.1007/s00500-023-08280-z
37	B. J. D. Kalyani, K. Meena, E. Murali, L. Jayakumar, D. Saravanan	Analysis of MRI brain tumor images using deep learning techniques	Soft Computing, ISSN: 1433-7479	2023	SCI	4.1	https://doi.org/10.1007/s00500-023-07921-7
38	Perumal Iyappan, L. Jayakumar, Manoj Kumar Verma, Ankur Dumka, Rajesh Singh, Anita Gehlot, Shaik Vaseem Akram, Sukhdeep Kaur, Kapil Joshi	A generic and smart automation system for home using internet of things	Bulletin of Electrical Engineering and Informatics	2022	Scopus		10.11591/eei.v1i15.3785
39	L. Jayakumar*, Jothi Chitra, J. Sivasankari, S. Vidhya, Laura Alimzhanova, Gulnur Kazbekova, Bakhytzhan K, Alma K, S. Devi, DM Teresa	QoS Analysis for Cloud based IoT Data using Multi-Criteria based Optimization Approach	Computational Intelligence and Neuroscience	2022	Scopus		https://doi.org/10.1155/2022/7255913

40	L. Jayakumar*, S. Janakiraman	A novel Need based free channel selection scheme for cooperative CRN using EFAHP-TOPSIS	Journal of King Saud University - Computer and Information Sciences, ISSN: 1319-1578	2022	SCI	13.47	https://doi.org/10.1016/j.jksuci.2019.09.005
41	Sanchaita Misra, Abu Md Ashif Ikbal, Dipanjan Bhattacharjee, Minakshi Hore, Snehasis Mishra, Sankha Karmakar, Alakendu Ghosh, Ravurushanmuk Srinivas, Abhik Das, Shivankar Agarwal, Krishna das Saha, Prashant Bhardwaj , I.B.Ubhadia, Parasar Ghosh, Sirshendu De, Onkar Nath Tiwari, Debprasad Chattopadhyay, Partha Palit	Validation of Antioxidant, Antiproliferative and in-vitro Anti-Rheumatoid Arthritis activities of Epigallocatechin rich bio-active fraction from Camellia sinensis var. assamica, Assam variety White Tea and its comparative evaluation with Green-tea fraction.	Journal of Food Biochemistry	2022	SCI (Q1)	3.654	10.1111/jfbc.14487
42	Tania Paul, Prashant Bhardwaj , Abhijit Mondal, Tarun Kanti Bandyopadhyay Nibedita Mahata, Biswanath Bhunia	Identification of Novel Protein Targets of Prodigiosin for Breast Cancer Using Inverse Virtual Screening Methods	Applied Biochemistry and Biotechnology	2023	SCI (Q2)	3.094	10.1007/s12010-023-04426-9
43	Buddhadeb Pradhan, Mir Wajahat Hussain, Gautam Srivastava, Mrinal K. Debbarma, Rabindra K. Barik, Jerry Chun-Wei Lin	A neuro-evolutionary approach for software defined wireless network traffic classification	IET Communications	2022	SCI	1.6	https://doi.org/10.1049/cmu2.12548
44	Mili Dhar, Bidyut K Bhattacharyya, Mrinal Kanti Debbarma, Swapan Debbarma	A cost-effective and load-balanced controller placement method in software-defined networks	Wiley	2022	SCI	1.5	https://doi.org/10.1002/nem.2199

45	Habila Basumatary, Mrinal Kanti Debbarma	Comparative Study on Different Parameters Used for Energy Conservation in Wireless Sensor Networks	Taylor & Francis	2022	SCI	2.4	https://doi.org/10.1080/02564602.2021.1882344
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In Proceedings of International Conference:

Sl. No.	Author (S) Name as per the Journal sequence	Title of the paper	Name of the Conference	Year of Publication
1	Amaan Rizvi, Anupam Jamatia	NIT-Agartala-NLP-Team at EXIST 2022: Sexism Identification in Social Networks	Iberian Languages Evaluation Forum (IberLEF 2022) co-located with the Conference of the Spanish Society for Natural Language Processing (SEPLN 2022)	Sept 2022
2	Savita Sahu, Tribid Debbarma	Mental Health Prediction Among Students Using Machine Learning Techniques	International Conference on Frontiers of Intelligent Computing: Theory and Applications (FICTA 2022)	April-2023
3	Aparajita Sinha, Kunal Chakma	A Comparative Analysis of Sentiment Analysis and Emotion Detection Problems on Texts.	Intelligent Data Engineering and Analytics. FICTA 2022. Smart Innovation, Systems and Technologies, vol 327. Springer, Singapore.	Feb 2023
4	Aparajita Sinha, Kunal Chakma	A Comparative Analysis of Machine Learning Based Sentiment Analysis.	Artificial Intelligence. ISAI 2022. Communications in Computer and Information Science, vol 1695. Springer	Jan 2023
5	Nitish Kumar; Nirmalya Kar	Approaches towards Fake News Detection using Machine Learning and Deep Learning	10th International Conference on Signal Processing and Integrated Networks (SPIN)	March 2023
6	Purba Pal; Sharmila Ghosh; Nirmalya Kar	Attacks on Social Media Networks and Prevention Measures	International Conference for Advancement in Technology (ICONAT)	January 2023

7	Sharmila Ghosh; Purba Pal; Nirmalya Kar	An Analysis of Chaos-based Cryptographic Algorithms	Fifth International Conference on Electrical, Computer and Communication Technologies (ICECCT)	February 2023
8	Sristi Debnath; Nirmalya Kar	An Approach Towards Data Security Based on DCT and Chaotic Map	2nd Asian Conference on Innovation in Technology (ASIANCON)	August 2022
9	Kingshuk Debnath; Nirmalya Kar	Email Spam Detection using Deep Learning Approach	International Conference on Machine Learning, Big Data, Cloud and Parallel Computing (COM-IT-CON)	May 2022
10	Kingshuk Debnath; Nirmalya Kar	SMS Spam Detection Using Deep Learning Approach	Proceedings of ICHCSC 2022, Human-Centric Smart Computing. Smart Innovation, Systems and Technologies, vol 316. Springer, Singapore.	Nov 2022
11	J. Kolluri and R. Das	An efficient Synergic Model with Contrast Limited Adaptive Histogram Equalization model for Object Classification in Ship Detection	IEEE 2nd Mysore Sub Section International Conference (MysuruCon)	Dec 2022
12	M. Boruah and R. Das	Developments Pertaining to the Characteristics of the Sites of HIV Integration Highlighting its role in Clinical Research and its Future with AI	IEEE International IOT, Electronics and Mechatronics Conference (IEMTRONICS)	Jun 2022
13	R Das et al.	Emotion Recognition from Mizo Speech: A Signal Processing Approach	IEEE International Conference on Distributed Computing and Electrical Circuits and Electronics (ICDCECE)	
14	Ashwini S, Rajalakshmi N.R, Victor paul. P, Jayakumar L	Dynamic NLP Enabled Chatbot for Rural Health Care in India	IEEE Second International Conference on Computer Science, Engineering and Applications (ICCSEA)	Oct, 2022
15	Ashwini S, Rajalakshmi N.R, Jayakumar L	A Novel Voice Annotation In Images Using Enhanced CNN	Second National Conference on Recent Advancements in Science, Engineering & Technologies (RASET 2022)	May, 2022

Books Published:

Sl. No.	Author (S) Name as per the Book / Book Chapter	Title of the Book/Book chapter	Type (Book or Book Chapter)	Date of publication of the Book / Chapter
1	S. Namasudra and K. Akkaya	Blockchain and its applications in industry 4.0	Book	2023
2	S. Namasudra and K. Akkaya	Introduction to blockchain technology	Book Chapter	2023
3	S. Namasudra	Perspective of DNA computing in computer science	Book	2022
4	S. Minocha and S. Namasudra	Research challenges and future work directions in DNA computing	Book Chapter	2022
5	T. Kumar and S. Namasudra	Introduction to DNA computing	Book Chapter	2022
6	Munesh Chandra et al	DNA Sequence in Cryptography: A Study	Book Chapter	2023
7	Munesh Chandra et al	Recent Trends for Practicing Steganography Using Audio as Carrier: A Study	Book Chapter	2023
8	Munesh Chandra et al	Password-Protected Lossless Visible Watermarking Technique for Digital Image	Book Chapter	2022
9	Munesh Chandra et al	Metamorphic Cryptography using Concept of Spiral Transposition and LSBs Approach using Audio as Carrier Medium	Book Chapter	2023
10	Lalthangmawii, M., Das, R., Lalramhluna, R	Mizo News Classification Using Machine Learning Techniques	Book Chapter	2022
11	Kolluri, J., Das, R.	Ship Detection from Satellite Images with Advanced Deep Learning Model (Single Shot Detector (SSD)).	Book Chapter	2022
12	Boruah, M., Das, R.). Transfer Learning-Based Advanced Deep Learning Architecture for the Identification of HIV-1 Integration Sites Using Imbalanced Dataset	Book Chapter	2023
13	De, S., Das, R., Das, K	Deep Learning Based Bengali Image Caption Generation.	Book Chapter	2023
14	Senapati, B., Das, R	Single-Cell RNA Sequence Data Analysing Using Fuzzy de Based Clustering Technique	Book Chapter	2022
15	Pathak, A., Pakray, P., Das, R.	MathIRs: A One-Stop Solution to Several Mathematical Information Retrieval Needs	Book Chapter	2022
16	SC Satapathy, R Das,P Peer, J Tang, V Bhateja, A Ghosh	Evolution in Computational Intelligence	Book	2023
17	SC Satapathy, R Das,P Peer, J Tang, V Bhateja, A Ghosh	Intelligent Data Engineering and Analytics	Book	2023

18	Debnath, D., Pakray, P., Das, R., Gelbukh, A	An Abstractive Text Summarization Using Recurrent Neural Network	Book Chapter	2023
19	KK Barik, Vivek Mishra, JR Mohanty, Mrinal K Debbarma, RK Barik	Cloud GIS Model for Coastal Geospatial Big Data Analytics	Book Chapter	2022

Patent Published:

Sl. No.	Inventor Details	Status (Published or Granted)	Year published/Granted	Title of the Patent
1	Dr. Munesh Chandra Trivedi, Mr. Dhrubjyoti Bhowmik, Mr. Prashant Bhardwaj, Dr. Vineet Kumar Singh	Published	2023	Iot Based Humidity Monitoring System Using Machine Learning Approach In Agriculture
2	Dr. Munesh Chandra Trivedi, Ms. Nandita Goyal, Dr. Mrinal Kanti Deb Barma, Mr. Prashant Bhardwaj	Granted	2023	Smart Stand For Sun Tracking Solar Panel
3	Dr. Munesh Chandra Trivedi, Mr. Nikhil Debbarma, Mr. Prashant Bhardwaj	Granted	2022	Health Monitoring Device
4	Dr. Munesh Chandra Trivedi, Dr. Nirmalya Kar and Dr. Harivans Pratap Singh.	Published	2023	"Real-Time Face Recognition And Verification System"
5	S. Namasudra and P. Sharma	Granted	2023	A Privacy-Preserving Cab Sharing System And Method
6	Dr. Munesh Chandra Trivedi et al	Granted	2023	IOT Street Light Controller Device
7	Dr. Munesh Chandra Trivedi et al	Granted	2023	IOT Enabled Integrated Printer
8	Dr. Munesh Chandra Trivedi et al	Granted	2023	Portable Solar Heater
9	Dr. Munesh Chandra Trivedi et al	Granted	2023	Frictionless Extendable Road Barriers
10	Dr. Munesh Chandra Trivedi et al	Granted	2023	Frictionless Hydraulic Weight Lifter
11	Dr. Munesh Chandra Trivedi et al	Granted	2023	Smart Belt for School Children's

9.6 Placement Data

Number of students registered:	129
No of student Placed:	108
No of Students for Multiple offer:	26
No of Companies Visited	63
Avg package:	14.71 LPA
Highest package:	52 LPA

List of Companies Visited for placement:

<i>Amdocs</i>	<i>AWS</i>	<i>Vassar Labs</i>
<i>TATA ELXSI</i>	<i>Aakash Byju's</i>	<i>Brane</i>
<i>CGI</i>	<i>Tekion</i>	<i>Nation with Namu</i>
<i>Deloitte</i>	<i>Amazon</i>	<i>Zscaler</i>
<i>ITC Infotech</i>	<i>Digite Infotech Pvt Ltd</i>	<i>Mpowered Health</i>
<i>O9 Solutions</i>	<i>Godigit</i>	<i>Strand Life Science</i>
<i>Oracle</i>	<i>Publicis Sapient</i>	<i>Paypal</i>
<i>C-DOT</i>	<i>OMCS _Oracle</i>	<i>Jio Platforms</i>
<i>Samsung, Bangalore</i>	<i>Jio Platforms</i>	<i>PRADAN</i>
<i>Argusoft</i>	<i>Delhivery</i>	<i>MathWorks</i>
<i>Zycus</i>	<i>Appcino</i>	<i>Fanatics</i>
<i>ICICI Bank</i>	<i>Jungle Games</i>	<i>Gameskraft</i>
<i>InMovidu Technologies Pvt Ltd.</i>	<i>Fractal Analytics</i>	<i>Broadridge / Itiviti</i>
<i>TCS</i>	<i>Network Intelligence</i>	<i>BlackRock</i>
<i>IDFC First Bank</i>	<i>OLX</i>	<i>Teradata</i>
<i>Huron</i>	<i>Qbit Labs</i>	<i>GE Digital</i>
<i>GEP</i>	<i>Denso</i>	<i>Young Soft</i>
<i>Ngarro</i>	<i>Axis Bank</i>	<i>Discovery</i>
<i>Target Corporation</i>	<i>Google</i>	<i>Oracle Netsuite</i>
<i>Comviva</i>	<i>CaaStle Technology</i>	<i>Cradlepoint</i>
<i>Mavenir</i>	<i>Cashfree</i>	<i>Synchrony</i>

9.7 Other Activities

1. Faculties are involved in paper reviewing work of different International Journal, International Conferences.
2. Faculties have **evaluated PhD Thesis** from Various Universities across the World.
3. Faculties are performing as **Expert Speaker** in different Seminar Programme.
4. Faculties have given **Expert Lecture** in the seminar cum workshop and FDPs.
5. Faculties are also invited as **Resource person** in different workshops.
6. Faculties are also **External Member** of Research Advisory Committee (RAC)
7. **Expert Member** of a Board of Under Graduate Studies (BUGS).

10.0 ELECTRICAL ENGINEERING DEPARTMENT

10.1 Introduction:

Department of Electrical Engineering is one of the enriched and primogenital branches of engineering of the National Institute of Technology (NIT), Agartala (formerly Tripura Engineering College, Govt. of Tripura). This Department has been fulfilling the needs of the state of Tripura as well as the nation by developing technical manpower in the Electrical Engineering field since its inception in 1965. In this long 65 years of journey, being a pivotal branch of the then Tripura Engineering College, this department has witnessed many ups and downs. Still, it has produced a great number of capable electrical engineers who in turn spread their talent around various parts of the globe thereby enhancing the image of the institute in general and branch in particular.

The Electrical Engineering Department started with an annual intake of 20 seats in 1965 and consecutively increased to 40 in 1981. After conversion of the Tripura Engineering College into National Institute of Technology (NIT) in 2006, the intake has been increased to 90 and last year (2019) annual intake has been increased to 129.

10.2 Academic Programme:

The Electrical Engineering Department has progressed noticeably with an annual intake of 129 for 4 years (8 semesters) B.Tech program and annual intake of 64 for 2 years (4 semesters) M. Tech. program. Apart from the B.Tech and M. Tech. program, the Electrical Engineering department started Ph.D program from 2008 academic session. Considering the aspiration of the students and keeping in view of employment opportunities and prospects for research, the Department has been offering four specializations in M.Tech program, namely (a) Power Electronics & Drives (b) Instrumentation (c) Power System, and (d) Integrated Energy System. Further, excellent responses are obtained for the Ph.D program. Several candidates from academic arena and industry show their interests for pursuing their Ph.D work in the Department of Electrical Engineering and enroll their names in the program. At present 26 nos. (Part Time :13, Full Time: 12, Thesis submitted: 1), candidates are carrying out their Ph.D work in the department. The department has awarded 04 (four) Ph.D degrees in this academic year.

The number of students enrolled in Electrical Engineering Department during academic session 2022-23 is as follows:

Students on Roll:

Programme	1 st semester	2 nd semester	3 rd semester	4 th semester	5 th semester	6 th semester	7 th semester	Total
B.Tech	130		126		119		102	477
M.Tech	18		18					36
Ph.D.	26							539

Academic Program Goals:

The Electrical Engineering Department pursues the following primary academic goals:

- i. Create a healthy academic environment to promote the intellectual and professional development of both students and faculties.
- ii. Develop and maintain quality academic activities in UG, PG and PhD levels which are commensurate with the mission of the Institute.

iii. Equip the students with theoretical and practical skills required for employment in Government or private sectors, and admission to higher studies.

iv. Support the research scholars as well as faculties in terms of infrastructure, laboratory facilities and resources in order to enabling them to conduct extensive research activities in par with the standards of the Institute



Sl. No.	Coordinators	Title	Period
Short Term Courses			
1.	Dr Arvind Kumar Jain	SERB-High End workshop on “Grid Integration of Renewable Energy Sources: Concepts, Issues and Solutions”	16-22 January 2023 at NIT Agartala.
2.	Dr Arvind Kumar Jain	ATAL-FDP on “Power Quality Disturbances in Smart Distribution Grid:Theories, Concepts and Solutions”	13-24 March 2023, at NIT Agartala
3	Dr. Subhadeep Bhattacharjee	Seminar on ‘Power Converters & Drives for Electrical Vehicles’, jointly organised by NITA and IEI	04/04/2022
4	Prasenjit Debnath	On the Entropy of a Stationary Black Hole: Due to Extreme Entropy, the Black Hole Radiates Energy to Maintain Proper Balance within the Black Hole. (AIP Conference Proceedings)	April 2022

5	Prasenjit Debnath	On the Access of Information and the Concept of Symmetrical Time. (AIP Conference Proceedings)	June 2022
6	Prasenjit Debnath	On the Introductory and Conceptual Establishment of the Physical Time with Spatial Coordinates. (Materials Today Proceedings)	September 2022
7	Prasenjit Debnath	The Evaluation of Properties of the Actual Physical Time versus the Psychological Recognition of the Physical Time”, AIP Conference Proceedings	November 2022
8	Prasenjit Debnath	Why the Physical Time is a Cycle, if not a Circle: The Physical Time Obeys Periodicity or Close to Periodicity.”, AIP Conference Proceedings	November 2022
9	Prasenjit Debnath	On the Properties / Characteristics of Information based on the Physical Distance, Minuteness and the Physical Time.(AIP Conference Proceedings)	June 2022

10.3 Faculty and their activities:

Short-Term Courses/ Workshops/ Seminar/ Symposia/ Conferences organized by the faculty members:

Short-Term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the Faculty in Academic Institutions and Public Sector Undertakings:

Sl. No.	Name of Faculty	Title	Period
Conferences			
1	Dr Arvind Kumar Jain	2nd International Symposium on Sustainable Energy and Technological Advancements (ISSETA-2023),	24-25 Feb. 2023, NIT Meghalaya.
2	Dr. Subhadeep Bhattacharjee	Attended 37 th Indian Engineering Congress held in Chennai, Tamilnadu. The theme of the Indian Engineering Congress was ‘Role of Engineers for Creating a Sustainable & Self -Reliant India	16-18 December, 2022
Short-Term Courses			
1.	Dr. Arup Ratan Bhowmik	FDP on "Power Quality Disturbances in Smart Distribution Grid: Theories, Concepts and Solutions	13-03-2023 to 18-03-2023 and 20-03-2023 to 24-03-2023

Honours and Awards obtained:

Sl. No.	Name of Faculty	Name of Award/Honor	Awarded/Honored by	Award/Honor for	Date
1.	Dr. Subhadeep Bhattacharjee	Chairman, IEL, Tripura State Centre	The Institution of Engineers (India)	Dr. Subhadeep Bhattacharjee, Associate Professor & Former Head, Dept. of EE, NITA has assumed the charge of the Chairman, The Institution of Engineers (India), Tripura State Centre for the session 2022-24.	31.10.2022
2.	Dr. Subhadeep Bhattacharjee	Council Member, The Institution of Engineers (India)	The Institution of Engineers (India)	Council Member, The Institution of Engineers (India)	December, 2023
3.	Dr. Subhadeep Bhattacharjee	Invited Speaker Azadi Ka Amrit Mahotsav through Green and Clean Energy	Jointly organized by ONGC, Tripura Asset and NIT Agartala	Invited Talk on 'Electric Vehicle An Option for Clean Technology for Green Transportation' on the occasion of Workshop at NIT Agartala in connection with Oil and Gas Conservation Mass Awareness Campaign on the theme: Azadi Ka Amrit Mahotsav through Green and Clean Energy	20.04.2022
4.	Dr. Subhadeep Bhattacharjee	Keynote Speaker on observance of International Energy Day	Jointly organized by Tripura Natural Gas Corporation Ltd. (TNGCL) and IEL, Tripura State Centre	Delivered Keynote Speech on the occasion of International Energy Day held in the Conference Hall TNGCL, Agartala.	05.05.2022

5.	Dr. Subhadeep Bhattacharjee	Presided over the Seminar on 'Recent Trends in Concurrent and Emerging Technologies'	Gomati District Polytechnic, Udaipur, Gomati Tripura.	Dr. Subhadeep Bhattacharjee, Associate Professor & Former Head, Dept. of EE, NITA and Chairman IEI Tripura State Centre presided over a Seminar on 'Recent Trends in Concurrent and Emerging Technologies' at Gomati District Polytechnic, Udaipur, Gomati Tripura.	22.11.2022
6.	Dr. Subhadeep Bhattacharjee	Member of Selection Committee, Tripura Public Service Commission	Tripura Public Service Commission (TPSC)	Selection for recruitment of technical posts (Gazetted)	September, 2022
7.	Dr. Sadhan Gope	Best paper award	SSTEPS-2022, Central University of Haryana	Best paper award	7 th – 9 th Nov, 2022

10.4 Design and Development Activities:

Brief and specific details of Process/ Instruments/ Equipment/ Software Designed and developed

- 1) The development of an effective theoretical approach to generate spatial optical soliton in exceptionally beneficial bulk RTP crystal by utilizing cascaded second-order nonlinearity through electro-optic tuning.
- 2) The development of (2 + 1)D spatial bright soliton analytically at 1064 nm wavelength of the incident continuous-wave optical radiation and implication of tunable electro-optic effect to the crystal's nonlinear response.
- 3) FPGA-based noncontact vibration measurement using optical sensor position-sensitive detectors (PSD). The study peruses an innovative foray into the domain of calibrated vibration measurement systems.
- 4) Real time non-contact pulse vibration measurement system of radial artery for vate, pitta, kapha, diagnosis using CMOS Camera.

5) Examining the behavior and properties of non-Gaussian class of beams like Bessel-Gauss, Laguerre–Gaussian, Vortex, and Airy beam with the aim of developing next generation highly sensitive fiber-optic sensors.

6) Analytical investigation of SPR-based fiber optic biosensor by employing a wave theory-based technique for the determination of breast cancer at its earlier stage, where non-Gaussian beams like Bessel-Gauss beam, radially polarized Gaussian beam, radially polarized Bessel-Gauss beam are used as a source.

7) Designing of Graphene symmetric mode resonance based all optical modulator and highly sensitive voltage tunable gas sensor.

8) LRSPR based magnetic tuning of optical bistability at terahertz frequency and thus making it feasible for application like logic gate, optic memory, optic switch and optotransistors at a very low threshold in terahertz range.

9) An improved hybrid OTDM-WDM transmission system for effective nonlinearity mitigation utilizing Ti: PPLN waveguide based OPC module

10.5 Research and Consultancy:

Sponsored Research Projects:

Sl. No	Title	Period	Funding Agency	Amount (in lakhs)	Coordinators
1.	Real time non-contact pulse vibration measurement system of radial artery for vata, pitta, kapha diagnosis using CMOS camera (CRG/2022/006581)	2023-2026	SERB	51,33,832.00	PI: Dr. Ardhendu Saha Co-PI: Dr. Biswanath Bhunia
2.	Vetting of Electrical Wiring Drawing of multi storey residential and commercial buildings.		TUDA, Govt. of Tripura.	8.10	Dr Arvind Kumar Jain Prof. Ardhendu Saha

Research Publications:

Total No. of papers published in Refereed International Journals	:	27
Total No. of papers presented in International Conferences	:	27
Total No. of books/ book chapters published	:	08
Total No. of patents	:	02

In Refereed International Journals:

1. S. Deb and A. Saha, "Analysis of electro-optically adjustable cascaded second-order nonlinearity in tapered BBO crystal: a compression scheme for ultra-short pulse," OE 62, 065102 (16.06.2023).

2. K. Avinash, N. Goswami, and A. Saha, "Magnetically tunable ultralow threshold optical bistability by exciting LRSPR in InAs/graphene layers at the terahertz region," *Appl. Opt.*, AO 62, 3797–3805 (May 9, 2023).
3. S. Das, S. Khatri, and A. Saha, "Position sensitive detector based non-contact vibration measurement with laser triangulation method utilizing Gabor Transform for noise reduction," *Journal of Vibration and Control* 10775463231173842 (May 5, 2023).
4. B. Saha, N. Goswami, and A. Saha, "Proposal for the detection of breast cancer at its early stage using wave-theory-based analysis in a tapered fiber structure illuminated by the Bessel–Gauss beam for enhanced sensitivity," *J. Opt. Soc. Am. B, JOSAB* 40, 574–584 (February 16, 2023).
5. N. Goswami, S. K. Yadav, and A. Saha, "Illustration of an Extremely Sensitive SPR Based Fiber Optic Gas Sensor Irradiated by Bessel-Gauss Beam and Wave Theory Based Approach," *Optik* 170599 (26.01.2023).
6. Bijaya Saha, Nabamita Goswami, and Ardhendu Saha, "Wave-theory-based analysis of a fiber optic bio-sensor illuminated by radially polarized Bessel–Gauss beam: an approach for early diagnosis of breast cancer with a high-resolution wavelength-interrogation technique," *Appl. Opt.* 61, 10408–10417 (December 5, 2022).
7. Sharbari Deb, Satadru Behera, and Ardhendu Saha, "Electro-optically tunable cascaded second-order nonlinearity induced $(2 + 1)$ D spatial optical soliton using bulk β -barium borate crystal: a theoretical approach," *J. Opt. Soc. Am. B* 39, 3311–3319 (November 29, 2022).
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9. Kailash Kumar Mahto, Pradipta Kumar Pal, Priyanath Das, Sudhanshu Mittal, Bidyut Mahato "A New Design of Multilevel Inverter Based on T-type Symmetrical and Asymmetrical DC Sources". *Iranian Journal of Science and Technology, Transactions of Electrical Engineering*. October'
10. Gitanjali Saha, Kabir Chakraborty, Priyanath Das, "Enrichment of voltage stability in power system through novel generalized approximate reasoning based intelligent control with african buffalo optimization approach" *APPLICATION OF SOFT COMPUTING*. December'22.
11. Mahto, K. K., Pal, P. K., Das, P., Mittal, S., & Mahato, B. (2022). A New Design of Multilevel Inverter Based on T-type Symmetrical and Asymmetrical DC Sources. *Iranian Journal of Science and Technology, Transactions of Electrical Engineering*, 1-19.
12. Durbanjali Das, Priyanath Das, Kailash Kumar Mahto, Ankita Bhatt, "A New Criss-Cross based asymmetrically configured T-Type Multi-level Inverter". *Microsystem Technologies (ACCEPTED)*.
13. Durbanjali Das, Priyanath Das, Kailash Kumar Mahto, Pooja Prakash, A Novel HK-Type Multi-level Inverter for Reduced Power Electronic Devices" *Microsystem Technologies (ACCEPTED)*
14. Durbanjali Das, Pradipta Kumar Pal, Priyanath Das, Kailash Kumar Mahato, Bidyut Mahato, "Lesser Switches Multilevel Inverter: An Approach with Different Values of DC Sources" *Microsystem Technologies (ACCEPTED)*.
15. Kailash Kumar Mahto, Priyanath Das, Durbanjali Das, Sudhanshu Mittal, Bidyut Mahato, "A New Criss-Cross based asymmetrically configured T-Type Multi-level Inverter" *Microsystem Technologies (ACCEPTED)*.
16. Kailash Kumar Mahto, Priyanath Das, Durbanjali Das, Ananyo Bhattacharya, Bidyut Mahato "A New Symmetrical DC Sources based DC/AC Converter with Experimental Verification" *Microsystem Technologies (ACCEPTED)*.
17. A.K. Jain et al, "APuML: An efficient approach to detect mobile phishing webpages using 5 machine learning", *Wireless personal communication*, 125, pages 3227–3248 (May, 2022).

18. Rahul Bhattacharjee and Subhadeep Bhattacharjee, 'Effects of the different plant design parameters on the performance improvement of the concentrated solar plant in low direct normal irradiance region', *International Journal of Green Energy* (Taylor & Francis) (<https://doi.org/10.1080/15435075.2022.2076235>) (Published online 06.06.2022)
19. Prabir Ranjan Kasari and Subhadeep Bhattacharjee, 'An improved grid integration technique for SPV based CHBMLI in distribution network', *International Journal of Power Electronics* (Inderscience) (Accepted for publication)
20. Prabir Ranjan Kasari, Subhadeep Bhattacharjee, 'An HESS based on a modified MMCC-TSBC converter integrating energy storages', *CSEE Journal of Power and Energy Systems* (CSEE JPES, SCI indexed) (Accepted for publication)
21. J. Das & S. Paul, "Diverse HTS Hysteresis Motors" *International Journal of Innovative Technology and Exploring Engineering (IJITEE)* ISSN: 2278-3075, Volume-9 Issue-2S, December 2019.
22. Nitesh Kumar Singh, Chaitali Koley, Sadhan Gope, "A Two Stage Optimal Scheduling Strategy of Hybrid Energy System integrated Day-ahead Electricity Market", *International Journal of Environment and Sustainable Development* (Inderscience), January, 2023. DOI: 10.1504/IJESD.2023.10054534. (Accepted). (Jan-23), (Scopus).
23. Sadhan Gope, Galiveeti Hemakumar Reddy, and, Kshetrimayum Millaner Singh, "Frequency Regulation Analysis for Renewable-Bio Generated Autonomous Multi-Microgrid Using Moth Flame Optimized Fractional Order Controller", *Material Today Proceedings* (Elsevier), vol. 80 (2), pp. 753-761, 2023, <https://doi.org/10.1016/j.matpr.2022.11.082>, (Nov-22), (Scopus).
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25. Raghutla, Chandrashekar, P. Padmagirisan, P. Sakthivel, Krishna Reddy Chittedi, and Smrutisikta Mishra. "The effect of renewable energy consumption on ecological footprint in N-11 countries: Evidence from Panel Quantile Regression Approach." *Renewable Energy* 197 (2022): 125-137.
26. Prasenjit Debnath, Ngangbam Ishwarchandra, "The Evaluation of the Rotating Metrics with $a \neq 0$ from the Mass Function $\hat{M}(u, r)$ with reference to the Theory of General Relativity", *Indian Journal of Science and Technology (SCI)*, Volume –15 , Issue – 5 (2022): Pages – 216 - 220 . DOI: [10.17485/IJST/v15i5.1560](https://doi.org/10.17485/IJST/v15i5.1560)
27. Prasenjit Debnath, Ngangbam Ishwarchandra, "On the Entropy of a Stationary Black Hole: Due to Extreme Entropy, the Black Hole Radiates Energy to Maintain Proper Balance within the Black Hole.", *AIP Conference Proceedings* (SCOPUS), Volume – 2446 , Issue – 180015 (2022): Pages – 1- 6 . DOI: [10.1063/5.0108285](https://doi.org/10.1063/5.0108285)

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1. Bijaya Saha, Nabamita Goswami, Ardhendu Saha, "Wave-Theory Based Fiber Optic Sensor using Ag Nanolayer by Shining Bessel-Gauss Beam: A SPR based Technique", *International Hybrid Conference on Nano Structured Materials and Polymers (ICNP)*, May 12th-14th, 2023.
2. A. Datta, S. Tripathi, M. Chaturvedi, A. Saha, Enhancing the sensitivity of a fiber-optic biosensor for the detection of oral cancerous cell, *AIP Conference Proceedings*. 2779 (2023) 030011. <https://doi.org/10.1063/5.0142296> (10.05.2023).
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5. Ardhendu Saha, Samhita Das, Nabamita Goswami, “Multiple Silver Nanorod Deposition on a Substrate using Oblique Angle Deposition Method: A Wave Theory-based Delineation using SPR Phenomenon”, International Conference on Advanced Physics, IEMPHYS 2022, 22.09. 2022 to 214.09.2022, Institute of Engineering and Management (IEM) Kolkata. IEMPHYS-2022, Abstract Id: 26, Page No: 53.
6. AparupaKar, Nabamita Goswami, Ardhendu Saha, “Graphene Surface Plasmon Polariton Based Tunable Gas Sensor at Terahertz Frequency”, International Conference on Advanced Physics, IEMPHYS 2022, 22.09. 2022 to 214.09.2022, Institute of Engineering and Management (IEM) Kolkata.IEMPHYS-2022, Abstract Id: 12, Page No: 64.
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8. Raj Chakraborty, Diptanu Das, Priyanath Das. “Optimal Placement of Electric VehicleCharging Station with V2G Provision using Symbiotic organisms Search Algorithm” IEEE International Students’ Conference on Electrical, Electronics and Computer Science, 19-20 Feb 2022. 31.
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10. Raj Chakraborty, Priyanath Das, Diptanu Das, “Optimal Planning of Electric VehicleCharging Station in Radial Distribution Network considering SystemAverageInterruption Frequency Index”. 2022 IEEE 6th International Conference on ConditionAssessment Techniques in Electrical Systems (CATCON) 33.
11. Punam Das, Diptanu Das, Arup Ratan Bhowmik, Priyanath Das, “Symbiotic OrganismsSearch Algorithm to Optimally Allocate EV Charging Station in Radial DistributionNetwork”. IEEE Power, Instrumentation, Energy, and Control (PIECON-2023).
12. Arvind Kumar jain, Tapomay Debnath and Arup Ratan Bhoumik, Hospital Energy Management System for Enhancing Sustainability and Reliability of Power Supply, 2nd International Symposium on Sustainable Energy and Technological Advancements (ISSETA-2023), 24-25 Feb. 2023, NIT Meghalaya.
13. Kriti Thakur and Arvind Kumar Jain, “Transient Stability Assessment of DC Microgrid using Nonlinear Decoupling Approach” 2022 IEEE Silchar Subsection Conference (SILCON), 04-06 Nov. 2022.doi.org/10.1109/SILCON55242.2022.10028865.
14. Tapomay Debnath; Arvind Kumar Jain; Arup Ratan Bhowmik, “Optimal Design of Grid Tied Hybrid Microgrid for Hospital to Enhance Reliability and Sustainability” 2nd International Conference on Emerging Frontiers in Electrical and Electronic Technologies (ICEFEET), 24-25 June 2022, NIT Patna. DOI: 10.1109/ICEFEET51821.2022.9848255.
15. Abhishek Deb and Arvind Kumar Jain, “Coordinated Charging Strategy of Electric vehicles using receding horizon technique to maintain the power quality of distribution grid: Abhishek Deb, IEEE CATCON- 2022, 17-19 Dec. 2022, NIT Durgapur.
16. Pankaj Jamatia, Subhadeep Bhattacharjee, and Sharmistha Sharma, ‘Optimal allocation of EV charging station in distribution network’, *4th International Conference on Energy, Power and Environment*, 29th April- 1st May, 2022. NIT Meghalaya (Available in IEEE Explorer)

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18. A. Animesh, J. Das & S. Sharma "Islanding Detection and Resynchronization with Anti-Islanding in Distributed Generation", **2022 IEEE Global Conference on Computing, Power and Communication Technologies (GlobConPT)**, 23-25 September 2022, New Delhi, India.
19. D. Dey, R. Chakraborty, A. R. Bhowmik, D. Das and A. Jamatia, "Optimal Placement of Electric Vehicle Charging Station in Distribution Network with SOS Algorithm," 2023 Fifth International Conference on Electrical, Computer and Communication Technologies (ICECCT), Erode, India, 22-24 February 2023, pp. 01-05, doi: 10.1109/ICECCT56650.2023.10179725.
20. V. K. Kaiwart, A. Jamatia, A. Chakrabarti, B. Das, P. R. Kasari and N. Laskar, "Modeling of Dual Active Bridge with Extended Phase Shift and Dual Phase Shift Modulation Technique using Reduced Order Model Method," 2023 Second International Conference on Electronics and Renewable Systems (ICEARS), Tuticorin, India, 02-04 March 2023, pp. 13-20, doi: 10.1109/ICEARS56392.2023.10085254.
21. A. Jamatia and P. Sensarma, "A New Grid connected Doubly Grounded PV Micro-inverter with Power Decoupling Capability," 2023 IEEE IAS Global Conference on Renewable Energy and Hydrogen Technologies (GlobConHT), Male, Maldives, 11-12 March 2023, pp. 1-6, doi: 10.1109/GlobConHT56829.2023.10087372.
22. Devaraju D, V N Suraj Kumar, Vivek DS, Akshay Kumar R, Galiveeti Hemakumar Reddy, Sadhan Gope, "An Efficient Automatic Solar Panel Cleaning System for Roof-top Solar PV System", 2022 International Conference on Smart and Sustainable Technologies in Energy and Power Sectors (SSTEPS), 7th - 9th Nov, 2022, Central University of Haryana, DOI 10.1109/SSTEPS57475.2022.00018.
23. Prasenjit Debnath, "On the Access of Information and the Concept of Symmetrical Time.", AIP Conference Proceedings (SCOPUS), Volume –, Issue - (2023): Pages - . DOI:
24. Prasenjit Debnath, "On the Properties / Characteristics of Information based on the Physical Distance, Minuteness and the Physical Time.", AIP Conference Proceedings (SCOPUS), Volume –, Issue - (2023): Pages - . DOI:
25. Prasenjit Debnath, "On the Introductory and Conceptual Establishment of the Physical Time with Spatial Coordinates.", Materials Today Proceedings (SCOPUS), Accepted.
26. Prasenjit Debnath, "The Evaluation of Properties of the Actual Physical Time versus the Psychological Recognition of the Physical Time", AIP Conference Proceedings (SCOPUS), Accepted.
27. Prasenjit Debnath, "Why the Physical Time is a Cycle, if not a Circle: The Physical Time Obeys Periodicity or Close to Periodicity.", AIP Conference Proceedings (SCOPUS), Accepted.

Book /Book Chapter Published:

Name of the Authors published	Title of the Books	Date of publication	Issue/ Volume No./ Page No
Dr Arvind Kumar Jain	Optimal Decision Making under Uncertainty using Heuristic Approach in Restructured Power System" in the edited book entitled "Deregulated Electricity Market Structures and Smart Grid"	ISBN:9781003278030, CRC Press, Taylor & Francis Publications, UK (2022)	Page No: 1to 24

Dr Arvind Kumar Jain	Optimal Demand Response Strategy of an Industrial Customer” in the edited book „Industrial Demand Response for Smart Grids: Methods, Best practices, Case Studies, and Applications.	“ISBN: 9781839535611, IET, UK (2022)	Page No.187-207
Soubhik Bagchi, Raj Chakraborty, Pritam Bhowmik, Priyanath Das	“Modern Control of Grid Connected PV System- A Critical Review”		Nova Science Publisher.
Raj Chakraborty, Soubhik Bagchi, Punam Das, Priyanath Das, Diptanu Das,	“Planning of EV Charging Station in Distribution Network”		Nova Science Publisher.
Subhadeep Bhattacharjee	<i>‘Energy Resources – Origins and Relatable Issues’</i> , Book: Integrated Energy Systems: Design, Control and Operation (Nova Science Publishers, Inc.)	Accepted for publication	
D. Roy Barman & Subhadeep Bhattacharjee	<i>‘Design and Operational aspects of the Food Waste based Energy System’</i> , Book: Integrated Energy Systems: Design, Control and Operation (Nova Science Publishers, Inc.)	Accepted for publication	
Umakant Tivari, Joyashree Das, Book Chapter:	Power Infrastructure- A Grid-Connected PV Module with MPPT and VSC. Technology, Infrastructure and Resilience of Urban Systems,	(ISBN: 978-93-5455-288-5).	Macmillan Publishers India Private Limited.
Padma Paul, Prabir Ranjan Kasari, Bikram Das and Abanishwar Chakrabarti	Book Chapter: A five-level boost cascaded MLI with single DC source	2023	CRC press, 1,1, pp-228-234
Sadhan Gope, Diptanu Das, Priyanath Das,	Optimal Economic and Environment Dispatch with Integration of Wind Power Generation using Multi-objective Ant Lion Optimizer Algorithm, Integrated Energy Systems:	Feb, 2023 (Accepted).	-

	Design, Control and Operation, Nova Publishers		
Nitesh Kumar Singh, Koley, Gope,	Hybrid Energy Systems Integrated Power System Imbalance Cost Calculation using Moth Swam Algorithm, Intelligent Data Engineering and Analytics, Proceedings of the 10th International Conference on Frontiers in Intelligent Computing: Theory and Applications (FICTA 2022)	June 18-19, 2022,	pp.49-59, DOI:10.1007/978-981-19-7524-0_5.
P. Padmagirisan, M. Suman and Priyanath Das	Control and Operation of Microgrid Powered by Hybrid Energy Sources	Accepted for Publication	Accepted for Publication

Patent Published:

Inventor Name	Year	Title	Published source	Patent version no.	Patent Application no.
Dr. Priyanath Das	18/10/2022	“APPARATUS FOR COLLECTING RECYCLABLE OBJECTS AND DISPENSING REWARDS”.	Indian Patent		202111050971
Dr. Subhadeep Bhattacharjee, Shantanu Acharya, Aparita Das,	28.11.2022	A HEAT-FREE COMPOSITE DAYLIGHT INGESTING SYSTEM	Indian Patent	Patent Number : 412576	652/KOL/2015

Session Chair:

1. Certificate Of Appreciation As Session Chair by Dr. Priyanath Das At 5th International Conference On Energy Systems, Drives And Automation (ESDA 2022) from 31/12/2022 to 01/01/2023.
2. Session chair by Dr. Priyanath Das at International Conference On Intelligent Vision And Computing (ICIVC2022) organized by NIT Agartala from 26-27 Nov, 2022.
3. Session chair by Dr. Priyanath Das at 4 th International Conference On Energy , Power And Environment (ICEPE2022) organized by NIT Meghalaya from 29 th April -1 st May, 2022.

Delivered Lecture:

1. Dr. Priyanath Das delivered lecture as Speaker On “Advances in Clean Energy Conversion Technologies” November 22-26, 2022, At NIT Silchar.

11.0 ELECTRONICS AND COMMUNICATION ENGINEERING DEPARTMENT

11.1 Introduction:

The Department of Electronics & Communication Engineering (ECE) was established in 2007. Since its inception the Department has been growing in a multidimensional direction in context to UG, PG teaching and PhD research aspects. The department offers a wide range of courses which address almost the entire arena covering electronic devices, Signal processing, Wireless Communication, VLSI, Nano-electronics, Modern era of Communication, Fabrication and Characterization of Nano Scaled Devices, Image Processing, Advanced Microwave Electronics, Optical Communication, Non-Linear System Science to mention a few. The department aims to create competent Electronic and Communication Engineers to serve the needs of modern advanced technology and the nation as a whole. The department always updates the entire course curriculum on a regular basis after discussion with academicians from institutes of national repute and technologists from various renowned organizations by which our students can compete with the best with respect to knowledge and ability in the business and face the modern challenges of today's Electronics and allied industries and institutions where change is the norm. Among all branches of Engineering Sciences, Electronics and Communication Engineering changes at an extremely fast pace, so fast that which is brand new product for today becomes obsolete on the very next day with respect to science and engineering of this branch. Considering all the said aspects, the department possesses a qualified and experienced team of faculty members to carry out its legacy. The major thrust areas of the department are VLSI and Nano-Technology, Nano-Electronics, Microwave, Image Processing, Optoelectronics, Control Engineering and Communication Systems. The Department offers PhD courses in Nano-electronics, Microwave, VLSI, and Image Processing, to name a few. The students of this branch have been placed in various reputed R&D organizations and eminent companies in India and abroad. Also, number of students are pursuing their higher studies in different reputed Institutions across India and abroad.



Basic Electronics Laboratory



MSDC Laboratory



Microwave Laboratory



Nanoelectronics Laboratory



Instruments in Electromagnetic and Measurement Lab.

11.2 Academic Programme:

The Department of Electronics & Communication Engineering currently offers the following programs: -

Under Graduate Program: B. Tech in Electronics & Communication Engineering (4 Years)

Post Graduate programmes: M. Tech (2 years) in two specializations-

- (i) VLSI Design
- (ii) Communication Engineering.

The Department also offers Ph.D. courses in Nano-electronics, Microwave, VLSI, Image Processing, Bio-Signal Processing, to name a few.

The Total strength of students in the current academic year are as follows:

Program	1st / 2nd Semester	3rd / 4th Semester	5th / 6th Semester	7th / 8th Semester	Other Semester	Total
B. Tech	129	129	120	117	NA	495
M.Tech (VLSI Design)	6	19	-	-	-	25
M.Tech (Communication Engineering)	2	6	-	-	-	8
PhD	1	2	1	7	11	22

11.3 Faculty and their Activities:

Short-Term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the Faculty in Academic Institutions and Public Sector Undertakings:

Fellowships of Academics and Professional Societies:

<i>Sl. No.</i>	<i>Name of Faculty</i>	<i>Level</i>	<i>Year</i>
ISTE/ CSI and others			
ISTE	Dr. Atanu Chowdhury	Member	Life time
ISI	Dr. Atanu Chowdhury	Member	Life time
IEI	Dr. Atanu Chowdhury	Associate Member	Life time
ISTE	Mr. Manik Bhowmik	Member	Life time
IEI	Dr. Tamasi Moyra	Member	Life time
IEI	Dr. Mitra Barun Sarkar	Member (MIE)	Life time

11.4 Design and Development Activities: Brief and specific details of Process/ Instruments/ Equipment/ Software Designed and developed:

SL. NO.	LABORATORY	MAJOR DEVELOPMENT
1	Micro and Nanoelectronics Lab (I & II)	Accomplished the successful development of an air pollution monitoring system (प्रदूषणमविधेयकः) and facilitated technology transfer as part of the ISRO-funded project titled 'Development of

		an integrated, miniature, and portable air pollution monitoring system' (Project Code: TDP S-TIC-0123)."
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11.5 Research and Consultancy:***Sponsored Research Projects:***

<i>Sl. No.</i>	<i>Title</i>	<i>Period</i>	<i>Funding Agency</i>	<i>Amount (in lakhs)</i>	<i>Co-ordinators</i>
1	Development of an integrated, miniature, and portable air pollution monitoring system	2019-2023	ISRO	24,43,520.00	Dr. Mitra Barun Sarkar (PI)
2	Fabrication and Characterization of Ag-doped Al ₂ O ₃ :TiO ₂ Nanowire Array Device for UV-Vis Detection and Breath Sensing Application	2023-2026	CRG-SERB	57,663,32.00	Dr. Mitra Barun Sarkar (PI)
3	Applicability of Electromagnetic Metamaterials in Antennas and Microwave circuits for use in Space Applications.	03.10.2019 to 26.04.2023 (Completed)	ISRO	24,03,520.00	a) Dr. Tamasi Moyra (PI) b) Mr. Anirban Bhattacharjee (Co-PI)
4	Wireless communication channel noise characterization for hilly urban areas.	August 2023 – August 2025 (Ongoing)	ISRO	11,00,000.00	a) Dr. Shravan Kumar Bhandari, Asst Prof. NIT, Meghalaya. (PI) b) Dr. Tamasi Moyra (Co-PI)
5	Knowledge Guided GIS based Hydro-geochemical modeling to understand the sources & control of Arsenic (As) contamination in Groundwater of Tripura	3 years	ISRO	21.6	a) Prof. Dr. Umesh Mishra (PI) b) Dr. Priyanka Choudhury (Co-PI) c) Dr. Sushant Kumar Biswal. (Co-PI).
6	Design and Development of High data rate Digital Demodulator	3 years	ISRO	13	a) Dr. Sambhu Nath Pradhan (PI) b) Dr. Tamasi Moyra (Co-PI) c) Mr. Anirban Bhattacharjee (Co-PI) d) Dr. Abhishek Nag (Co-PI)

Research Publications:

Total No. of papers published in Refereed International Journals : 14
Total No. of papers presented in International Conferences : 05

In Refereed International Journals:

<i>Name of the Authors</i>	<i>Title of the Paper</i>	<i>Name of the Journal</i>	<i>Volume No.</i>	<i>Page Number</i>	<i>Year</i>
K. D. Purkayastha, C. Nath and S. N. Pradhan	Power-aware air quality sensing system with efficient data storage capability	Journal of Air Pollution and Health	8	23-42	2023
K. Das, and S. N. Pradhan	Hardware Architecture Design for Complementary Ensemble Empirical Mode Decomposition Algorithm	Integration, the VLSI Journal, Elsevier	91	153-164	2023
A. Bhattacharjee, A. Das, D. K. Sahu, S. N. Pradhan and K. Das	A Meta-heuristic Search-Based Input Vector Control Approach to Co-optimize NBTI effect, PBTI effect, and Leakage Power Simultaneously	Journal of Microelectronics Reliability	144	114979	2023
V. K. Singh, A. Nag, A. Das, A. and S. N. Pradhan	Low Power Design of 16-Bit Synchronous Counter by Introducing Effective Clock Monitoring Circuits	Songklanakarin Journal of Science and Technology	-	-	2023
C Tiwari, GK Gupta, V Mishra	Computational analysis of lead-free and highly efficient intrinsic Ch ₃ NH ₃ SnI ₃ -based solar cell with suitable transport layers	Results in Optics	13	100517	2023
Deepak Sahu, Shikha Maurya, Matadeen Bansal, Dinesh Kumar V.	Deep Learning-Based Relay Selection and Precoders Design for IoT Cognitive Relay Networks	Elsevier Physical Communication	NA	1-16	2023 (Accepted for publication)
Amitabha Nath, and Mitra Barun Sarkar	“An in-depth analysis on the switching response and impedance curves of n-si/In ₂ O ₃ NW/Ag NPs/In based devices by a double-step glancing angle	‘Physica B: Condensed Matter	660(17),	414886	2023

	deposition technique.”				
Abhijit Das, Amitabha Nath, Shuvam Pawar, Naorem Khelchand Singh, and Mitra Barun Sarkar	Superior photo sensing performance by Ag nanoparticles textured Al ₂ O ₃ thin film based device.” were published in the Journals ‘Physica B: Condensed Matter and ‘	Journal of Nanoparticle Research	125(5)	88	2023
Rajib Kumar Nanda, Amitabha Nath, Laishram Robindro Singh, and Mitra Barun Sarkar	“Morphological, Optical, and Surface Wettability Analysis of Electron-Beam Synthesized Annealed TiO ₂ NW/Au TF”	Brazilian Journal of Physics	53(4)	85	2023
Rajnish Ranjan, A. Chowdhury, Dibyendu Ghoshal	On Performance Analysis of Wireless Network over Double Shadowed Rician Fading Channel	IETE Journal of Research	DOI: 10.1080/03772063.2023.2181230	-	Feb 2023
Rajavel V, Dibyendu Ghoshal	AMC-Based Low-Profile Dual-Band Slotted Patch Antenna for IoT Devices in the Healthcare System	Iranian Journal of Science and Technology, Transactions of Electrical Engineering	doi.org/10.1007/s40998-022-00581-7	-	Dec 2022
P.Ranjan and Atanu Chowdhury	Comparative study of IDC sensor's geometrical effect, performance, and frequency behavior with water level detection	Instruments and Experimental Techniques	DOI:org/10.1134/S0020441223020215	-	2023
R.K.Ranjan, Atanu Chowdhury and D.Ghoshal	On Performance Analysis of Wireless Network over Double Shadowed Rician Fading Channel	IETE Journal of Research	DOI: 10.1080/03772063.2023.2181230	-	2023
R. R. Das, S. Maity, A. Choudhury, A. Chakraborty	Investigation of Step Fin (SF), Step Drain (SD) and Step Source (SS) FinFETs with trap effect	IETE Journal of Research	DOI:10.1080/03772063.2022.2071770		2022

In Proceedings of International Conference:

<i>Author Name</i>	<i>Title of the Paper</i>	<i>Name of the Conference</i>	<i>Place of the Conference</i>	<i>Volume</i>	<i>Page Number</i>	<i>Period of Conference</i>
Deepak Sahu, Shikha Maurya, Matadeen Bansal, Dinesh Kumar V.	A Low Complexity Deep Learning Based Precoder Designing for Enhanced Throughput in Underlay Network	2022 IEEE 6th Conference on Information and Communication Technology (CICT)	ABV-IIITM Gwalior	NA	1-5	18-20 November 2022
Deepak Sahu, Shikha Maurya, Matadeen Bansal, Dinesh Kumar V.	An Optimal Relay Selection and Precoder Designing in MIMO Multi-Relay Cognitive Networks	2022 IEEE 6th Conference on Information and Communication Technology (CICT)	ABV-IIITM Gwalior	NA	1-4	18-20 November 2022
Arpita Mandal, Tamasi Moyra, and Prithwineel Paul	“Compact Low-pass Filtering-response Wilkinson Power Divider with Wide Harmonic Suppression”	2023 IEEE 13th Annual Computing and Communication Workshop and Conference (CCWC)	Las Vegas, NV, USA	10.1109/CWC5734.4.2023.10099359	1243 - 1249	8-11 March 2023
Apangshu Das, Vivek Kumar Singh, Sambhu Nath Pradhan	Temperature Aware Bi-partitioning Multi-level Logic Synthesis	Soft Computing: Theories and Applications: Proceedings of SoCTA 2022	Shimla, India	627	423-430	Dec 2022
P.Ranjan and Atanu Chowdhury	Studying the frequency behaviour of the interdigital capacitive sensor during water level measurement	2022,IEEE International Conference on Current Development in Engineering and	SAGE University, Bhopal,			Dec 23-24, 2022,

		Technology (CCET)				
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11.6 Placement Data:

Total no of eligible students	113
Total no of offers	113
Total no of students placed	93
Placement percentage	82.3%
Highest Package	52 LPA
Average Package	13.83 LPA

12.0 ELECTRONICS AND INSTRUMENTATION ENGINEERING DEPARTMENT

12.1 Introduction:

The Department of Electronics and Instrumentation Engineering (EIE) has been in existence since July 2009. Presently the branch of EIE has been running under Electrical Engineering since 2021-22 academic session. The undergraduate course provides a dynamic foundation to the students in EIE. The Department aims to create competent Electronic and Instrumentation Engineers to serve the needs of modern advanced technology and the nation as a whole. The department is supported by various well-equipped laboratories to meet the requirement of the undergraduate students. The department offers a wide range of courses which address almost the entire arena covering Advanced Control System, Nano-electronics, Modern era of Instrumentation, Signal Processing to mention a few. The Department has five (5) qualified and experienced faculty members and five (5) staff members to develop highly competing young engineers, scientists and management professionals of international standard. Best endeavor is always being put forward for the recruitment of qualified and competent faculty members from all over the country to achieve all round growth at par with any other famous Institute. The students of this branch have been placed in various reputed R&D organizations and eminent companies in India and abroad.



Department of Electronics and Instrumentation Engineering

12.2 Academic Programme:

The department currently offers the following programs:

1. Under Graduate Program (B. Tech) in Electronics and Instrumentation Engineering for 4 Years
2. PhD in Electronics and Instrumentation Engineering

Students on Roll:

Programme	1st/2nd semester	3rd/4th semester	5th/6th semester	7th/8th semester	Others	Total
B. Tech.	-	73	71	50	0	194
M. Tech	NA	NA	NA	NA	NA	0
Ph. D.	2	1	2	1	NA	6
Total						200

Lab Facilities:

Electronics and Instrumentation Engineering Department is now becoming well-equipped with the laboratories. Industry oriented two new laboratories 'DCS & PLC' and 'Hydraulic & Pneumatic' control systems are already set up in our department.

Sl. No.	Name of the Laboratories	Maximum Batch Size	No. of Experiments		Remarks
			Prescribed	Conducted	
1	Network Theory Lab	36	14	12	
2	Electrical and Electronic Instrumentation and Measurement Lab	36	18	16	
3	Analog Electronic and Linear Integrated Circuits Lab	36	16	12	
4	Sensors and Transducers Lab	36	13	12	
5	Digital Electronics Lab	36	10	10	
6	Industrial Instrumentation lab	36	12	11	
7	Linear Control System Lab	36	16	12	
8	Process Control Lab	31	10	10	
9	Industrial Electronics Lab	36	10	10	
10	Microprocessor and Microcontroller Lab	36	15	13	
11	Advanced Process Control and Automation lab	31	10	10	
12	Digital Signal Processing Lab	36	10	6	
13	Communication Theory and Telemetry Lab	36	10	10	



Fig: Some photos of laboratory equipments

12.3 Faculty and their Activities:

Faculty:

Sl. No.	Name	Designation	Qualification	Major Area of Specialization
1.	Dr. Rup Narayan Ray	HOD & Associate Professor	M.Tech, Ph.D	Electrical M/Cs & Drives, Power Qualities, Distributed Generations
2.	Dr. Jayanta Kumar Rakshit	Asst. Professor.	M.Tech, Ph.D	Optoelectronics and Optical Communication, Signals and System, Analog and Digital Communication.
3.	Dr. Debanjan Acharyya	Asst. Professor.	M.Tech, Ph.D	Flexible and Wearable Electronics, IoT Sensor and Actuator, Gas and Bio Sensor, AI and ML for Device modelling, Agriculture and Healthcare
4.	Dr. Subir Das	Asst. Professor.	M.Tech, Ph.D	Sensors & Transducers, Instrumentation Measurement, Robotics, Agricultural Electronics, IoT

5.	Dr. Yogesh Kumar Sariya	Asst. Professor.	M.Tech, Ph.D	Medical Signal and Image Processing, AI in healthcare
6.	Mrs. Priyanka Roy Goswami	Asst. Professor (contractual)	M.Tech	Mobile Communication & Networking, Micro Electronics, Solid State devices & Technology, VLSI (Fabrication and Design)
7.	Dr. Priyanka Dey	Asst. Professor (contractual)	M.Tech, Ph.D	Sensor & Transducer, Nonlinear optics.
8.	Dr. Rupam Gupta Roy	Asst. Professor (contractual)	M.Tech, Ph.D	Instrumentation, Nonlinear Control and Robotics.
9.	Dr. Aparupa Kar	Asst. Professor (contractual)	M.Tech, Ph.D	Optoelectronic Instrumentation, Optics.

Honours and Awards obtained:

Sl. No.	Name of Faculty	Name of Award	Awarded by	Award for	Date
1.	Dr. Jayanta Kumar Rakshit	Selected in top 2% scientist list for the year 2022	Stanford University	Research activity	October 2022

12.4 Design and Development Activities

1. An IoT enabled weather monitoring system for smart farming is designed and developed. The developed system called smart probe can continuously monitor the health of farming required parameters like soil moisture, soil temperature, dew wetness, and ambient moisture. The system consists of multiple smart probes and the probes can communicate with cloud servers through in-built GSM modules. Using the remote dashboard, the measured data is monitored and recorded for further processing like prediction of crop disease.
2. 32 Channel EEG machine purchase was initiated for Biomedical Instrumentation Laboratory (New).

12.5 Research and Consultancy:***Research Publications:***

Total No. of papers published in Refereed International Journals	: 11
Total No. of papers presented in International Conferences	: 06
Total No. of Books /Book Chapters published	: 02
Total No. of patents	: 01

In Refereed International Journals:

- 1) M. P. Singh, **J. K. Rakshit**, and M. Hossain, "Modeling of Polarization-Conversion and Rotation-Based Ultrafast All-Optical Ternary Logic Switch Using Microring Resonator," *Brazilian Journal of Physics*, 53(2), p.40 (2023).
- 2) U. Biswas, C. Nayak, and **J. K. Rakshit**, "Fabrication techniques and applications of two-dimensional photonic crystal: history and the present status," *Optical Engineering*, 62(1), pp.010901-010901 (2023).
- 3) **J. K. Rakshit**, and M. Hossain, "Design and analysis of an efficient reversible hybrid new gate using silicon micro-ring resonator-based all-optical switch," *Photonic Network Communications*, 44(2-3), pp.116-132 (2022).
- 4) M. P. Singh, **J. K. Rakshit**, and M. Hossain, "Implantation of polarization rotation based ternary 3: 1 multiplexer and 1: 3 demultiplexer using optical micro ring resonator," *Optics Communications*, 522, p.128646 (2022).
- 5) M. Hossain, and **J. K. Rakshit**, "Implementation of all-optical synchronous and asynchronous binary up counters using silicon micro-ring resonator," *Optical Engineering*, 61(10), pp.105105-105105 (2022).
- 6) M. Hossain, **J. K. Rakshit**, and K. E. Zoiros, "Microring resonator-based all-optical parallel pseudo random binary sequence generator for rate multiplication," *Optical and Quantum Electronics*, 54(8), p.525 (2022).
- 7) U. Biswas, **J. K. Rakshit**, and K. E. Zoiros, "Effect of smoking and alcohol on the hemoglobin concentration of blood: modeling and analysis using photonic crystal based race track ring resonator," *Optoelectronics and Advanced Materials-Rapid Communications*, 16(July-August 2022), pp.325-335 (2022).
- 8) M. Hossain, **J. K. Rakshit**, and M. Pal Singh, "Numerical analysis of all-optical silicon microring resonator-based cyclic redundancy check encoder," *Journal of Nanophotonics*, 16(3), pp.036007-036007 (2022).
- 9) M. P. Singh, **J. K. Rakshit**, M. Hossain, and J. N. Roy, "Design and analysis of polarization rotation based all-optical ternary half-subtractor and full-subtractor using micro-ring resonator," *Optical and Quantum Electronics*, 54(5), p.287 (2022).
- 10) M. Hossain, **J. K. Rakshit**, and T. Chattopadhyay, "Silicon microring resonator based on all-optical reversible modified Fredkin gate: design and analysis," *Optical Engineering*, 61(4), pp.046111-046111 (2022).
- 11) **Rupam Gupta Roy**, Girish V. Lakhekar, M. H. Tanveer, "Designing of neural network-based SoSMC for autonomous underwater vehicle: integrating hybrid optimization approach", *Soft Computing*, Springer, Volume 27, 3751-3763, 2023.

In Proceedings of International Conference:

- 1) U. Biswas, and **J. K. Rakshit**, "Photonic crystal race track ring resonator design for the detection of cancer cells," In *Journal of Physics: Conference Series* (Vol. 2335, No. 1, p. 012004). IOP Publishing (2022, September).
- 2) M. Hossain, M. P. Singh, and **J. K. Rakshit**, "Modelling of one-bit Arithmetic Logic Circuit using silicon micro-ring resonator," In *Journal of Physics: Conference Series* (Vol. 2335, No. 1, p. 012003). IOP Publishing (2022, September).
- 3) **Aparupa Kar**, Nabamita Goswami, Ardhendu Saha, "Tunable threshold bistable Lateral Beam displacement through Graphene Symmetric mode at Terahertz Frequency," *IEMPHYS-22 International Conference on Advanced Physics*, Institute of Engineering & Management, Kolkata, India, September 22-24, 2022, pp 65.
- 4) **Aparupa Kar**, Nabamita Goswami, Ardhendu Saha, "Graphene Surface Plasmon Polariton based tunable Gas Sensor at Terahertz frequency," *IEMPHYS-22 International Conference on Advanced Physics*, Institute of Engineering & Management, Kolkata, India, September 22-24, 2022, pp 64.
- 5) **Rupam Gupta Roy**, P. Ghorai, A. Eskandarian and V. R. Kasi, "Design of a new nonlinear predictive PI controller for cascaded control system applications," *Eighth Indian Control Conference (ICC)*, Chennai, India, Volume-8, pp. 109-114, 14-16 December 2022.

- 6) S. Nayak, **Subir Das**, B. Chakraborty, T. Chakraborty and K. Roy “Internet of things (IoT) based continuous growth rate monitoring System of plant stem, IEEE VLSI Device Circuit and System (VLSI DCS), February 26-27, 2022, Kolkata, West Bengal, India.

Book /Book Chapter Published:

Name of the Authors published	Title of the Book/ book chapter	Date of publication	Issue/ Volume No./ Page No
Priyanka Dey, Priyanka Roy Goswami, Rituraj Bhattacharjee, Aparupa Kar, Ardhendu Saha	Proceedings of International Conference on Communication and Computational Technologies: ICCCT 2022 / Evaluation of Radio Over Fiber Optical System Supported by Fiber Bragg Grating and Dispersion Compensating Fiber for Attenuating Four-Wave Mixing Effect	27/09/2022	Pages: 561-572
Aparupa Kar, Nabamita Goswami, Priyanka Dey, Priyanka Roy Goswami, Ardendu Saha	Proceedings of International Conference on Communication and Computational Technologies: ICCCT 2022 / Graphene Surface Plasmon Resonance Based All-Optical Modulator at Terahertz Frequency	27/09/2022	Pages: 879-889

Patent Published:

<i>Inventor Name</i>	<i>Year</i>	<i>Title</i>	<i>Published source</i>	<i>Patent version no.</i>	<i>Patent application no.</i>
<i>Dr. Yogesh Kumar Saria</i>	2022	<i>AUXILIARY FUNCTIONAL UNIT IN HOSPITAL BED FOR CHANGING PATIENT POSITION.</i>	<i>IPR</i>	NA	2022210111 46

<i>Dr. Yogesh Kumar Sariya</i>	<i>2022</i>	<i>NOVEL COMPOSITION USING BIOLOGICAL PRODUCTS FOR THE SYNTHESIS OF ZINC OXIDE (ZNO) NANOPARTICLES HAVING MEDICINAL APPLICATIONS</i>	<i>IPR</i>	<i>NA</i>	<i>202221011721</i>
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Distinguished Visitors to the Departments:

Sl. No.	Name of the Visitors and Designation	Date of Visit	Purpose of Visit
1.	Mr. Mohammad Musa HOD at ONGC Tripura Power Company Ltd	2/05/2023	Grand Viva -Voce

12.6 Placement Data

Batch	Total students eligible for placement	Total number of students placed	Percentage placement
2018-2022	44	42	95.5%
2019-2023	56	49	87.5%

13.0 DEPARTMENT MANAGEMENT, HUMANITIES & SOCIAL SCIENCES

13.1 Introduction:

The Department of Humanities & Social Sciences had co-existed with NIT Agartala since the birth of NIT Agartala, i.e., when the erstwhile Tripura Engineering College was converted to National Institute of Technology Agartala on 01.04.2006. The Department was established with an objective of making an engineer enlightened with adequate knowledge of his/her surroundings. The approach of the Department had always been interdisciplinary. The Department offered undergraduate courses in Economics, Costings, Management Principles and Communicative Skill Development. Besides that, it encouraged the students to actively take up research in various fields of Humanities and Social Sciences. The Ph.D. programme of the Department was introduced to serve that very purpose.

The School of Management started its operation in July 2012. It had been established to meet the growing aspirants of Techno Managers in the country specially to meet the demand of North Eastern Region of the country. The School of Management was offering Masters of Business Administration programme (Full Time) and Ph.D. programme in management.

The Department of HSS (Humanities and Social Sciences) and SoM (School of Management) have been merged into Department of Management, Humanities & Social Sciences with effect from the academic session 2019-2020. The Department of Management, Humanities & Social Sciences was established with an objective of making an engineer enlightened with adequate knowledge of his/her surroundings. The approach of the Department is interdisciplinary.

The Department of Management, Humanities & Social Sciences has a language communication skills and multimedia lab which is developed in collaboration with CACM, IIT Kharagpur. The lab which functions on a carefully designed software ISILS WIRELESS interconnects all the students in the classroom with an integrated and active mode of learning, facilitating spontaneous interaction among the students themselves along with the instructor. The lab offers beyond the traditional lecture-based mode of learning and aims at rendering an interactive classroom atmosphere with technological support to help students come to terms with the anxiety of second language learning and channelize their latent linguistic competence into developing communication skills.



Language LAB

The Department of Management, Humanities and Social Sciences (MHSS) also has a well-equipped Computer Laboratory. In this Lab, students perform practical works in various subjects like IT and Business Skills, Finance, marketing and so on. Students also perform research work in this computer lab. The Lab is also equipped with a web camera and internet facility for interview purposes.

**Computer LAB**

Sl. No.	Name of the Laboratories	Maximum Batch Size	No. of Experiments		Remarks
			Prescribed	Conducted	
01	Language Lab	40	Practice in Basic Language, Body Language, Listening Practice, GD, Debate, Communication Skills	Practice in Basic Language, Body Language, Listening Practice, GD, Debate, Communication Skills	

13.2 Academic Programme:

The Department offers undergraduate courses to B. Tech students in Economics, Costing, Management Principles, Management, Business Communication, Communicative Skill Development and Value Education & Ethics and full-time graduate programme in Management. Besides that, it encourages the students to actively take up research in various fields of Humanities, Social Sciences and Management.

The department offers a two year (four semesters) full time MBA programme. This programme is providing an in-depth understanding to students in technical, human and conceptual skills, necessary for a successful manager with specialization in different areas like Finance, Marketing, Human Resource and System. The teaching strategy for this programme is oriented towards the application of knowledge with live-cases and teaching aids. There is a six-week Summer Internship Programme (SIP) for students, after completion of first year course to develop business acumen. The Department facilitates students to undergo internships in various reputed government and private organizations viz. RBI, NEDFi, SBI, NABARD, ONGC, HDFC, ITC, Senrysa Technologies Pvt. Ltd. etc.

The Ph.D. programme of the Department in Economics, Literature and Management, has been introduced to serve that very purpose. Along with these diverse academic departments, the Department is home to a wide variety of interdisciplinary collaborations, path-breaking research projects, and unique areas of study. The Ph.D. programme of the Department in Economics, Literature and Management has been introduced to serve that very purpose. Along with these diverse academic departments, the Department is home to a wide variety of interdisciplinary collaborations, path-breaking research projects, and unique areas of study. The ultimate

objective of any education system is to produce human capital who will be responsible citizen, besides excelling in his/her own domain. To produce a complete technocrat, only technical knowledge seldom serves the purpose. He/She has to be socially aware and be compassionate towards others.

13.3 Faculty and their Activities

Sl. No.	Name	Designation	Qualification	Area of Interest
1	Dr. Debasis Neogi	Professor	Ph.D (Jadavpur University)	Development Economics, Industrial Economics, Corporate Governance.
2	Dr. Gyanabati Khuraijam	Assistant Professor & Head of Department	Ph.D (Manipur University)	Commonwealth Literature
3	Dr. Anirban Dutta	Assistant Professor	Ph.D (NIT Durgapur)	Marketing Efficiency and Service Productivity Measurement
4	Dr. Rajib Mallik	Assistant Professor	Ph.D (Singhania University)	Accounting and Finance
5	Dr. Sonit Dutta	Assistant Professor	Ph.D (Assam University)	Organizational Behaviour, Industrial Relation and Human Resource Management
6	Dr. Amlanbrata Chakraborty	Assistant Professor	Ph.D (Tripura University)	White Collar Business Crime, Intellectual Property Right, International Business, Consumer Behaviour, Corporate Governance, Labour Law
7	Dr. Kaju Nath	Assistant Professor	Ph.D. (Rajiv Gandhi University)	Managerial Economics and Environmental Economics
8	Dr. Anuradha Nongmaithem	Assistant Professor	Ph.D. (Madras University)	African American Literature

9	Dr. Amit Bikram Chowdhury	Assistant Professor	Ph.D. (NIT Agartala)	International Trade and Econometrics
10	Bidyasagar Debnath	Teaching Assistant	M.Com. (Calcutta University)	Accountancy and Management
11	Nabendu Debnath	Teaching Assistant	M. Com. (Tripura University), UGC NET	Accounting and Management

Short-Term Courses/Workshops/Seminar/Symposia/Conferences organized by the faculty members:

<i>SL No.</i>	<i>Co-ordinators</i>	<i>Title</i>	<i>Period (Ddth – Ddth Month, Year)</i>
Short Term Courses			
1.	Dr. Gyanabati Khuraijam	“6 Day Workshop on Personality Development and Interview Skills”	13th-18th June 2022

Short-Term Courses/Workshops/Seminars/Symposia/Conferences/Training attended by the Faculty in Academic Institutions and Public Sector Undertaking:

<i>SL. No.</i>	<i>Name of Faculty</i>	<i>Title</i>	<i>Period</i>
Workshop:			
1.	Dr Anuradha Nongmaithen and Dr Amit Bikram Chowdhury	Interdisciplinary Research Approach for Sustainable Development	1 Day, 25 th July , 2022
2.	Dr. Anirban Dutta	One day Capability Building Training Programme for LPG distributors in Tripura sponsored by Indian Oil Corporation on 25 th Nov'2022	25 th Nov'2022
Conference:			
1.	Dr. Gyanabati Khuraijam	“2 Day International Conference on Post Pandemic Perspectives: Reflections and Realities”	5th-6th August 2022

13.4 Research and Consultancy:

Research Publications:

Total No. of papers published in Refereed International Journals	:11
Total No. of papers presented in National Conference	:10
Total No. of papers presented in International Conferences	:08
Total No. of Book published	: 04

1. Toijam Chanu Panthoi and Gyanabati Khuraijam. 'Third World Women and Environment: An Ecofeminist Reading of Mahasweta Devi's Short Story 'The Hunt''. *Journal of Positive School Psychology*. Vol. 6 No.3. 7996–8001 (2022) (ISSN: 2717-7556) (Scopus indexed)
2. Toijam Chanu Panthoi and Gyanabati Khuraijam. 'An Ecocritical Study of Mahasweta Devi's Short Story 'Little Ones' Translated by Ipsita Chanda'. *Journal of Positive School Psychology*. Vol. 6 No. 4. 5713-5718, 2022. (ISSN: 2717-7556) (Scopus indexed)
3. Adwitiya Gope and Gyanabati Khuraijam. 'New Woman: Dominant Narrative of Modern Indian Womanhood'. *IUP Journal of English Studies*. Jun 2022, Vol. 17 Issue 2, 73-87. (ISSN: 0973-3728) (Scopus indexed)
4. Atri Majumder and Gyanabati Khuraijam. 'Memory, Trauma and Affect: The Implicated Subject in Anuk Arudpragasam's *A Passage North*'. *Rupkatha Journal on Interdisciplinary Studies in Humanities*, Vol. 14, no. 4, 2022, 1-12. (ISSN: 0975-2735) (Scopus indexed, Web of Science: ESCI)
5. Jayashree Tripura, Atri Majumder, Dr. Gyanabati Khuraijam. 'Accentuating Environmental Migration, And Resisting Essentialism In Amitav Ghosh's Gun Island And Salman Rushdie's Quichotte'. *Journal of Positive School Psychology*. Vol. 6 No. 6. 2022. 9040-9046. (ISSN: 2717-7556) (Scopus indexed)
6. Anuradha Nongmaithem. "Politics, Class, Women and Society: A Study of The Princess and the Political Agent" *Journals of Research in Humanities and Social Sciences (JRHSS)*. Vol. 10. Issues 4 (2022): ISSN 2321-9467 (Online). April, 2022. Page no: 12-15.
7. Jayanta Chakraborti, Anirban Dutta, Bhaswati Jana, "Digital Marketing Adoption among Startups in India: A systematic review and bibliometric analysis", *Journal of Information and Optimization Sciences*, Vol.43 Year 2022 (Nov), Pg-1301-1309, Taylor & Francis Publication, Indexing: Web of Science (ESCI), *ABDC Listed Journals* DOI: [10.1080/02522667.2022.2117329](https://doi.org/10.1080/02522667.2022.2117329)
8. Jayanta Chakraborti, Anirban Dutta, Bhaswati Jana, "An Empirical Investigation Into Startups Resist Use of Digital Marketing", *Journal of Content, Community & Communication*, Vol.15 Year 8, July'2022, Pg-69-83, Amity University Publication, Indexing: Scopus DOI: [10.31620/JCCC.06.22/06](https://doi.org/10.31620/JCCC.06.22/06)
9. Arijit Choudhury, Anirban Dutta, Sonit Dutta, "An Analysis of Employee Happiness, Engagement and Organisational Commitment in the Banking Sector of India", *International Journal of Economics and Business Research*, 2022 (26th June), Vol 24 No.1/2, pp 159-179 Inderscience Publication, Indexing: Scopus; *ABDC*. DOI: [10.1504/IJEER.2021.10037392](https://doi.org/10.1504/IJEER.2021.10037392)
10. Mog, M., Neogi, D., Bharadwaz, M.P., Panda, B.K., Sil, A. Prevalence and factors associated with Anaemia in Married Women of Reproductive age group: Evidence from North East India. *Journal of Biosocial Science*, 2022. Cambridge University Press.
11. NEOGI D. Capturing the Differential Impacts of Easing COVID-19 Restrictions: Application of a Hybrid Model of Entropy and TOPSIS. *International Journal of Mathematical, Engineering and Management Sciences*, 2022, 7(2), pp. 231–242

In Proceeding of National Conference:

1. Psychopolitics of Memory: Tracing Affect in Yoko Ogawa's *The Memory Police* by The Third SARC International Online Conference on "The New Human Family in South Asia – Global and Local", November 26 – 27, 2022, South Asia Research Center, Soka University, Japan.
2. Social Media Memory: Affect and Agency in Salman Rushdie's *Quichotte*. Two Day Offline International Seminar on Popular Culture and Contemporary Literature, November 10 - 11, 2022 Pondicherry University

3. Memory, Trauma and Affect: The Implicated Subject in Anuk Arudpragasam's *A Passage North*. 3rd Rupkatha International Open Conference on "Global Anxieties in Times of Current Crises", December 15 – 16, 2022, organized by University of Turin, Italy, and Università Popolare dei Diritti Umani, Italy
4. Affect and lieux de memoire: Historicity and (In)authenticity of Identities in Salman Rushdie's *The Enchantress of Florence*. Historical Fictions Research Conference, February 17-19, 2023, Historical Fictions Research Network (HFRN), UK
5. Refashioning of Myths and Folktales and Their Implications in the Films of Harry Potter. International Seminar on "Popular Culture and Contemporary Literature" at Pondicherry University on November 11, 2022
6. From the adaptation of Death Note to post-pandemic Manga Obsession: Glocalization of Japanese Manga culture. Third International Conference on The New Human Family in South Asia – Global & Local" organized by the South Asia Research Center, Soka University, Japan held from November 26, 2022 to November 27, 2022.
7. Otherization and Alienation of Second-Generation Diasporas in Jhumpa Lahiri's *The Namesake*." Two-Day International Conference on Indian Diaspora in Texts and Contexts organized by the Dept. of English, Manbhum Mahavidyalaya in collaboration with IQAC, MMV on November 10, 2022.
- 8 Bapsi Sidhwa and Arundhati Roy challenging and redefining the stereotypical beliefs of sexual identity and performative roles. International Virtual Conference on Subaltern Studies organized by the Dept. of English, AVP College of Arts and Science, Tamil Nadu on 18th February 2023.
9. Jayanta Chakraborti, Anirban Dutta and Bhaswati Jana," Digital Marketing Adoption Among Startups in India: A Systematic Review and Bibliometric Analysis" in National Conference on Resilience Reinvention & Rebuilding towards the New Normal (R3TN2), held on 14th May 2022 at GIMS, Greater Noida, India. ISBN No: 978-93-5627-804-2
10. Jayanta Chakraborti, Anirban Dutta and Biplab Bhattacharya "*Determining the Adoption of Digital Marketing among Start-up Companies in India: A PLS-SEM Approach Using TAM-TOE Model*" in the 12th Conference on Excellence in Research and Education (CERE), held from 3rd -5th June 2022 at IIM Indore. ISBN 978-93-90951-43-7

In Proceedings of International Conference:

Books Published:

Name of the Authors Published	Title of the Books	Date of Publication of the Book	Issue/Volume No./Page No.
Gyanabati Khuraijam	<i>Feminist Engagements: Cultural Expressions and Politics.</i>	June 2022 Authors Press, New Delhi, India.	ISBN: ISBN 978-93-5529-767-9. 2022.
Gyanabati Khuraijam	<i>Post Pandemic Literary and Cultural Perspectives.</i>	August 2022 IIP, India. INSC International Publishers Pvt. Ltd., Novi, Michigan, USA. ISBN:	978-1-68576-380- 0. 2022.
Gyanabati Khuraijam	<i>Post Colonial and Feminist Literary Concerns.</i>	December 2022 IIP, India. INSC International Publishers Pvt. Ltd.,	ISBN: 978-1-68576-385-5. 2022

		Novi, Michigan, USA.	
Gyanabati Khuraijam	<i>Exploring Gender Studies and Feminisms Through Literature and Media.</i>	May 2022 IGI Global. International Academic Publisher.	ISBN13: 9781668465721 ISBN10: 1668465728 EISBN13: 9781668465745. USA. 2022.

Book Chapter:

1. Ethical Issues in Management, Trends in Interdisciplinary Research, Vol.II, Bhumi Publishing, Maharashtra, ISBN. 978-93-88901-55-0, 77-83, Co-author. Dr. Rajib Mallik.

13.5 Placement Data

100% placement for 2022-23 and 100% internship

13.6 Other Activities:

All dedicated faculty members of the department are deeply involved in academic, research and administrative responsibilities of the Institute.

14.0 MECHANICAL ENGINEERING DEPARTMENT

14.1 Introduction

The Department of Mechanical Engineering at NIT Agartala was formed in 1965, when the institute started as a State Engineering College by the name of Tripura Engineering College. Currently, the department has more than 448 students in the B. Tech. programme, 9 students in the M.Tech. program and 44 Scholars in the Ph.D. program, which are supported by 30 faculty members and 19 staff.

The Mechanical Engineering Department of NIT Agartala is privileged to be commemorating a distinguished legacy of half a century of devotion pledged to the cause of higher education in our Nation from its inception in 1965 along with the foundation of the erstwhile Tripura Engineering College itself. Starting out with a modest beginning, it now boasts of a large fraternity whose continuous and indefatigable efforts to this day has earned itself numerous coveted and prestigious achievements. The department disseminates its academic scope through its B.Tech. and M.Tech curriculum through the specialization of Thermal Science and Engineering, Automotive Engineering, Manufacturing Technology and Machine Design supported by 16 State-of-the-Art research laboratories catering to the various facets of research interests, the department envisages the importance and relevance of live industrial problems in its PhD curriculum. Such a perspective to the necessities to be adaptive to the contemporary needs of global engineering interests have resulted in unprecedented recognition of its research potential, evident from its research publications in eminent peer reviewed journals, patent filings and several ongoing sponsored research projects and consultancy endorsements from various Govt. and non-Govt. concerns.

Our Nation's transition to a knowledge-based economy is requiring a new generation of educated and skilled workforce for innovation and sustainable growth. Its competitive edge is being determined by our ability to create, share, and use knowledge effectively. The frontiers of a higher education system are increasingly being challenged to remain contemporary to the needs of the global requirements. Rapidly changing global technological requirements with ever decreasing timescales of deployment, liberalization of our nation's industry along with increased social and environmental obligations are challenging the very framework of our contemporary technical education system to provide an industry ready taskforce. To be proactive rather than being reactive to the demands of the present and future requirements, the Mechanical Engineering Department of NIT Agartala envisage a plan of action that is multi-faceted and is delivering its objectives through contemporary and innovative models of education using the best of all forms of technology, relevant and appropriate to regional expectations and preferences. Extensive use of ICT based efforts are being put in place to augment and enhance such training that will focus on identifying, developing, promoting, honing and sustaining the inherent skills of our budding engineering and technical professionals. It is through such initiatives that we endeavor to prepare our students both at the Under-graduate and Post-graduate level to be industry ready in the present era of emerging multidisciplinary career opportunities. The Mechanical Engineering Department realizes its pivotal role in providing a firm foundation in mathematical, scientific and engineering fundamentals to its students which is essential to comprehend, analyze, design and create innovative and novel solutions to real life engineering problems that they are destined to encounter in their professional career. It has also been our fundamental aspiration to inculcate the values of professionalism and ethics in our students coupled with effective communication and multidisciplinary skills to empower them with a strategic advantage on the platform of lifelong learning and innovation. Furthermore, our societal responsibilities have been continuously increasing. To meet these expectations, team effort and a dynamic work culture is the need of the hour. The department realizes that enthusiasm, diligence and commitment as the virtues that will guide our students to adapt to these continuously changing expectations and help them embark on a road of sustained excellence. Committed with a vision to produce high quality Mechanical Engineers with techno-managerial ability to contribute in Industry and Research areas maintaining professional ethics and values, the Mechanical Engineering Department envisages a mission to create knowledge through research in the science and technology of mechanical engineering by developing an effective platform to share knowledge through educational programs and the dissemination of new discoveries. The Mechanical Engineering Department of NIT Agartala envisions to develop the professional

potential of faculty, staff, and students by offering an inviting, nurturing, and challenging environment. This is responsive to the intellectual, social, and cultural needs of a diverse learning community. The Department advocates a research portfolio encompassing traditional areas of mechanical engineering, as well as emerging and interdisciplinary ones in order to foster creativity and critical thinking skills through innovative research and design experiences. Awarded with the coveted and prestigious NBA (National Board of Accreditation) accreditation for 5 years for Under-graduate Courses, the Mechanical Engineering Department with such a depth of its vision and mission, seeks to achieve its cherished goals of creating an edifice of excellence in research and consultancy and to harmonize the values of social upliftment through ethical and conscientious pursuance of the commitments of engineering and technical education.

The major research areas include advanced / non-traditional machining processes, aerodynamics, bearing design, CAD/CAM, combustion, composites, computational contact impact analysis, computational fluid mechanics, computational mechanics, convection, refrigeration systems, energy conservation fatigue, wear and failure analysis, finite element methods, fracture mechanics, heat transfer, internal combustion engines, materials processing and characterization, metal casting, metal forming, multi-phase flows, nano-fluids, propulsion, renewable energy, robotics, rotor dynamics, soft computing in design and manufacturing, welding, tribology, turbo machines, turbulence, vibration etc.

Vision of the Department

To produce the bright young Professionals of Mechanical Engineering Sciences by providing excellent Teaching Learning Facilities with entrepreneurial skills for meeting the societal needs.

Mission of the Department

- ii. To develop professional attitude so that the students may develop and sustain their skills as Mechanical Engineer.
- iii. To provide Mechanical Engineering Expertise to Industry, government and society.
- iv. To make good human beings possessing Professional Ethics.
- v. To make responsible citizens with social commitment to foster Research and attitude for development.
- vi. To participate in all round development of the region.



14.2 Academic Programmes

Program	1 st Year	2 nd Year	3 rd Year	4 th Year	Total
B.Tech	121	108	110	109	448
M.Tech	1	8	----	----	9
Ph. D.					44
Grand Total					501

14.3 Faculty and their Activity

Short-Term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the Faculty in Academic Institutions and Public Sector Undertakings:

Sl. No.	Name of Faculty	Title	Period
Workshop			
1.	Prof. Vipin Kumar Tripathi Dr. Ankuran Saha Dr. Arindam Majumder	Optimum Design: Principles and Applications	1st May – 5th May 2023
Short Term Course			
1	Dr. Manish Bhargav	Applications of Soft-computing Techniques and Numerical Modelling in “Additive Manufacturing and Materials Processing”	17-21 December 2022
2	Dr. Preeti Gulia	Advances in Vibration Engineering (AVE-2022) organized by MNIT Allahabad.	Dec. 12-16, 2022

14.4 Research and Consultancy:**Research Publications:**

Total No. of papers published in Refereed International Journals : 71

Total No. of papers presented in National Conference : 01

Total No. of papers presented in International Conferences : 07

Total No. of Books (chapter) published : 08

Total No. of patents : 04

In Refereed International Journals:

Sl. No	Name of the Authors	Title of the Paper & Title of the Journals	Issue/ Volume No./ Page No.	Date of publication of the paper
1.	Alok Ranjan, Ranjan Das, Sameer S. Gajghate, Debabrata Barik, Himadri	"Numerical and Optimization-Based Study on Split Hemispherical Shaped Fins for Augmenting Heat Transfer Rate"	vol. 2023, Article ID 8300877, 20 pages, 2023.	03 Feb 2023

	Majumder, Elaine M. Cardoso, Arindam Majumder, Sagnik Pal, Madhujit Deb,	Journal Name: International Journal of Energy Research,	https://doi.org/10.1155/2023/8300877	
2.	Ranjan A, Das R, Pal S, Majumder A, Deb M.	“Performance analysis of porous-based taper-shaped fin for enhanced heat transfer rate using cuckoo search algorithm” Journal Name: Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering.	2023;0(0). doi:10.1177/09544089231157151	February 27, 2023
3	VireshPayak, P. Jawahar, BarnikSaha Roy, Manish Bhargava and Pritam Das	A review on recent development in aluminium-copper friction stir welding. Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering	1-45	17 March 2023 (SCI)
4	Manish Bhargava, P.Jawahar	Effects of SiC and Carbon Black on Mechanical Properties (Tensile and Flexural) of AA6082/SiC/CB Metal Matrix Composites. International Journal of Materials and Product Technology	65 (4), 412-426	12 September 2022 (SCI)
5	Sanjeev Kumar, Smrity Chaudhary, DurjyodhanSethi, P. Jawahar, Manish Bhargava, BarnikSaha Roy	Effect of process parameters on third generation of friction stir welded Al–Li alloy plates. CIRP Journal of Manufacturing Science Technology 38: 372-385	38,372-385	August 2022 (SCI)
6	S. Sathishkumar, P. Jawahar, Prasun Chakraborti	Influence of carbonaceous reinforcements on mechanical and tribological properties of PEEK composites—a review Polymer Plastics Technology and Materials	12/61/ 1367-1384	April 27,2022 (SCI)
7	Moutoshi Singha Roy, P. Jawahar and Prasanta Kumar Rout	Development and Testing of Al6061-TiB2 Coconut Shell Ash Reinforced Hybrid Composite Nano World Journal	Volume 9, S637-S641	May 22, 2023 (SCOPUS)
8	Sandipan Deb, Kanade Paresh Mahesh, Mantu Das, Dipak Chandra Das, Sagnik Pal, Ranjan Das, Ajoy Kumar Das	Flow boiling heat transfer characteristics over horizontal smooth and microfin tubes: An empirical investigation utilizing R407c, International Journal of Thermal Sciences	188/ 108239	26.02.2023
9	Amit Kumar, Dipak Chandra Das & Pritam Das	Parametric variation studies of experimental flow boiling heat	59/ 1353–1363	20.01.2023

		transfer phenomena using R407c inside an enhanced tube, Heat and Mass Transfer		
10	Neeraj Kumar Vidhyarthi, Sandipan Deb, Sameer Sheshrao Gajghate, Sagnik Pal, Dipak Chandra Das , Ajoy Kumar Das, Bidyut Baran Saha	A comprehensive assessment of two-phase flow boiling heat transfer in micro-fin tubes using pure and blended eco-friendly refrigerants, Energies	16/1951 .	16.02.2023
11	Ankit Samal ¹ · Sanjeev Kumar ² · Manish Bhargava ¹ · Barnik Saha Roy ¹	Fabrication and Characterization of Banana Pseudostem Fibre Reinforced Epoxy Hybrid Composite Using Al ₂ O ₃ as Filler, Journal of Bionic Engineering https://doi.org/10.1007/s42235-023-00331-3	Accepted: 4 January 2023	
12	Setu Suman · Durjyodhan Sethi ² · Manish Bhargava ¹ · Barnik Saha Roy ¹	Investigating the Effect of Multi-pass Friction Stir Processing of SiC Particles on Temperature Distribution, Microstructure and Mechanical Properties of AA6061-T6 Plate, Silicon https://doi.org/10.1007/s12633-022-02108-5	Received: 1 July 2022 / Accepted: 7 September 2022	
13	Sandipan Deb, Kanade Pares Mahesh, Mantu Das, Dipak Chandra Das, Sagnik Pal, Ranjan Das, Ajoy Kumar Das	Flow boiling heat transfer characteristics over horizontal smooth and microfin tubes: An empirical investigation utilizing R407c, International Journal of Thermal Sciences	188/108239	26.02.2023
14	Amit Kumar, Dipak Chandra Das & Pritam Das	Parametric variation studies of experimental flow boiling heat transfer phenomena using R407c inside an enhanced tube, Heat and Mass Transfer	59/1353–1363	20.01.2023
15	Neeraj Kumar Vidhyarthi, Sandipan Deb, Sameer Sheshrao Gajghate, Sagnik Pal, Dipak Chandra Das,	A comprehensive assessment of two-phase flow boiling heat transfer in micro-fin tubes using pure and blended eco-friendly refrigerants,	16/1951 .	16.02.2023

	Ajoy Kumar Das, Bidyut Baran Saha	Energies		
16	Alok Ranjan, Ranjan Das, Sagnik Pal, Arindam Majumder, Madhujit Deb	Performance analysis of porous-based taper-shaped fin for enhanced heat transfer rate using cuckoo search algorithm Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering (SAGE	https://doi.org/10.1177/09544089231157151	February 27, 2023
17	Alok Ranjan, Ranjan Das, Sameer S. Gajghate, Debabrata Barik, Himadri Majumder, Elaine M. Cardoso, Arindam Majumder, Sagnik Pal, Madhujit Deb,	"Numerical and Optimization-Based Study on Split Hemispherical Shaped Fins for Augmenting Heat Transfer Rate" Journal Name: International Journal of Energy Research,	vol. 2023, Article ID 8300877, 20 pages, 2023. https://doi.org/10.1155/2023/8300877	03 Feb 2023
19	Sandipan Deb, Paresh Mahesh Kanade, Sagnik Pal, Ajoy Kumar Das	Influence of horizontal enhanced tube on flow boiling heat transfer characteristics of environmentally friendly refrigerant R-407c Materials Today: Proceedings	Vol-62, Page-3178-3182	4 April 2022,
20	Arindam Sinha, Arindam Majumder, Krishanu Gupta	A RSM based MOGOA for process optimization during WEDM of Inconel 625 Journal Name: Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering	Volume No. 236, Issue-5 Page No. 1824-1832	Arindam Sinha, Arindam Majumder, Krishanu Gupta
21	Alok Ranjan, Ranjan Das, Sameer S. Gajghate, Debabrata Barik, Himadri Majumder, Elaine M. Cardoso, Arindam Majumder , Sagnik Pal, Madhujit Deb	Numerical and Optimization-Based Study on Split Hemispherical Shaped Fins for Augmenting Heat Transfer Rate Journal Name: International Journal of Energy Research,	vol. 2023, Article ID 8300877, 20 pages, 2023. https://doi.org/10.1155/2023/8300877	Alok Ranjan, Ranjan Das, Sameer S. Gajghate, Debabrata Barik, Himadri Majumder, Elaine M. Cardoso, Arindam Majumder , Sagnik Pal, Madhujit Deb
22	Alok Ranjan, Ranjan Das, Sagnik Pal, Arindam Majumder , Madhujit Deb	Performance analysis of porous-based taper-shaped fin for enhanced heat transfer rate using cuckoo search algorithm Journal Name: Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering.	2023;0(0). doi:10.1177/09544089231157151	Alok Ranjan, Ranjan Das, Sagnik Pal, Arindam Majumder , Madhujit Deb

23	Vishal Patil, Paramvir Singh, Sachin Sonage, Neeraj Kumbhakarna, Sudarshan Kumar	Validation of Gasoline Surrogates Through Thermodynamic Analysis of Spark-Ignition Engine & <i>ASME Journal of Energy Resources Technology</i>	145(5): 051703	January 2023
24	Vishal Patil, Paramvir Singh, Sachin Sonage, Neeraj Kumbhakarna, Sudarshan Kumar	Applicability of ketone-gasoline blended fuels for spark ignition engine through energy-exergy analyses & <i>Fuel Elsevier</i>	339: 127416	May 2023
25	Lukas Kieseewetter, Kazi Hassan Shakib, Paramvir Singh, Mizanur Rahman, BhupendraKhandelwal, Sudarshan Kumar and Krishna Shah	A Holistic Review of the Current State of Research on Aircraft Design Concepts and Consideration for Advanced Air Mobility Applications & <i>Progress in Aerospace Sciences Elsevier</i>	Accepted	
26	Ashish Soni, Pankaj Kumar Das, Abdul Wahab Hashmi, Mohammad Yusuf, Hesam Kamyab, ShreeshivadasanChellian	<u>Challenges and opportunities of utilizing municipal solid waste as alternative building materials for sustainable development goals: A review</u> Sustainable Chemistry and Pharmacy	Volume-27 Pages 100706 Publisher-Elsevier	2022/6/01
27	Ashish Soni, Sayanta Chakraborty, Pankaj Kumar Das, Apu Kumar Saha	Materials selection of reinforced sustainable composites by recycling waste plastics and agro-waste: An integrated multi-criteria decision making approach Construction and Building Materials	Volume 348 Pages 128608 Publisher Elsevier	19-09-2022
28	Ashish Soni, Pankaj Kumar Das, Mohammad Yusuf, Amjad Ali Pasha, Kashif Irshad, MostefaBourchak	<u>Synergy of RHA and silica sand on physico-mechanical and tribological properties of waste plastic-reinforced thermoplastic composites as floor tiles</u> Environmental Science and Pollution Research	Pages 1-19 Publisher Springer Berlin Heidelberg	Publication date 2022/5/23
29	Ashish Soni, Pankaj Kumar Das, Mohammad Yusuf, Hesam Kamyab, ShreeshivadasanChellian	<u>Development of sand-plastic composites as floor tiles using silica sand and recycled thermoplastics: a sustainable approach for cleaner production</u> Scientific reports	Volume 12 Issue 1 Pages 18921 Publisher Nature Publishing Group UK	2022/11/7

30	Ashish Soni, Pankaj Kumar Das, Mohammad Yusuf, Syahrir Ridha	<u>Tribological behavior of particulates reinforced sustainable composites: Effect of composition, load, and sliding speed</u> Sustainable Chemistry and Pharmacy	Volume 29 Pages 100748 Publisher Elsevier	Publication date 2022/10/1
31	Ashish Soni, Pankaj Kumar Das, Prabhat Kumar	<u>A review on the municipal solid waste management status, challenges and potential for the future Indian cities</u> Environment, Development and Sustainability	Pages 1-49 Publisher Springer Netherlands	Publication date 2022/10/1
32	A Soni, PK Das, M Yusuf	<u>An experimental investigation on physical-mechanical-tribological performance of thermoplastic composites with partial sand replacements</u> Materialwissenschaft und Werkstofftechnik	Volume 53 Issue 9 Pages 1028-1042	Publication date 2022/9
33	Ashish Soni, Das Pankaj Kumar, Mohammad Yusuf, Syahrir Ridha	<u>Experimental investigations on the workability of sustainable composite by recycling waste plastics and agro-waste</u> Zaštita materijal	Volume 63 Issue 4 Pages 493-501	Publication date 2022
34	Ashish Soni, Pankaj Kumar Das, Mohammad Yusuf, Syahrir Ridha, Hesam Kamyab, Shreeshivadasan Chellipani, Irina Kirpichnikova, Zainab Haider Mussa	<u>Valorization of Post-Consumers Plastics and Agro-Waste in Sustainable Polymeric Composites for Tribological Applications</u> Waste and Biomass Valorization	Pages 1-17 Publisher Springer Netherlands	Publication date 2023/3/11
35	Ashish Soni, Pankaj Kumar Das, Sanjay Kumar, Vivek Mishra, Ajay Pagare, Dipendra Kumar	<u>Tribological characterizations and numerical simulations of thermoplastic composites in pin-on-disc configuration</u> Materials Today: Proceedings	Volume 79 Pages 92-99 Publisher Elsevier	Publication date 2023/1/1

36	Ashish Soni, Sameer Kumar, Biprajit Majumder, Hridhi Dam, Vishal Dutta, Pankaj Kumar Das	<u>Synergy of waste plastics and natural fibers as sustainable composites for structural applications concerning circular economy</u> Environmental Science and Pollution Research	Pages 1-20 Publisher Springer Berlin Heidelberg	Publication date 2023/3/17
37	Ashish Soni, Pankaj Kumar Das, Sanjay Kumar, Ajay Pagare	<u>Experimental investigations on the tribological behaviour of thermoplastic composites with partial sand replacements</u> Materials Today: Proceedings	Volume 79 Pages 44-48 Publisher Elsevier	Publication date 2023/1/1
38	Chakraborty, Amitav; Biswas, Srijit; Kakati, Dipankar; Banerjee, Rahul;	Leveraging hydrogen as the low reactive component in the optimization of the PPCI-RCCI transition regimes in an existing diesel engine under varying injection phasing and reactivity stratification strategies & Energy	244.0//122629.0	2022
39	Srijit Biswas, Dipankar Kakati, Prasun Chakraborti, Rahul Banerjee.;	Performance-emission-stability mapping of CI engine in RCCI-PCCI modes under varying ethanol and CNG induced reactivity profiles: A comparative study through experimental and optimization perspectives, & Energy	Volume 254, Part B,	2022
40	Chakraborty, Amitav; Biswas, Srijit; Meitei, Saratchandra; Sengupta, Anindita; Kakati, Dipankar; Banerjee, Rahul;	Examining the significance of the ignition characteristics of hydrogen and liquefied-petroleum-gas on the reactivity controlled compression ignition and its interspersed profiles induced in an existing diesel engine: a comparative perspective & Energy Conversion and Management	268.0//115976.0	2022
41	Srijit Biswas, Anindita Sengupta, Dipankar Kakati, Rahul Banerjee.;	The transition from conventional biodiesel combustion to RCCI with CNG/ethanol induction in CI engine: A comparative combustion analysis and relative effects on performance-emissions. &	Volume 24, Issue 6	2022

		International Journal of Engine Research.		
42	Biswas, Srijit; Sengupta, Anindita; Kakati, Dipankar; Chakraborti, Prasun; Banerjee, Rahul;	Parametric optimization of the CNG/ethanol-induced RCCI profiles in biodiesel combustion through a robust design space foray & Fuel	332.0//126203.0	2023
43	Srijit Biswas, Rahul Banerjee.;	In-cylinder pressure profiling for CNG/ethanol enriched biodiesel combustion. & Fuel	343.0/127970.0/	2023
44	Durjyodhan Sethi, Uttam Acharya, Shashank Shekhar, Barnik Saha Roy	<u>Applicability of unique scarf joint configuration in friction stir welding of AA6061-T6: analysis of torque, force, microstructure and mechanical properties /</u> Defence Technology	18/4/ 567-582	2022
45	Sanjeev Kumar, Smrity Chaudhary, Durjyodhan Sethi, Jawahar Paulraj, Manish Bhargava, Barnik Saha Roy	Effect of process parameters on third generation of friction stir welded Al–Li alloy plates / CIRP Journal of Manufacturing Science and Technology	38/ 372-385	2022
46	Durjyodhan Sethi, Uttam Acharya, Sanjeev Kumar, Shashank Shekhar, Barnik Saha Roy	<u>Effect of tool rotational speed on friction stir welded AA6061-T6 scarf joint configuration /</u> Advanced Composites and Hybrid Materials	5/3/ 2353-2368	2022
47	Durjyodhan Sethi, Sanjeev Kumar, Shashank Shekhar, Barnik Saha Roy	<u>Friction stir welding of AA7075-T6/TiB₂ in situ cast composites plates using scarf joint configuration /</u> Advances in Materials and Processing Technologies	8/2/ 979-991	2022/9/30
48	Sanjeev Kumar, Jitendra Kumar Katiyar, Uttam Acharya, Subash Chandra Saha, Barnik Saha Roy	<u>Influence of tool rotational speed on microstructure and mechanical properties of Al-Li alloy using friction stir welding /</u> Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering	236/5/2106-2117	2022/10
49	Setu Suman, Durjyodhan Sethi, Arabinda Meher, Manish Bhargava, Barnik Saha Roy	<u>Effect of tool rotational speed on microstructure and mechanical properties of AA6061/SiC surface composites using friction stir processing /</u> Materials Today: Proceedings		2022/11/29
50	Setu Suman, Durjyodhan Sethi,	<u>Investigating the effect of multi-pass friction stir processing of SiC</u>	15/4/1621-1633	2023/2

	Manish Bhargava, Barnik Saha Roy	<u>particles on temperature distribution, microstructure and mechanical properties of AA6061-T6 plate / Silicon</u>		
51	Ankit Samal, Sanjeev Kumar, Manish Bhargava, Barnik Saha Roy	Fabrication and Characterization of Banana Pseudostem Fibre Reinforced Epoxy Hybrid Composite Using Al ₂ O ₃ as Filler / Journal of Bionic Engineering	1-10	2023/2/8
52	Sanjeev Kumar, Manoj Kumar Triveni, Jitendra Kumar Katiyar, Tameshwer Nath Tiwari, Barnik Saha Roy	<u>Prediction of heat generation effect on force torque and mechanical properties at varying tool rotational speed in friction stir welding using artificial neural network</u> / Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science	09544062231155737	2023/2/11
53	Sanjeev Kumar, Jitendra Kumar Katiyar, Barnik Saha Roy	<u>Influence of tool tilt angle on physical, thermal, and mechanical properties of friction stir welded Al-Cu-Li alloys</u> / Materials Today Communications	34/105348	2023/3/1
54	Viresh Payak, Jawahar Paulraj, Barnik Saha Roy, Manish Bhargava, Pritam Das	<u>A review on recent development in aluminium-copper friction stir welding</u> / Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering	09544089231158201	2023/3/17
55	Smrity Choudhury, Uttam Acharya, Joydeep Roy, Barnik Saha Roy	<u>Recent progress in solid-state additive manufacturing technique: Friction stir additive manufacturing</u> / Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering	237/2/467-491	2023/4
57	<i>Prabhat Kumar, Subrata Kumar Ghosh, Somasundaram Saravanan, John Deb Barma</i>	<i>Effect of Explosive Loading Ratio on Microstructure and Mechanical Properties of Al 5052/AZ31B Explosive Weld Composite, JOM</i>	75: 167–175	21/11/2022
58	Pabitra Maji, R. K. Bhogendro Meitei, Subrata Kumar Ghosh	Understanding the Trends in Welding of Copper and Steel	24840/2183-6493_008.006_0004	28/11/2022
59	P. Shinde, S. S. Ohol, V. K. Tripathi	Shape optimization of wind turbine blade, journal of Applied Fluid Mechanics	188 (2023) 108239	2023
60	S. Deb, K. P. Mahesh, M. Das, D. C. Das, S. Pal, R. Das, A. K. Das	Flow boiling heat transfer characteristics over horizontal smooth and microfin tubes: An	DOI: 10.1007/s00231-023-03374-8	

		empirical investigation utilizing R407c		
61	S. Deb, M. Das, D. C. Das, S. Pal, R. Das, A. K. Das	Evaluation of flow boiling heat transfer in horizontal circular trapezoidal-shaped microfin tube.	DOI: https://doi.org/10.1155/2023/8882662 .	
62	S. Deb, N. K. Vidhyarthi, S Pal, A. K. Das, D Barik	Parametric Evaluation of the Flow Boiling Heat Transfer Properties of R22 and R407c inside Horizontal Microfin Tube	Volume 62, part 6, 2022, Pages 3178-318	
63	Sandipan Deb, Kanade Pareesh Mahesh, Ajoy Kr Das	Influence of horizontal enhanced tube on flow boiling heat transfer characteristics of environmentally friendly refrigerant R-407C	https://doi.org/10.1016/j.matpr.2023.06.369	
64	Neeraj Kumar Vidhyarthi, Sandipan Deb, Sagnik Pal, Ajoy Kumar Das	Significance of enhanced Cu-tube over flow boiling heat transfer characteristics using R134a: An experimental investigation	https://doi.org/10.3390/en16041951	
65	Neeraj Kumar Vidhyarthi, Sandipan Deb, Sameer Sheshrao Gajghate, Sagnik Pal, Dipak Chandra Das, Ajoy Kumar Das and Bidyut Baran Saha	A Comprehensive Assessment of Two-Phase Flow Boiling Heat Transfer in Micro-Fin Tubes Using Pure and Blended Eco-Friendly Refrigerants	Volume 43(2023), 101965	
66	Bireesh Shil, Dipak Sen, Ajoy Kumar Das, Pulak Sen, Sanjib Kalita, Sudev Das	Enhancement in pool boiling performance of GNP/Cu-Al ₂ O ₃ nano-composite coated copper microporous surface	188 (2023) 108239	
67	Gupta A., Sharma R., Thakur A., Gulia P	"Metamaterial Foundation for Seismic Wave Attenuation for Low and Wide Frequency Band", <i>Nature Scientific Reports</i> ,	Vol. 13 (2023), 2293-1-14	
68	Dogra S., Gulia P., Gupta A	"Noise Isolation in Building HVAC system using Recyclable Plastic Bottles",	Part C-Journal of Mechanical Engineering Sciences	
69	Gulia P., Dogra S., Gupta A.	"Preliminary Study of using plastic Bottles as Meta-material"	Building Acoustics	
70	A Mandal, A Banik, J Deb Barma, G Majumdar	Effect of Square Pin Tool on Friction Stir Welded AA 6061-T6 from the Perspective of Revolution Pitch <i>Soldagem&Inspeção</i>	27: e2706. https://doi.org/10.1590/0104-9224/si27.06	04.05.2022
71	Abhishek Mandal, John Deb Barma, Gautam Majumdar	Effect of Tool Pin Geometries on Weld Quality of Al/Cu Dissimilar Friction Stir Welding,	https://doi.org/10.1007/s40033-023-00472-z	28.03.2023

		<i>Journal of the Institution of Engineers (India): Series D</i>		

In Proceedings of National Conference:

Sl. No	Name of the Authors	Title of the Paper	Name of the Conference and Place	Issue/ Volume No./ Page No.	Period of Conference
1	S. Sathishkumar, P. Jawahar, Prasun Chakraborti	A Focused Review on PEEK (Poly Ether Ether Ketone) and PEEK based polymer composites for Biomedical Applications	DST-SERB sponsored National Conference on Recent Trends in Green Chemistry & Material Science (RTGCMS 2022) and Mohamed Sathak Engineering College, Ramanathapuram Tamil Nadu	ISBN :978-93-5701-467-0	August:25-26th, 2022.

In Proceedings of International Conference:

Sl. No	Name of the Authors	Title of the Paper	Name of the Conference and Place	Issue/ Volume No./ Page No.	Period of Conference
1	S. Sathishkumar, P. Jawahar, Prasun Chakraborti	Additive Manufactured PEEK Based Composites for Orthopedic Implants: A Review”	PEEK Based Composites for Orthopedic Implants: A Review” in (ICAMAT-2022) International conference on Additive manufacturing and Allied Technologies, Department of Metallurgical and Materials Engineering organized by National Institute of technology, Tiruchirappalli in association of NTNU, Norway and Tallinn	-	June 10- 11th, 2022

			University, Estonia.		
2	Ashish Soni, SayantaChakraborty, Pankaj Kumar Das, Apu Kumar Saha,,	1st International Conference on Mathematical Engineering and Management Sciences (1st ICMEMS, 2022), Recycling of solid waste for developing green composites as a building material- An approach towards sustainability,	The DQM Research Center, Prijevor, Serbia,.		June 25 - 26, 2022
3	Ashish Soni, Pankaj Kumar Das, Sanjay Kumar, Ajay Pagare	, International Conference on Innovative advancement in Engineering and technology (IAET- 2022),Experimental investigations on the tribological behaviour of thermoplastic composites with partial sand replacements,	Jaipur National University,		March 25-26, 2022.
4	<i>Prabhat Kumar, Subrata Kumar Ghosh, Somasundaram Saravanan, John Deb Barma, Jitendra Kumar</i>	The joining of magnesium and aluminium alloys by inclined arrangement of explosive welding	ICAMP-2022, Secunderabad, India	76: 536-541	8th& 9th July, 2022
5	M. P. Uddin, A. Majumder, J. D. Barma & P. Kumar	Study of the performance of Cu-Gr composite tool during EDM of AISI 1020 mild steel	<i>ICMPC 2022</i> Hyderabad, India <i>Materials Today: Proceedings</i>	62, 3886- 3890	7 May 2022

Book chapter Published:

Sl. No.	Name of the Authors	Title of the Book /Book Chapter	Date of publication of the Book/Book Chapter	Issue/ Volume No./ Page No.
1.	<u>Alok Ranjan,</u> <u>Sagnik Pal &</u> <u>Madhujit Deb</u>	“ <u>Lecture Notes in Mechanical Engineering</u> ” / Performance Analysis of Split Circular and Drop-Form Fin Geometry for Enhanced Heat Transfer Rate	21 September 2022	pp 115–126
2	Chapter: Synthesis, Properties and Application of PEEK Based Bio Materials.	Chapter: Synthesis, Properties and Application of PEEK Based Bio Materials. Book: Advanced Materials for Biomedical Applications CRC Press (Taylor and Francis Group)	December 13, 2022	1st Edition/ Page No. 81 – 107, ISBN No.: 978-1-003-34481-0.
3	S Prajapati, A Sahu, A Kumar, M Gandhi, A Acharjee -	<u>CFD Analysis and Validation of Airflow Pattern in Typical Indian Rooms.</u>	25/9/2022	https://doi.org/10.1007/978-981-19-3379-0_26 Page No: 295-307
4	Shivam Prajapati, Shulabh Yadav, Raghav Khandelwal, Priyam Jain, AshisAcharjee, Prasun Chakraborti	Thermo-Economic Analysis for the Feasibility Study of a Binary Geothermal Power Plant in India	29/06/2022	https://doi.org/10.1007/978-981-19-0836-1_38 Page No: 493-510
5	Manish Bhargava, Tushar Sharma, Shraddha Arya, Arindam Sinha	Quality Improvement in Inner Bore Grinding Rejection of Ball Bearing by Using Six-Sigma Methodology	2023	Advances in Modelling and Optimization of Manufacturing and Industrial Systems, LNME SPRINGER
6	<u>Alok Ranjan,</u> <u>Sagnik Pal &</u> <u>Madhujit Deb</u>	“ <u>Lecture Notes in Mechanical Engineering</u> ” / Performance Analysis of Split Circular and Drop-Form Fin Geometry for Enhanced Heat Transfer Rate	21 September 2022	pp 115–126
7	Arindam Majumder	Robotic Cell Scheduling Problems and Their Solution	2023	pp 271-295

		Procedures: A Survey and Future Research Directions		
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Patent Published:

Sl. No.	Inventor Name	Year	Title	Published source	Patent version no.	Patent application no.
1	Dr. J. Chandradass Mr. T. Thirugnanasambandham Dr. Ttm. Kannan Dr. P. Jawahar	05.01.2023	Brake Pad for Racing Car	Government of India	340458-001	123918
2	Dr. Apurba Das Dr. Ankuran Saha Dr. Gurudas Mandal Dr. Arijit Sinha Miss. Pratima Biswas	2023	WHEELCHAIR TO PATIENT BED: QUICK CONVERSION	The Patent Office Journal No. 17/2023 Dated 28/04/2023		202331029112 A
3	Ashish Soni, Pankaj Kumar Das	2023	Compositions and methods for thermoplastics composites by the synergy of RHA, Silica sand and waste plastics”			Application number – 202331008007.
4	Ashish soni, Pankaj Kumar Das	2022	A System for providing Development of Sustainable Composites for Tribological Application”.			Application number – 202231071656

Distinguished Visitors to the Departments:

Sl. No.	Name of the Visitors and Designation	Date of visit	Purpose of visit
1	Prof. Uday Kumar Dixit, Professor IIT Guwahati	31/05/2022	Official Purpose
2	S.P Bhattacharya, Alumni	14/01/2023	Alumni Meet
3	Pradip Kumar Biswas, Alumni	14/01/2023	Alumni Meet
4	Abhijit Das, Alumni	14/01/2023	Alumni Meet
5	Prof. Mukul Sutaone, VC COEP Technological University Pune	26/03/2023	Official Purpose

14.5 Institute – Industry Collaboration

Sl. No.	Title	Period (Years)	Funding Agency	Amount (in lakhs)	Co-ordinators
1	Friction Stir Welding of Aluminum Alloy (Al6101) and Copper Alloy (C11000) for Busbar Application by Novel Hybrid Interlayer Approach	3 Years	Science and Engineering Research Board, Department of Science & Technology, Government of India	4213220	Dr. P. Jawahar
2	Conversion analysis of the syngas production from single-use absorbent waste materials and its applicability for power generation in industries/hospitals through RCCI combustion	Dec. 2022 to Dec 2024	Science and Engineering Research Board	32.93	Dr. Paramvir Singh (PI)
3	Development of unified RCCI-CDF combustion strategy for heavy-duty diesel engine with CNG-Diesel fuels. CRG/2022/005822	3	SERB	15.7	Co-PI (Dr. Rahul Baneerjee)

14.6 Placement Data

105 no. of students are placed out of 109 students

14.7 Other Activities:

Prof. Swapan Bhaumik delivered a lecture on Pool Boiling Heat Transfer Enhancement using Refrigerants in 3rd International Conference on "Recent Advancements in Mechanical Engineering (ICRAME 2022)" during 04 - 06th February 2022 at NIT Silchar as Invited Speaker.

15.0 MATHEMATICS DEPARTMENT

15.1 Introduction:

The Department of Mathematics starts from the inception of NIT Agartala in 2006 with the up gradation of erstwhile Tripura Engineering College (TEC). The Department is motivated towards excellence in research and teaching and has accomplished in this venture continuously over the years to a large extent. Initially, the Department catered the need of teaching Engineering Mathematics to the undergraduate students. In 2010, the Department made a big stride in the way of starting Post Graduate course, namely M.Sc. in Mathematics. Further expansion of the Department in the form of opening BSMS, a 5 years dual degree course in 2013 was really a milestone in the history of the Department. Since then, it started functioning as a full-fledged department in true sense. In 2020 and 2021, another post graduate course, namely M.Sc. in Mathematics and Computing and 5-year dual degree course, namely BTMT in Computational Mathematics were started. At present, the Department is offering M.Sc. course in Mathematics and Computing, BSMS in Mathematics, BSMS in Mathematics and Computing and BTMT in Computational Mathematics and also Ph.D. Programs in (both Pure & Applied) Mathematics. Apart from teaching Engineering Mathematics, the faculty members teach various other subjects, like Operations Research, Numerical Analysis, Computational Linear Algebra etc. to under graduate and post graduate engineering students. The faculty members are involved in extensive individual and collaborative research work.



Departmental Computer Lab



Students working in Computer Lab

15.2 Academic Programme:

For imparting quality education, both PG and UG level courses (M.Sc. in Mathematics and Computing, BSMS in Mathematics, BSMS in Mathematics & Computing and BTMT in Computational Mathematics) are taught in Mathematics Department. Admission in the two years (4 Semester) M.Sc. Degree and five years (10 Semesters) BSMS and BTMT Courses are made through merit basis with an initial intake capacity of 13, 25 and 25 students (respectively). Both of these M.Sc. and Dual Degree Programs encourage and persuade the students to grasp in depth knowledge and also widen their career opportunities. Also the Department offers Ph.D. Degree in Mathematics.

15.3 Faculty and their Activities:

The Department has highly qualified faculty members consisting of one (01) Professor, four (04) Associate Professors, one (01) Assistant Professor (Regular) and ten (10) Assistant Professors (Contractual). In their pursuit of research, the faculty members are doing an extensive study in vast and diverse fields relating to

Topology, Generalized fuzzy topological space, Inventory management (Operations Research), Bi-topology, MCDM, Fuzzy control system, Fuzzy optimization, Computational Fluid dynamics, Inventory control, Biomathematics, Graph theory, ODE & PDE, Super-symmetric Quantum Mechanics, Water wave mechanics, Heat transfer, Convection, Numerical methods, Wireless Network, Image Processing, Quantum Computing, Deep Learning etc.

Short-Term Courses/Works/tops/ Seminar/ Symposia/Conferences organized by the faculty members:

Sl. No.	Co-ordinators	Title	Period (Dd th -Dd th , Month, Year)
Workshop:			
1.	Coordinator: Dr. Baby Bhattacharya Co-coordinators: Dr. Susmita Roy, Dr. PinkiMajumder and Dr. JayasreeChakraborty	Fundamentals of Computational Mathematics (training program)	20 th -26 th June, 2022
5.	Dr. Baby Bhattacharya	DigitALL: Innovation and Technology for Gender Equality(Workshop: Organized by ICC in the dept. of Mathematics)	22nd -28th March, 2023
Conferences			
1.	Dr. Apu Kumar Saha	International conference on intelligent vision and computing(ICIVC2022)	26 th - 27 th August, 2022

Short-Term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the Faculty in Academic Institutions and Public Sector Undertakings:

Sl. No.	Name of Faculty	Title	I Period
Conference: 01			
1.	Dr. Susmita Roy	13 th International Conference on Materials, Processing & Characterization (13 th ICMPC) (Hybrid mode), GRIET, Hyderabad	22 nd to 24 th April, 2022 (Online)

15.4 Research and Consultancy:

A project titled “Development of Mathematics Proficiency in North–East India”, under the Scheme Synergistic Training program Utilizing the Scientific and Technological Infrastructure” (STUTI) Program of the Department of Science & Technology (DST), Government of India has been sanctioned for the Department of Mathematics, National Institute of Technology Agartala which cost Rs. 2,24,47,000/- (Rupees two crore twenty-four lakh and forty-seven thousand only) per annum for three years. Initially, the project is sanctioned for one year. The project has been extended for one more year after the successful

completion of the 1st year. There are 13 Institutes selected for the STUTI project from all over India. From North East part of India, our Institute is the only recipient of this project. In this project, our Institute shall function as a Project Management Unit (PMU). According to the STUTI Program guideline, there are two major components that will be conducted by the PMU. 1. Twenty-two training programs (7 days long) on DST-supported Research & Development (R&D) equipment targeting Scientists/Professors/PhDs and PDFs actively involved in research across various institutions of North-East India. 2. Twelve awareness programs (1-day duration) on R&D equipment/facility for School students (Science stream class 11 and 12) in catchment areas by means of popular science events.

A research project, namely "Transmission of quantum information using perfect state transfer" has been sanctioned by Science and Engineering Research Board (SERB). The total financial grant of the project is Rs. 20,40,293/- (Twenty lakh, forty thousand, two hundred ninety three) for a period of three years.

Sponsored Research Projects:

Sl. No.	Title	Period	Funding Agency	Amount (in lakhs)	Coordinators
1.	Development of Mathematics Proficiency in North-East India	Jan 2022 – August 2023	DST STUTI Program	Rs. 2,24,47,000/- per annum (Two crore twenty-four lakh forty seven thousand)	PI: Dr. Uttam Kumar Bera Co-PI: Dr. Paritosh Bhattacharya and Dr. Baby Bhattacharya
2.	Transmission of quantum information using perfect state transfer	March 22 – March 25	SERB	20,40,293/- (Twenty lakh, forty thousand, two hundred ninety-three)	Dr. Supriyo Dutta (PI) & Dr. Subashish Banerjee (Co-PI, IIT Jodhpur)

Research Publications:

Total No. of papers published in Refereed International Journals	: 42
Total No. of papers presented in National Conference	: 01
Total No. of papers presented in International Conferences	: 16
Total No. of Books published	: 01
Total No. of patents	: 01

In Refereed International Journals:

1. Agushaka, J. O., Akinola, O., Ezugwu, A. E., Oyelade, O. N., & Saha, A. K. (2022). Advanced dwarf mongoose optimization for solving CEC 2011 and CEC 2017 benchmark problems. Plos one, 17(11), e0275346.
2. Alshamrani, A., Sengupta, D., Das, A., Bera, U. K., Hezam, I. M., Nayeem, M. K., & Aqlan, F. (2023). Optimal Design of an Eco-Friendly Transportation Network under Uncertain Parameters. Sustainability, 15(6), 5538.

3. Baidya, A., Bera, U. K., & Maiti, M. (2022). A Restricted Multi-Objective Solid Transportation Problem with Budget Constraint Involving Stochastic Variable and Interval Type-2 Fuzzy Number. *New Mathematics and Natural Computation*, 18(03), 747-773.
4. Chakraborty, S., & Saha, A. K. (2022). A framework of LR fuzzy AHP and fuzzy WASPAS for health care waste recycling technology. *Applied Soft Computing*, 127, 109388.
5. Chakraborty, S., & Saha, A. K. (2022). Selection of Forklift unit for transport handling using integrated MCDM under neutrosophic environment. *FactaUniversitatis, Series: Mechanical Engineering*.
6. Chakraborty, S., & Saha, A. K. (2022). Selection of optimal lithium ion battery recycling process: A multi-criteria group decision making approach. *Journal of Energy Storage*, 55, 105557.
7. Chakraborty, S., & Saha, A. K. (2023). Novel Fermatean Fuzzy Bonferroni Mean aggregation operators for selecting optimal health care waste treatment technology. *Engineering Applications of Artificial Intelligence*, 119, 105752.
8. Chakraborty, S., Nama, S., Saha, A. K., & Mirjalili, S. (2022). A Modified Moth-Flame Optimization Algorithm for Image Segmentation. In *Handbook of Moth-Flame Optimization Algorithm: Variants, Hybrids, Improvements, and Applications* (pp. 111-128). CRC Press.
9. Chakraborty, S., Saha, A. K., & Chhabra, A. (2023). Improving whale optimization algorithm with elite strategy and its application to engineering-design and cloud task scheduling problems. *Cognitive Computation*, 1-29.
10. Chakraborty, S., Saha, A. K., Ezugwu, A. E., Agushaka, J. O., Zitar, R. A., & Abualigah, L. (2023). Differential evolution and its applications in image processing problems: A comprehensive review. *Archives of Computational Methods in Engineering*, 30(2), 985-1040.
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In Proceedings of National Conference:

Author Name	Title of the Paper	Conference Name	Place	Volume	Page No.	Date/ Duration
C. Tripura, S. Chakraborty and B. Bhattacharya	Selection of Best Video Conferencing Platform using integrated MCDM under Picture Fuzzy Environment	National Conference on Mathematics and Computing	NIT Agartala, India			22nd December, 2022

In Proceedings of International Conference:

Author Name	Title of the Paper	Conference Name	Place	Volume	Page No.	Date/ Duration
S. Debbarma, S. Chakraborty and A. K. Saha,	Health care waste recycling technology selection using Fermatean fuzzy Multi-Criteria Group Decision Making	Emerging Trends in Mathematical Sciences & Computing (IEMSC-23),	Institute of Engineering & Management, Kolkata, India,			February 3 – 5, 2023.
A. Pareek, S. Chakraborty and A. K. Saha,	An integrated multi-criteria decision making approach for material selection by waste recycling	Emerging Trends in Mathematical Sciences & Computing (IEMSC-23),	Institute of Engineering & Management, Kolkata, India,			February 3 – 5, 2023.

S. K. Sahoo, A. K. Saha, M. Irfan	HMFOISCA: a hybrid moth flame optimization algorithm for combined economic emission dispatch problem	Dewantara International Conference on Multidisciplinary (D-ICoM) 2022,	Universitas Sarjanawiyata Tamansiswa, Yogyakarta, Indonesia,			3rd December 2022.
S. Wanjari, S. K. Sahoo, T. M. Shami, A. K. Saha, I. Taufiq	A hybrid single candidate optimizer for engineering design problems	Dewantara International Conference on Multidisciplinary (D-ICoM) 2022,	Universitas Sarjanawiyata Tamansiswa, Yogyakarta, Indonesia,			3rd December 2022.
S. Reang, S. K. Sahoo, A. K. Saha,	A mathematical operator based Moth flame optimization algorithm for global optimization	International Conference on Evolution in Pure & Applied Mathematics (ICEPAM-2022),	Akal University, Bathinda, Punjab, India,			November 16-18, 2022.
S. Debbarma, S. Chakraborty and A. K. Saha,	Health care waste recycling technology selection using Fermatean fuzzy MCGDM	International Online Conference on Reuse Recycling Upcycling Sustainable Waste Management and Circular Economy (ICRSC – 2022)	Mahatma Gandhi University, Kottayam, Kerala, India,			September 9 – 11, 2022.
A. Pareek, S. Chakraborty and A. K. Saha,	Recycling of waste plastic and agro waste for material selection using an integrated multi-criteria decision making approach	International Online Conference on Reuse Recycling Upcycling Sustainable Waste Management and Circular Economy (ICRSC – 2022)	Mahatma Gandhi University, Kottayam, Kerala, India,			September 9 – 11, 2022.
A. Soni, S. Chakraborty, P. K. Das and A. K. Saha,	An Integrated MCDM Approach for Materials Selection of Particulates Reinforced	1st ICMEMS	University of Delhi, India.			June 25-26, 2022.

	Sustainable Composites					
S. K. Sahoo, A. K. Saha,	A modernized moth flame optimization algorithm for higher dimensional problems	1st International Conference on Sustainable Engineering and Technology (IC-SET2022)	Universitas Sarjanawiyata Tamansiswa, Yogyakarta, Indonesia,			7th June 2022.
N. Nath, A. K. Saha, S. K. Sahoo,	A modified sine cosine algorithm for composite benchmark functions	Fourth Two Day International Conference on “New Trends in Mathematical Modeling with Applications (ICNTMMA – 2022)	Sri Vidya Mandir Arts and Science College, Katteri, Tamil Nadu, India,			April 7-8, 2022.
C. Tripura, S. Chakraborty and B. Bhattacharya	Picture fuzzy multi criteria group decision making approach for video conferencing tool selection	Fifth Edition of the International Conference on Research in Applied Mathematics and Computer Science, (ICRAMCS - 2023)	Casablanca (Maroc)			March 16 – 18, 2023.
M. Debnath, S. Chakraborty and D. Bhattacharya	Fermatean Fuzzy Aggregation Operator based MCGDM for Green Supplier Selection	IEMSC– 2023	Institute of Engineering & Management, Kolkata			February 3 – 5, 2023.
M. Debnath, S. Chakraborty and D. Bhattacharya	Fermatean Fuzzy Aggregation Operator based MCGDM for Supplier Selection	1st ICMEMS	University of Delhi, India			June 25-26, 2022.

S.Ankur, P.Majumder, U.K.Bera&S. Biswas	A co-operative game theoretical strategy of Vendor and Buyer in an EPQ model of deteriorating items under trade credit policy	2022 IEEE Region 10 Symposium (TENSYP)	Mumbai, India	1	1-6	01-03 July 2022
D. Ghosh, P.Majumder&U. K.Bera	Economic Order Quantity Model of Deteriorating Items Under Trade Credit Policy : A Game Theoretical Approach	2022 IEEE 7th International conference for Convergence in Technology (I2CT)	Mumbai, India	1	1-6	07-09 April 2022
K. Mishra, S. Biswas&U.K.Bera	Solution of Stochastic Transportation Problem Involving Multi-choice Constraints of Exponential Distribution using Lagrange's Interpolation	2022 IEEE 7th International conference for Convergence in Technology (I2CT)	Mumbai, India	1	1-6	07-09 April 2022

Books Published:

Name of the Authors published	Title of the Books	Date of publication of the Book	Issue/ Volume No./ Page No.
S. Chakraborty and D. Bhattacharya	Lecture Notes in Networks and Systems	14 October 2022	Chapter 10. Springer Verlag, Singapore; 1st ed. 2022 edition (14 October 2022). ISBN-10: 9811901783. ISBN-13:978-9811901782.

Patent Published:

Inventor Name	Year	Title	Published source	Patent version no.	Patent application no.
M. Majumder, U. K.Bera, T.Chakraborty&Mr.T. Ghosal	2022	A Sensor-Based Optimal Water Selection	National	202231024078 A	

		System For Crop Cultivation			
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Distinguished visitors to the Departments:

<i>Sl. No.</i>	<i>Name of the Visitors and Designation</i>		<i>Date of Visit</i>	<i>Purpose of Visit</i>
1.	Prof. R K Mishra	SLIET, Punjab	27-05-2022	Invited Talk & Departmental Visit
2.	Dr. Pratik Chattopadhyay	Asst. Prof., Department of CSE, IIT BHU	20-06-2022 To 26-06-2022	Lecture on Programming Language
3.	Dr. Kaustav Nag	Asst. Prof., Department of CSE, IIT Guwahati	20-06-2022 To 26-06-2022	Lecture on Artificial Neural Networking
4.	Dr. Raksha Sharma	Asst. Prof., Department of CSE, IIT Roorkee	20-06-2022 To 26-06-2022	Lecture on Artificial Neural Networking
5.	Dr. Sudip Roy	Asst. Prof., Department of CSE, IIT Roorkee	20-06-2022 To 26-06-2022	Lecture on Machine Learning
6.	Dr. Nanda Dulal Jana	Asst. Prof., Department of CSE, NIT Durgapur	20-06-2022 To 26-06-2022	Lecture on Deep Learning
7.	Padma shri Prof. Sanghamitra Bandyopadhyay	Director, ISI Kolkata	14-11-2022	2 nd meeting of Subject Expert Committee
8.	Prof. Romesh Kumar Sharma	University of Jammu	14-11-2022 To 15-11-2022	2 nd meeting of Subject Expert Committee & Departmental Visit
9.	Prof. D. R. Sahu	BHU University, Varanasi	14-11-2022 To 15-11-2022	2 nd meeting of Subject Expert Committee & Departmental Visit
10	Prof. Prabhugouda M. Patil	KLE Technological University	14-11-2022 To 15-11-2022	2 nd meeting of Subject Expert Committee & Departmental Visit
11	Prof. Bibhas Chandra Giri	Jadavpur University	14-11-2022 To 15-11-2022	2 nd meeting of Subject Expert Committee & Departmental Visit

12	Dr. Arindam Bhattacharyya	Scientist 'F', DST	14-11-2022 To 15-11-2022	2 nd meeting of Subject Expert Committee & Departmental Visit
13	Prof. Gurmeet Kaur Bakshi	Panjab University	14-11-2022	2 nd meeting of Subject Expert Committee
14	Prof. Ponnusamy Saminathan	IIT Madras, Chennai	14.11.2022 To 15.11.2022	2 nd meeting of Subject Expert Committee & Introductory Lecture on Real Analysis for UG/PG students & Departmental Visit
15	Prof. B. C. Tripathy	Tripura University, Tripura, India	22.12.2022	National Conference on Mathematics and Computing
16	Prof. Binayak Samadder Choudhury	IEST Shibpur, India	29-12-2022 To 30-12-2022	Lecture on Quantum Technology & PhD Defense Expert

15. 5 Placement Data: Total ten (10) students were recruited by reputed Organizations through In-Campus and Off-Campus Interviews

15.5 Other Activities:

i. Total six (06) students and two (02) research scholars have qualified GATE exam in February, 2023; one (01) research scholar has qualified Assam SLET in March, 2023, one (01) Research Scholar has qualified CSIR-NET in June 2022 and two (02) students have qualified JAM in 2023.

ii. Total one (01) research scholar were awarded Ph.D. degree.

iii. Dr. Uttam Kumar Bera, Associate Professor, Department of Mathematics, NIT Agartala was elected as Office Bearers and Council Members of Operational Research Society of India for 2023-2024.

16.0 PHYSICS DEPARTMENT

16.1 Introduction:

From the inception of the institute, the mandate of the Physics Department has been the conduction of teaching courses for students of Science and Engineering disciplines as well as to conduct interdisciplinary studies. Over the years the department, has evolved into State's and region's premier Engineering Physics teaching institution with sufficient infrastructure to run various undergraduate and postgraduate courses.

The faculty members are engaged in rendering the Science and Engineering undergraduate students with the fundamental knowledge of Physics and problem-solving skills, requisite for a bright career, and striving tirelessly to improve the education further. The course structure of the four semester Master's Degree program (M.Sc.) in Physics has been designed with the specializations in Condensed Matter Physics, Physics of Plasmas, Thin Film and Nanotechnology, and Gravitation and Cosmology etc to blend all best in these areas of contemporary and applied Physics to create the post-graduates who are equally comfortable with science and technology. The department currently has a total of 73 students in BSMS and 88 students in BTMT which are Five year Dual degree programs, 23 students in M.Sc Program, about 920 students in its roll which includes the B.Tech program, and 11 Ph.D. scholars. This year 12 students from BSMS, 7 students from BTMT and 4 students from M.Sc have completed their degree from the Department of Physics. Also 2 students have completed their PhD thesis in last one year. The department is well equipped with laboratory facilities required to facilitate the need of undergraduate, post graduate students and the research activities. The department has faculty strength of 13 from all quarters of Physics.

A number of students from the Physics department secured high scores in prestigious NET and GATE examination and joined in various IITs to pursue further advanced research. Students graduated from Physics department got opportunity to pursue better research careers in universities abroad and also secured job in companies like Jhonson Control, ICICI, The Affordable Organic Store, Future Market Insights etc.

The department has a vibrant research program in various frontline areas of research including various projects sponsored by SERB-DST and CSIR which are currently going on. Physics department has received FIST project from Department of Science and Technology, Government of India. The faculty members ensure the best possible research work for the research scholars engaged in respective fields of research in the major thrust areas of Thin Film and Nano-Science, Liquid Crystals, Plasma Physics and Theoretical High Energy Physics. The faculty members have also established collaborative research with various national and international institutes of repute.



16.2 Academic Programme:

Presently, the department runs 5-year dual BS-MS course and 2-year M.Sc. course in Physics along with the flagship program of 5-year dual BT-MT course in Engineering Physics. In addition the department teaches two semester long Engineering Physics course for B.Tech students of all Engineering branches. All of these courses are aimed to encourage the Science and Engineering students to acquire knowledge along with integrated thinking about education and high-level research in Physics.

16.3 Research and Consultancy:

Short-Term Courses/Works/tops/ Seminar/ Symposia/Conferences organized by the faculty members:

Sl.No.	Co-ordinators	Title	Period (Date, Month, Year)
Workshop			
1	Dr Biswajit Saha	One Week Training Programme on “Contemporary Physics Research	5 th -11 th January, 2023
2	Dr Suvra Prakash Mondal	One Week Training Programme on “Contemporary Physics Research	5 th -11 th January, 2023
Conference:			
1.	Subharaj Paul	International Online Conference on Nanomaterials (ICN-2022)	12 th August – 14 th August, 2022.
Training:			
1.	Dr. Thingujam Kiranmala Devi	One week training programme on Contemporary Physics Research sponsored by STUTI-DSTI	5 th Jan-11 th jan 2023
2.	Dr. Biswajit Paul	One week training programme on Contemporary Physics Research sponsored by STUTI-DSTI	5 th Jan-11 th jan 2023

Honours and Awards obtained:

Sl. No.	Name of Faculty	Name of Award	Awarded by	Award for	Date
1	Dr. Biswajit Saha	Recognized as one of the world's top 2% of Scientists in the list as	Stanford University, USA	Research	October 2022

		released by the Stanford University of USA (2022).			
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Research Publications:

Total No. of papers published in Refereed International Journals : 16
 Total No. of books published : 01

In Refereed International Journals:

1. Mahashweta Bhowmik, Animesh Debnath, Biswajit Saha, *Scale-up Design and Treatment Cost Analysis for Abatement of Hexavalent Chromium and Metanil Yellow Dye from Aqueous Solution Using Mixed Phase CaFe_2O_4 and ZrO_2 Nanocomposite*, International Journal of Environmental Research, 16, 80 (2022).
2. Sagarika Bhagade, Ajit Debnath, Dipankar Das, Biswajit Saha, *Thermoelectric composite material of CuBO_2 incorporated PANI powders with enhanced Seebeck coefficient*, Journal of Polymer Research, article in press (2022).
3. Akash Deb, Animesh Debnath, Nilanjana Bhattacharjee, Biswajit Saha, *Ultrasonically enhanced dye removal using conducting polymer functionalised ZnO nanocomposite at near neutral pH: kinetic study, isotherm modelling and adsorbent cost analysis*. International Journal of Environmental Analytical Chemistry, 102, 8055-8074 (2022).
4. Bibek Saha, Animesh Debnath, Biswajit Saha, *Fabrication of PANI@Fe–Mn–Zr hybrid material and assessments in sono-assisted adsorption of methyl red dye: Uptake performance and response surface optimization*, Journal of the Indian Chemical Society, 99 100635 (2022).
5. Dipankar Das, Jayanta Das, Ajit Debnath, Santanu Chakraborty, Biswajit Saha, *Positive temperature coefficient of resistance in Na_2S interacted polyaniline on cellulose substrate: a flexible electronic material*, Synthetic Metals, 287, 117089 (2022).
6. Payel Das, Saimatun Nisa, Animesh Debnath, and Biswajit Saha, *Enhanced adsorptive removal of toxic anionic dye by novel magnetic polymeric nanocomposite: optimization of process parameters*, Journal of Dispersion Science and Technology, 43, 880-895 (2022).
7. Farhana Yasmin Rahman, Rahul Deb, Surajit Sarkar, Hritinava Banik, Md Jashim Uddin, Santanu Chakraborty, Debajyoti Bhattacharjee, Syed Arshad Hussain, ‘Resistive Switching Behavior Employing the Ipomoea carnea Plant for Biodegradable Rewritable Read-Only Memory Applications’ ACS Applied Electronic Materials, 5, 3685-3697, 2023.
8. Dipankar Das, Jayanta Das, Ajit Debnath, Santanu Chakraborty, Biswajit Saha, ‘Polyaniline-graphite on cellulose substrate: a flexible, low-cost, use-and-throw sensor for glucose concentration detection’ Cellulose, 1-11, 2023.

9. Dipankar Das, Jayanta Das, Krishna Deb, Santanu Chakraborty, Biswajit Saha, ‘ A low-cost flexible material system made of PANI/graphite for resistive detection and quantitative determination of urea’ Materials Chemistry and Physics, 301, 127573, 2023.
10. Jwmwi Basumatary, Debraj Gangopadhyay, Aparna Nath, Kiranmala Devi Thingujam, Studies of temperature dependent Raman spectroscopy of two nematic liquid crystalline compounds of homologous series, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 300, 122898, 2023.
11. T Majumder, SP Mondal, S, N Co-doped graphene quantum dots for novel quantum dots solar cell International Journal of Nanoscience 21 (06), 2250047.
12. DC Patra, P Chakraborty, N Deka, K Debnath, SP Mondal, Electrochemical nitric oxide detection using gold deposited cobalt oxide nanostructures, Chemical Physics Letters 802, 139795.
13. K Debnath, T Majumder, SP Mondal, Photoelectrochemical study of hydrothermally grown vertically aligned rutile TiO₂ nanorods , Chemical Physics 561, 111609.
14. N Deka, DC Patra, P Chakraborty, SP Mondal , Self-powered photosensing and biosensing using hydrothermally grown CdS nanorods, Journal of Materials Science: Materials in Electronics 33 (22), 17688-17698.
15. Manash Kumar Paul, A. Debnath, A. A. K. Kasturiya, S. Bhattacharjee and S. Bose, “Study of nonlinear characteristics in hollow cathode discharge in unmagnetized plasmas”, Contributions to Plasma Physics (Wiley Pub.) vol. 63(x), e202200144, 2023.
16. S. Bose, A. Debnath and Manash Kumar Paul, “Formation of Multiple Anodic Fire Spots Inside an Electrostatic Cavity”, Contributions to Plasma Physics(Wiley Pub.) vol. 63(2), e202200072, 2023.

Books Published:

Name of the Authors published	Title of the Books	Date of publication of the Book	Issue/ Volume No./ Page No.
Bibek Saha, Animesh Debnath, Biswajit Saha	Evaluation of Fe–Mn–Zr trimetal oxide/polyaniline nanocomposite as potential adsorbent for abatement of toxic dye from aqueous solution	2022/4/26	Volume 1, Pages 15-37

Distinguished Visitors to the Departments:

SL No.	Name of the Visitors and Designation	Date of Visit	Purpose of Visit
1	Prof. Samit Kumar Ray, Professor of Physics, Dept. of Physics, IIT Kharagpur,		Attended One Week Training Programme on “Contemporary Physics Research” 2023, as an invited speaker
2	Prof. Debojyoti Bhattacharjee Professor of Physics, Tripura University		Attended One Week Training Programme on “Contemporary Physics Research” 2023, as an invited speaker
3	Prof. Saurabh Basu Professor of Physics, Dept. of Physics, IIT Guwahati		Attended One Week Training Programme on “Contemporary Physics Research” 2023, as an invited speaker
4	Dr. Uday Narayan Maiti, Associate Professor, Department of Physics, IIT Guwahati,		Attended One Week Training Programme on “Contemporary Physics Research” 2023, as an invited speaker
5	Dr. Bibhas Ranjan Majhi		Attended One Week Training Programme on “Contemporary Physics Research” 2023, as an invited speaker

17.0 PRODUCTIONENGINEERING DEPARTMENT

17.1 Introduction

Production Engineering Department was established in the year of 2005 while it was Tripura Engineering College (Presently National Institute of Technology) and is approved by AICTE. Presently the department offers Bachelor of Technology in Production Engineering and M.Tech in Computer Integrated Manufacturing and Doctoral Programme where students are encouraged to acquire knowledge facilities with an integrated thinking about education research & development, production and training. The students are provided knowledge to understand the fundamentals of basic sciences and humanities, inter disciplinary knowledge, innovation, creative and problem-solving abilities, intellectual honest and professional ethics, capacity for team work in inter disciplinary, national and international environment. It also helps the students to understand society, culture and global processes. The department helps to induce entrepreneurship interest in students. Also to align and educate our students from Production Engineering Department to improve their fundamental knowledge to bring innovative technology and to build products either by themselves or by working with various industries to boost economic condition of our county and also North-East part of India. The Department has seven numbers of permanent faculty and five numbers of contractual faculty members. All faculty members are deeply involved in academic, research and administrative responsibilities of the Institute.

The Production Engineering Department has Metallographic, Non-Traditional Machining, CNC automation & Robotics, Ergonomics & Condition Monitoring, CAD/CAM, Metal Forming and Metal Casting, Mechanics of Machine laboratory, Mechatronics Laboratory and Quality Engineering Laboratories.

Pictures of Existing Labs



Pictures of Non-Traditional Machining Laboratory



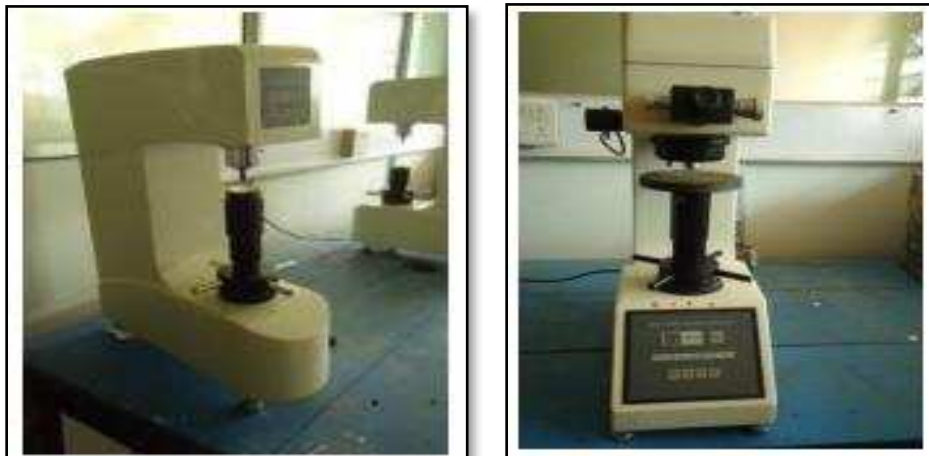
CNC, Automation and Robotics Laboratory



Picture of Metallography Laboratory Picture of CAD/CAM Laboratory



Picture of Condition Monitoring



Picture of Strength of Material Laboratory

17.2 Academic Programme:

Presently department is offering B.Tech, M.Tech & Ph.D programme. The student details are given below:

Programme	No. of Students				Total
	1 st semester	3 rd semester	5 th semester	7 th semester	
B.Tech	100	88	80	78	346
M.Tech	00	00	--	---	00
Ph.D	--				12
Total					358

17.3 Faculty and their Activities

Short-Term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the Faculty in Academic Institutions and Public Sector Undertakings:

Sl. No	Name of the Faculty	Title	Period
Workshop/Conference:			
1.	Dr. Uttam Kumar Mandal	3 rd International Conference on Modeling, Simulation and Optimization-2022.	December 21-23, 2022

Fellowships of Academics and Professional Societies:

Sl. No.	Name of Faculty	Level	Year
ISTE/CSI and others			
1.	Dr. Prasenjit Dutta	Member (IEI)	2015
2.	Dr. Kishan Choudhuri	i. Associate Member (IEI) ii. Member (ISTE) iii. Member (FOSET)	2000 2004 2009
3.	Dr. Swarup Paul	i. Associate Member (IEI) ii. Member (ORSI) iii. Member (ISTE) iv. Member (TSI) v. Member (SAE) vi. Member (FOSET)	2001 2008 2009 2011 2009 2010
4.	Dr. U.K Mandal	Member (IEI)	2014
5.	Dr. Sujoy Chakraborty	Associate Member (IEI)	2010
6.	Dr. Nabarun Biswas	Associate Member (IEI)	2010
7.	Dr. Debashis Podder	Associate Member (IEI)	2015

*IEI- The Institution of Engineers (India), *ISTE- The Indian Society for Technical Education, *FOSET- Forum of Science Engineering and Technology, *ORSI- Operational Research Society of India, *TSI- Tribology Society of India, *SAE- Society of Automotive Engineering.

17.4 Design and Development Activities:

The Department of Production Engineering has equipped with some advanced laboratories with modern equipment's. The details are given below:

1) CNC Wire Cut EDM, 2) Electric Discharge Machine, 3) Five Axis Robot, 4) CNC Vertical Milling, 5) Rockwell Hardness Testing Machines 6) Vickers's Hardness Testing Machines 7) Direct Reading Ferro Graph & Analytical Ferro Graph 8) Muffle Furnace 9) Induction Furnace 10) Hydraulic Press 11) Pneumatic Hammer 12) Image Analyzer 13) CAD Software- CATIA, PRO-E, DELMIA 14) 3D Surface Profilometer.

17.5 Research and Consultancy:

Research Publications:

Total No. of papers published in Refereed International Journals	: 18
Total No. of papers presented in International Conferences	: 08

In Refereed International Journals:

1. D. Podder, S. Chakraborty, U.K. Mandal, 'Experimental Investigation of Physical and Mechanical Properties of Al-Cu-ZrO₂-TiO₂ Composites', 2022, *Journal of Scientific and Industrial Research (JSIR)*, 81(7), pp. 720-729.
2. D. Podder, S. Chakraborty, U.K. Mandal, 'Evaluation of Microstructure and Mechanical Properties of Al-Cu-TiO₂-ZrO₂ Composites', 2022, *Journal of Scientific and Industrial Research (JSIR)*, 81(1), pp. 39-50.
3. Bhattacharjee P., Dey V., Mandal U.K., (2022) Failure Mode and Effects Analysis (FMEA) using interval number based BWM—MCDM approach: Risk Expected Value (REV) method; Soft Computing.
4. Mandal SK, Bhattacharjee B, Biswas N, Choudhuri K, Chakraborti P. Application of nanofluids on various performance characteristics of hydrodynamic journal bearing—A review. Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering. 2022; 236(3):1229-1238.
5. B. Bhattacharjee, N. Biswas, K. Choudhuri, P. Chakraborty (2022) A comparative analysis of the performance of single-layered and double-layered porous journal bearings lubricated with micropolar fluid, *Journal of Porous Media*, 25(7), 35-45.
6. Bhattacharjee, B., Biswas, N., Rai, R.N. *et al.* Stir Cast Al–Cu–SiCp Metal Matrix Composites: Effect of SiC Particles on the Mechanical Properties and Optimization of EDM Process Parameters. *J. Inst. Eng. India Ser. D* (2022).
7. A Dasgupta, P Dutta (2022) A Comprehensive Review on 3D Printing Technology: Current Applications and Challenges, *Jordan Journal of Mechanical & Industrial Engineering* 16 (4).
8. Kumar, A., Pandey, S., Singh, V., Rai, R.N. (2022) Study on the Effect of Process Parameters on Machinability Performance of AA7050/B4C Metal Matrix Composite on Wire Cut EDM, *Machines, Mechanism and Robotics*, 1545–1554.
9. Ranjan, L.K., Chakraborty, S., Mandal, U.K., Dey, V., Jha, K., Surface Modification of Al-7075 Alloy by Electro-Discharge Coating Process Using SiC/Cu Green Compact Electrode, *Advances in Micro and Nano Manufacturing and Surface Engineering*: https://doi.org/10.1007/978-981-19-4571-7_14, (2022).
10. Bhattacharjee P.; Dey V.; Mandal U.K., Failure Mode and Effects Analysis (FMEA) using interval number based BWM—MCDM approach: Risk Expected Value (REV) method; Soft Computing, (2022).

11. Jayashree Das, P. Sreedharan Robi and Prakash Kumar Sahu, Influence of process parameters on mechanical and microstructural properties of friction stir welded AA5052, *Advances in Materials and Processing Technologies*, <https://doi.org/10.1080/2374068X.2022.2085367>, ISSN No. 2374-0698, (2022).
12. Chakraborty B, Biswas N, Chakraborti P “An Investigation to Find the Effects on Air Foil Bearing by the Variation of Foil’s Structural Parameters”, *Journal of Scientific and Industrial Research (JSIR)* 2023, Vol.82 (06).
13. Choudhuri K, Biswas N, Mandal SK, Mitra C, Biswas S., A numerical study of an external gear pump operating under different conditions. *Materials Today: Proceedings*, 2022. <https://doi.org/10.1016/j.matpr.2022.12.008>.
14. Bhattacharjee B, Biswas N, Chakraborti P, Choudhuri K, “Impact of Nano-lubrication on Single-Layered Porous Hydrodynamic Journal Bearing: A Hypothetical Approach” *Journal of Porous Media*, (2022). <https://doi.org/10.1615/JPorMedia.2022044960>.
15. Ranjan L.K., Chakraborty S., Mandal U.K., Experimental Study of Surface Modification of Aluminum 7075 Alloy by Reverse EDM Process using SiC-Cu Powder Metallurgy Green Compact Electrode and Taguchi Experimental Design, *Int. J. of Machining and Machinability of Materials*, 2023, Accepted.
16. Mohanty, S., & Paul, S. (2023). A frame work for comparative wear based failure analysis of CNG and diesel operated engines. *Energy*, 269, 126675.
17. Mitra A, Mandal SK, Rai RN. Synthesis and characterisation of magnesium-based nano-composite – A review. *Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering*. 2023;0(0). doi:10.1177/09544089231167758.
18. Kishan Choudhuri, Nabarun Biswas, Suman Kumar Mandal, Chirantan Mitra, Srijit Biswas, A numerical study of an external gear pump operating under different conditions, *Materials Today: Proceedings*, 2022.

In Proceedings of International Conference

1. D. Podder, S. Chakraborty, U.K. Mandal, ‘Study on Mechanical Properties of Aluminium-Copper Matrix Composites’, 2nd International Conference on Industrial and Manufacturing Systems, 2022.
2. Paul, Swarup, et al. "Fractal mathematics applications for wear image analysis of engines using biofuels." In the Symposium of Failure and Preventive Maintenance of Machineries (FPM-2022), held at CSIR-Central Mechanical Engineering Research Institute Durgapur, West Bengal, India.
3. Choudhuri K, Equbal A, Biswas N, Pati N, Mandal SK, Biswas S. CFD Analysis of water-based slipper bearing. *International Conference on Advance Earth Sciences & Foundation Engineering* 23/06/2022-24/06/2022 Mohali, India. IOP Conference Series: Earth and Environmental Science; Vol. 1110012073. doi-10.1088/1755-1315/1110/1/012073.

4. Prakash Kumar Sahu, Preliminary Design and Development of a 3D Printer for Building Construction, ICFTMME-2022, Department of Mechanical and Automobile Engineering, SRM IST, Delhi-NCR Campus, Ghaziabad, 19th and 20th August 2022.
5. Swarup Paul, Moutushee Debnath, Debapratim Debnath, Suvendu Mohanty, "Selection of Plant Location for Sustainable Solid Waste Management: A Case Study of Agartala City", 12th Icon SWM-CE & IPLA Global Forum 2022 at SVU during Nov 30 to Dec 3, 2022.
6. Suvendu Mohanty, Swarup Paul, "Generation of solid waste and proposed management strategy: A case study of cuttack railway station", 12th Icon SWM-CE & IPLA Global Forum 2022 at SVU During Nov 30 to Dec 3, 2022.
7. Parul Dixit, Swarup Paul, "Current Challenges and Opportunities of Circular Economy in Diverse Manufacturing Practices: A Review", 12th Icon SWM-CE & IPLA Global Forum 2022 at SVU during Nov 30 to Dec 3, 2022.
8. D. Podder, U.K. Mandal, Preparation of SiC and Al₂O₃ of Single, Double and Triple particle size reinforced AMC by using vacuum moulding and stir casting to investigate the MRR of the AMC, 3rd International Conference on Modeling, Simulation and Optimization-2022, December 21-23, 2022.

Patent Published

1. Devi S., kumar R., Das P., Choudhuri K., Biswas N., (2022) "Apparatus for Collecting Recyclable Objects and Dispensing Rewards", Patent number: 409208, Application number: 202111050971.

17.6 Industrial Consultancy and Sponsored Research:

Title: Sustainable Machining of Carbon Fiber Reinforced Polymer Composites in a Hybrid Lubri Cooling Environment, Duration: 3 Years, Sponsoring Agency: Science and Engineering Research Board (SERB), PI: Dr. Uttam Kumar Mandal.

17.7 Placement Data: A total of 66 students got placement (2019-23 batch).

17.8 Other activities: The Department of Production Engineering is conducting bi-monthly webinars under the banner of "Student Chapter (IEI: The Institution of Engineers, India)" where both faculty and students are used to participate and present some topics related to recent engineering advances.

18.0 CENTRAL LIBRARY

18.1 Introduction:

NIT Agartala Central Library inherited some of its resources from the then Tripura Engineering College, controlled and managed by Dept. of Higher education, Govt. of Tripura in 2006. In 2010 the Central Library shifted to a building with a carpet area of 727.18 Sqm. Since then, it has grown in size and content to take a notable shape. In January 2018, the library has been shifted to its newly constructed sophisticated building with all modern amenities for library readers. At present, the ground floor with 2282.00 sqm. and the first floor with 2282.00 sqm. of the new building is being utilized by the library. Since the new building has a large floor area, the collections have been arranged and separated department-wise for easy searching of books. It has a separate non-book section, reserved section and foreign books section. A separate non-book section is open for the benefit of the PG and PhD scholars and faculty members of the institute. The library is at present equipped with facilities and resources in the forms of books, e-journals, dissertations, thesis, CD ROM, back volumes journals etc. Purified water facility and ample lit space for reading with adequate sitting capacity are provided on both floors to make an aesthetic appeal to the library users. It has a separate conference room with 20 seating capacity. The library is covered with CCTV surveillance system. The library is also equipped with lift facility for easy access to different floors of the library building.

The library is equipped with a RFID system to ensure security, automated issue & return of books, self-check-in & check-out facility and tracking of tagged library materials. More than 40000 selected volumes of books have been 'RFID tagged'. The process is going on for tagging the library's entire collection under the RFID system. The library is now functioning to attain the goal of creating knowledgeable persons in society and providing modern library facilities to its readers.

18.2 Library Information Services Statistics:

Item	2021-2022	2022-2023	Remarks
A. Collections:			
Books	89815 [64082(GL)+ 25733(BB)]	89815 [64082(GL)+ 25733(BB)]	Current physical book as per accession register 73901. As because 15914 of books fall under damaged, written off, missing, Accession dropped, torned etc.
Ph. D. Theses	202	265	63 nos of PhD thesis added during this period
Pamphlets and Reports	Nil	Nil	
Microfilms / fiche	Nil	Nil	
General	48,168	48,168	
Book Bank	25,733	25,733	
Current Periodicals by Subscription	14	21	Newspaper & Magazine
Current Periodicals by Exchange/ Gift	53	66	

Back volumes of Periodicals	Nil	Nil	
Patents & Specifications	Nil	Nil	
Faculty Publications	NA	NA	
German Collection	Nil	Nil	
C.D	796	796	
Video Cassettes	Nil	Nil	
B. Membership:			
Staff	NA	209	
Faculty	198	210	
Students	4613	4819	
Alumni Members	Nil	Nil	
Corporate Members	Nil	Nil	
Industrial Associate Members	Nil	Nil	
Special Members	Nil	Nil	
Project Co-ordinators	NA	NA	
C. Services: Circulation			
Number of Readers visited	7877	80129	
Number of Books/ Journals issued	2139	25203	
Number of Books issued through Book Bank (General)	NA	NA	
Number of Books issued Book Bank (Weaker Section)	NA	NA	
Consultation cards issued to users	NA	NA	
Overdue & other charges collected	22510	515869	
Xerox charges collection	Nil	Nil	
D. Reservation of Books			
Registered	Nil	Nil	
Fulfilled	Nil	Nil	

E. Loans			
Department Loan (Under issue)	Nil	Nil	
Permanent Loan issued	Nil	Nil	
F. Inter Library Loans			
Borrowed from other Libraries	Nil	Nil	
Loaned to other Libraries	Nil	Nil	
G. Literature Search			
CD-ROM search by users	2	Nil	
H. Reprint Service			
Reprints received from other Institutions	Nil	Nil	
Reprint supplied to other institutions	Nil	Nil	
I. Reprography Service			
Number of Xerox copies supplied	Nil	Nil	
Barcode-ID cards Generated	Nil	Nil	
J. Binding			
Number of Books and journals bound	Nil	Nil	
Number of Miscellaneous publications bound (internal)	Nil	Nil	
Cutting/ Trimming (sheets)	Nil	Nil	
K. Expenditure on			
Books Printed	Nil	Nil	
Printed Journals	Rs.4039	Rs.2967	
E-books	Nil	Nil	

E-journals	Nil	Nil	e-resources have been made available through ESS only.
L. New Journals Added	2914	2783	e-journals added through ESS
M. Any other material, if any:	CCTV Camera, Cable, Hand dryer, dispenser, Jet spray,	Chairs for reading area	

18.3 Binding Facilities:

At present NITA library has no binding section. Torn books are bound by the library staff. There is a plan to start a binding section in NITA Central Library in future.

18.4 New Facilities/ Equipment's added:

At present NITA library has been provided with 14 publishers' e-resources covering most of the fields particularly in science & technology by ESS (e-ShodhSindhu consortium formed by the guidelines of MHRD, Govt. of India) which provides more than 2780 e-journals and online databases. In addition to the e-resources provided by ESS, NITA Library has subscribed to IEEE (ASPP) package to facilitate research work of institute stakeholders. NITA library is providing remote access to the available e-resources. Softcopy of the thesis is being uploaded to the ShodhGanga – a reservoir of Indian theses by NITA library. With the introduction of automated circulation, the library has also started collection of charges against overdue books, which resulted in timely circulation of books. The borrowers are always kept aware about their borrowed materials through the OPAC system.

Recently the library has started subscribing 14 nos of popular magazines and 7 nos of newspapers. A separate non-book section and a back-volume journal section are setup in the library. Back Volume of printed journals are available from 1932 to present. There is a non-book section in the library with 265 nos of PhD thesis and 965 nos of Mtech dissertations along with magazines, letters, bulletins etc. Upgradation of the digital library is under process.

NITA Library provides 'URKUND' Plagiarism Detection Software to facilitate its stakeholders in scholarly publications.

NITA library has expanded its reading area by adding 60 more capacity of seating.

18.5 Future Plan:

1. RFID tagging of the entire collection of the library.
2. Upgradation of existing RFID system including self-check-in and check-out facility.
3. Upgradation of Digital Library by adding 30 more computers.
4. Starting a separate dedicated reading area with 100 seating capacity
5. Subscription to more e-resources
6. Procurement of new steel book racks

7. Providing a seamless WiFi network access throughout the library by adding new access points.
8. Providing digital display facility for information bulletin
9. Providing resource sharing and inter-library loan facilities.
10. Launching user-education programme.
11. Online question paper facilities to be provided for different PG & UG previous year examinations.
12. Building a complete institutional repository.

19.0 STUDENT AMENITIES AND ACTIVITY

19.1 Hostels:

The Institute can accommodate students in 5 Boys' Hostels and 1 Girls' Hostel. UG, PG and PhD students of NITA can avail the hostel facilities. Present status of the Hostels is given below:

<i>Name of the Hostel/ Unit</i>	<i>Hostel Seat Capacity</i>	<i>Seat Occupied</i>	<i>Chief Warden</i>	<i>Name of the Warden</i>
Aryabhatta Hostel	1060	1020	Mr. R.K. Bhogendro Meitei	Dr. Suresh Mamidi Dr. Tridib Kumar Bhowmick Dr. Jawahar Paulraj Dr. Goutam Gupta
Dhalai	88	Nil		Dr. Muthu Sivarama Pandian M
RNT	1563	982		Dr. Muthu Sivarama Pandian M Dr. Venkata Bharat Nishtala Dr. Debanjan Acharyya Dr. P. Padmagirisan Dr. Prakash Kumar Sahu
Gomati	30	21		Dr. Debanjan Acharyya
Howrah	30	Nil		Dr. P. Padmagirisan
Gargi (Girls Hostel)	615	528		Dr. Shikha Maurya Dr. Ranjita Das

19.2 Medical Facilities:

Brief about Health Centre, NITA

Situated centrally within the campus of the National Institute of Technology, Agartala, the NITA Health Centre extends dedicated healthcare services to the Institute community, including students, employees, their dependents, and institute guests.

It offers round-the-clock medical services, including nursing care, emergency response, and ambulance services. The Health Centre is equipped with essential facilities, including:

1. 24-hour availability of Doctors.
2. Round-the-clock medical emergency services.
3. Pharmacy operating 24x7.
4. 24-hour Ambulance services.
5. Observatory Beds.
6. Dressing Room.
7. Laboratory facilities for investigating common ailments.
8. Counseling Centre for Psychological wellbeing.

At present, the Health Centre operates with a total of 10 staff members, as outlined below:

Sl.No.	Designation	Number of Officials
1.	Medical Officer	2
2.	Pharmacist	2
3.	Staff Nurse	2
4.	Medical Laboratory Technician	1
5.	Medical Counsellor	1
6	GDA cum dresser	1
7	Technician	1
Total		10

The Medical Officers and other staff are dedicated to ensuring the seamless operation of the Out-Patient Department, with their availability extending 24 hours a day. Over the course of the financial year 2022-23, a total of 11,357 patients received medical attention at the Health Centre. Notably, 8,587 of these patients, constituting approximately 75.5% of the total, were students.

The Health Centre's laboratory is fully equipped, featuring essential instruments such as a Semi auto analyzer, incubator, centrifuge, and other specialized equipment. Throughout the financial year 2022-2023, the laboratory served a total of 515 patients, providing vital diagnostic support.

In cases of emergency, the Health Centre ensures swift and efficient delivery of essential medical services to the Institute community with its round-the-clock availability of three ambulances.

The Health Centre has currently the following equipment as listed below:

Sl. No.	Facilities and Equipments	Remarks
1	Ambulance Facilities	3 ambulances available 24x7, including referrals to ILS hospitals/AGMC & GB PH/Ranirbazar PHC/Jirania CHC.
2	Investigation Equipment	1 semi auto analyzer, 1 incubator, 1 centrifuge machine, 1 ECG machine.
3	Oxygen Cylinder	8 oxygen cylinders available.
4	Oxygen Concentrator	2 oxygen concentrators available.
5	Nebulization Machine	2 nebulization machines available.
6	Minor OT Facilities	1 minor OT bed with stitching and dressing facilities.

7	Laboratory Facilities	All routine investigations are conducted here.
8	Pulse Oxymeter	10 pulse oximeters available.
9	Observation Room	4 beds available for observation and in-patient department (IPD) purposes.

Annual Data of Psychological Counseling- 2023

SL. No.	Month	Total Case	Male	Female	New Case	Follow up
1	April '22	27	26	1	14	13
2	May'22	12	10	2	6	6
3	June' 22	6	6	0	2	4
4	July' 22	7	7	0	2	5
5	August' 22	6	6	0	2	4
6	September' 22	21	21	0	4	17
7	October' 22	14	10	4	6	8
8	November'22	23	22	1	10	13
9	December'22	9	5	4	1	8
10	January '23	19	18	1	3	16
11	February '23	20	19	1	2	18
12	March '23	22	21	1	5	17
TOTAL		186	171	15	57	129

NB. During the period of 01/04/2022 to 31/03/2023 total 186 cases were counselled. They were students and staff of NITA and some students of KVS. Among them 171 were males, 15 were females, 57 were new cases and 129 were follow ups. They came directly after calling as they were referred by someone from the Doctors of NITA Health Centre or by someone from their respective departments. They suffered from psychosocial and mental health issues. Regular follow-up on each case was done and maintained the record in a register carefully. Regularly assisted students in understanding and overcoming social, behavioural or academic problems and visits were done on holidays of NITA. The four numbers of male students had suicidal tendency. It was possible to cure them by the appropriate counselling and medical interventions. All

the beneficiaries who are suffering from psychosocial and mental health issues have benefited from the Psychological Counselling.

19.3 NCC

The National Cadet Corps (NCC) wing at the National Institute of Technology Agartala (NITA) was officially established in the year 2019, comprising the 15th Tr. Infantry Boys Battalion for male cadets and the 71st Tr. Infantry Girls Battalion for female cadets. Since its inception, the NCC unit at NITA has experienced significant growth and development.

Each academic year has witnessed a substantial influx of new cadets enrolling in the NCC program at NITA. During the academic session of 2022-23, an NCC orientation program was diligently organized within the esteemed premises of the Visvesvaraya Auditorium at NITA. This initiative led to the registration of nine cadets in the 71st Tr. Infantry Girls Battalion.

Furthermore, the NCC, NITA ensured the systematic execution of drill sessions for its cadets, which were conducted punctually at the NITA Sports Complex under the guidance of the NCC staff. The cadets exhibited their dedication and discipline during key national events, such as the celebrations of Independence Day on August 15, 2022, and Republic Day on January 26, 2023, where they participated in impressive march past displays.

In addition to the ceremonial aspects, regular classes were scheduled for the cadets on the NITA campus, diligently supervised by the Sports Officer of NITA. The cadets displayed unwavering enthusiasm and commitment, consistently attending various camps and training programs. In October 2022, eight cadets successfully completed a Combined Annual Training Camp (CATC), showcasing their dedication to the NCC's values and principles.

Notably, six female cadets underwent the examination process for the 'C' certificate, while two female cadets appeared for the 'B' certificate examination in the current year, showcasing their dedication to skill development and academic excellence.

At present, Dr. Preeti Gulia, Assistant Professor in the Mechanical Department, serves as the Caretaker Officer (CTO) for the female cadets, while Mr. Abhishek Kumar Yadav, the Student Activities and Sports (SAS) Officer, fulfils the role of CTO for the male cadets. Their combined efforts and leadership have contributed significantly to the growth and success of the NCC unit at NITA.

19.4 NSS

National institute of technology Agartala have (one nss unit) 120 volunteers actively participated in various activities in the year 01.04.2022 to 31.03.2023.

NSS Volunteers Activity LIST		
DATE	TIME	PROGRAMME
18.02.23	9.30AM TO 3.00PM	BLOOD DONATION (47)
19.02.23	3.30PM TO 5.30PM	PLANTATION & TREE CARING

20.02.23	10.00AM TO 1.00PM	CAMPUS CLEANING
21.02.23	3.30PM TO 5.30PM	SPORTS ACTIVITY
22.02.23	3.30PM TO 5.30PM	VOLLEYBALL PLAY WITH VILLAGERS
23.02.23	3.30PM TO 5.50PM	PLANTATION
24.02.23	3.30PM TO 5.30PM	ASSEMBLY
18.08.22	9.30AM TO 3.00PM	BLOOD DONATION (64)
19.08.22	3.30PM TO 5.30PM	PLANTATION & TREE CARING
20.08.22	10.00AM TO 1.00PM	CAMPUS CLEANING
21.08.22	3.30PM TO 5.30PM	SPORTS ACTIVITY
22.08.22	3.30PM TO 5.30PM	VOLLEYBALL PLAY WITH VILLAGERS
23.08.22	3.30PM TO 5.50PM	PLANTATION
24.08.22	3.30PM TO 5.30PM	ASSEMBLY
04.11.2022	8.30AM TO 10.00PM	CAMPUS CLEANING
05.11.2022	3.00PM	FRIENDLY FOOTBALL MATCH WITH THE VILLAGERS
12.11.2022	3.00PM TO 5.30PM	Gardening
13.11.2022	6.30AM TO 8.00AM	YOGA PRACTICE
26.05.2022	3.00PM TO 5.30PM	Awareness for Social Issues
15.08.2022	7.30AM	March past (perform and practice by the NSS Volunteers)
27.04.2022	NSS Volunteers Blood Donate	Mega BLOOD DONATION camp by 10 th Bn TSR. (30)

19.5 Gymkhana

The NIT-A Student Gymkhana is an active student body that acts as a liaison between the students and the administration. The gymkhana promotes the objectives of co-curricular and extracurricular activity development as well as student welfare. The gymkhana is managed by the students for the benefit of the students, with the guidance and active participation of the faculty and staff.

It consists of the Cultural, Sports, Technical, and Alumni Committees. Individual secretaries of clubs and committees report to the Gymkhana in the organisational structure. The students elect or choose each member of the Students' Gymkhana.

19.6 Games and Sports

NIT Agartala boasts a vibrant sports culture that promotes physical fitness, sportsmanship, overall well-being, and holistic development of students. The institute's state-of-the-art sports amenities play a crucial role in nurturing talent and fostering a competitive spirit.

The NIT Agartala ABV Sports Complex is a vibrant hub of sports and recreational activities within the National Institute of Technology Agartala. It serves as a vital resource for students and the community, promoting physical fitness, sportsmanship, and overall well-being.

At present, NIT Agartala, sports section operates with a total of 04 staff members, as outlined below:

Designation	Number of Officials
SAS Officer	01
Physical Edu. Officer	01
Sports Officer	01
Jr. Assistant (Sports Complex)	01
Total	04

SPORTS FACILITIES AT NIT, AGARTALA

Sl. No.	Sports Amenity	Description
01	Cricket Ground	A well-maintained cricket field (Old ground)
02	Football Ground	A regulation-sized football field (ABV Sports Complex)
03	Tennis Courts	02 nos indoor Tennis courts for Tennis enthusiasts
04	Basketball Courts	02 Indoor courts for Basketball
06	Indoor Stadium	A versatile indoor arena for various sports
07	Gymnasium	A fitness and training center (Gym)

08	Table Tennis	Dedicated facility for table tennis inside the sports complex as well as in hostels
09	Badminton Courts	3 Dedicated Badminton court
10	Volleyball Court	03 volleyball court in the campus at various locations
11	Handball Court	An outdoor Handball court
12	Kho-Kho ground	An outdoor Kho-Kho ground
13	Chess Room	An indoor Chess room at ABV sports complex
14	Yoga Centre	An indoor Yoga Centre at ABV sports complex
15	Equipment Room	Storage for sports gear and equipment
16	Swimming Pool	A 50 m swimming pool is under construction

SPORTS EVENTS AT NIT, AGARTALA 2022 April to 2023 March

Sl. No.	Event	Description
01	Entrance Cup	Entrance Cup cricket tournament 2022 for 1 st year students
02	Intramural 2022	Inter branch Badminton tournament for Men & Women
03	Intramural 2022	Inter branch Kabaddi tournament for Men & Women
04	Intramural 2022	Inter branch Volleyball tournament for Men & Women
05	Intramural 2022	Inter branch Kho-Kho tournament for Men & Women
06	Intramural 2022	Inter branch Handball tournament for Men & Women
07	Intramural 2022	Inter branch Tug of War tournament for Men & Women
08	Intramural 2022	Inter branch Basketball tournament for Men & Women
09	Intramural 2022	Inter branch Athletics championship for Men & Women
10	Intramural 2022	Inter branch chess tournament for Men & Women
11	Intramural 2022	Inter branch Cross country race for Men & Women
12	Intramural 2022	Inter branch Table Tennis tournament for Men & Women
13	Run for Unity	Celebration of National Unity Day

14	National Yoga Day	Celebration of National Yoga Day on 21 July. 2022
15	National Sports Day	Celebration of National Sports Day on 29 Aug. 2022

Notable Achievements:

Sl. No	Year	Achievements
1.	2022	NIT Agartala team participated in All India Inter NIT Tournament in Badminton (Men & Women), Handball (Men & Women), Hockey (Men), Kabaddi (Men & Women), Chess (Men & Women) Power Sports (Men), Table Tennis (Men & Women).
2.	2022	4 th place finish in the All-India Inter-NIT tournament in Hockey

Future Enhancements:

The institute is committed to continuous improvement in sports. Future developments may include expanding existing facilities, introducing new sports, and enhancing sports science support.

Conclusion:

The NIT Agartala Sports are integral to the holistic development of students and the overall well-being of the campus community. With good sports facilities, dedicated coaching, and a strong sporting tradition, NIT Agartala continues to excel in sports and fitness.

19.7 Cultural Activities

In the past year, our college has been a vibrant centre for cultural diversity and creativity. With **10+ active clubs** dedicated to various cultural expressions, we've seen dynamic events and activities ranging from captivating dance, and drama performances to thought-provoking art exhibitions. Alongside these club activities, our college has also hosted numerous cultural festivals, seminars, and workshops, fostering a strong sense of community and artistic appreciation. These cultural endeavours have not only allowed our students to showcase their talents but have also reinforced our commitment to promoting diversity and inclusivity within our academic community. We eagerly anticipate the continued celebration of our student's artistic spirit.

Fests Conducted:

Throughout the year, our college sparkled with a vibrant array of cultural festivals that illuminated our campus. These fests were a melting pot of creativity and diversity, showcasing talents in music, dance, art, and culinary arts. From the pulsating beats of traditional dance performances to the soul-stirring melodies of music concerts, these festivals celebrated cultural richness and artistic expression. Attendees were treated to captivating art exhibitions and indulgent culinary delights, making these events not only entertaining but also enriching cultural experiences. The enthusiastic participation and colourful displays of talent made these

cultural festivals the highlight of our college calendar. These festivities underscore our commitment to nurturing creativity, fostering cultural appreciation, and fostering a lively and harmonious campus community.

SL No.	EVENT	ACTIVITY	DATE
01	Aarambh 1.0	Cultural Orientation	17 April, 2022
02	Hindi Saptah	Promote and celebrate the Hindi language's rich cultural and linguistic heritage	5-9 Sept, 2022
03	Global Alumni Meet	The Global Alumni Meet is a prestigious event that reunites alumni from across the world.	14-15 Jan, 2023
04	Aayam	This techfest is a vibrant and dynamic event that showcases the technical prowess, creativity, and innovation of students at the institute.	27-29 Jan, 2023

Activities throughout the year:

Throughout the year, our college was a hub of diverse and engaging activities that catered to a wide range of interests and passions. From academic workshops and technical seminars to cultural festivals and artistic performances, our campus was abuzz with events that enriched our student body's holistic development. These activities encouraged collaboration, fostered creativity, and provided valuable learning opportunities.

SL No.	EVENT	ORGANIZER	ACTIVITY	DATE
01	NLCstaar	NITA Literary Club	A hostel-locker version of comicstaar, here we brought around people from the campus for a wide variety of engaging and fun events, all based on improvisational skills.	22nd Aug, 2022
02	उद्भव	Aaveg and NITA Literary Club	The orientation program for the incoming batch of 2022 was organized jointly by NITA Literary Club and Aaveg-The dramatics club.	24th Jan, 2023
03	Wear your art, Brush Brawl, Clay Clash	Fine Arts Club	A T-shirt designing competition, a drawing competition on a predecided theme, and a pot designing competition were done respectively.	27th Jan, 2023

04	Doodle-dee-do, Digital Fusion	Fine Arts Club	A doodle competition was done where people drew things without any planning. And a digital art competition was held respectively.	28th Jan, 2023
05	Canvas Chaos	Fine Arts Club	It was an open canvas painting.	29th Jan, 2023
06	The Artlantic	Fine Arts Club & Pixels	It was an art exhibition.	29th Jan, 2023
07	Snap Station	Pixels	Through this event, participants were able to ask our highly experienced photographers to help them capture the important moments of their college life, be it a solo picture at their first festival or a photo with other people to remember a memorable occasion	27th Jan, 2023
08	War-o-Mania	Phewsion -	BGMI tournament was done in classic mode, and freefire was done in the same way.	27th Jan, 2023
09	Middle Ground	NITA Literary Club	A thrilling debate experience was organised	28th Jan, 2023
10	FIFA	Phewsion	It was a football match where different groups of students competed against each other	28th Jan, 2023
11	Chess Competiton	Phewsion	The first online chess match between two players was there and after the qualification, players competed in offline mode	28th Jan, 2023
12	Debate Premier League	NITA Literary Club	Through this event, the participants will be exposed to the technical side of the modern world during their research for the General discussion and debates, which will be conducted in the Asian style.	28th Jan, 2023
13	AAGAZ	-	Freshers cultural evening	30th March, 2023

14	Notion Negotiations	NITA Literary Club	An Oxford Union format debate organised in partnership with Physicus(then Heisenbugs)the physics club as the first event of NLC when offline classes resumed in 2022	8th May, 2022
15	Pixela'	Pixels Club	This event helped the participants to excel their photography, photo editing and video editing skills by introducing the element of competition with like-minded participants.	24th Jan, 2023
16	Copy Cat	Aaveg	It was a monodrama competition in online mode where participants showed their monoact, monologue and mimicry skills	4th April, 2022
17	Kalamanch	Aaveg	A monoact competition where participants re-enacted any movie or web-series scene or their original content of their choice	24th Aug, 2022
18	Avinay Sangram	Aaveg	A group drama competition which taught teamwork to the student's	8th Sept, 2022
19	Photobooth	Aaveg	A competition where students copied the expressions from a given picture or expressions as guided by the mediators	27th Jan, 2023
20	Trickbox	Aaveg	A box filled with different improvisation ques, students performed whatever tasks they got from the box.	28th Jan, 2023
21	Cultural night	Aaveg	An act on the darkness of social media was performed in the cultural night under Dandia Night.	13th Nov, 2022
22	Nritya Utsab	Dzire	An open dance competition for all categories (solo/duet/group)	8th Sept, 2022

23	Frolic reels	Dzire	A dance competition was conducted in online mode where participants shared their dancing skills through reels.	26th July, 2022
24	Cultural Night	Dzire	Performed in the cultural night under Dandia Night to pace up the audience.	13th Nov, 2022
25	Dansperation	Dzire	Orientation program for the batch of 2022	19th Jan, 2023
26	Sangeet Avinya	Malhar	Orientation program for the batch of 2022	20th Jan, 2023
27	Jamming	Malhar	Jamming was done in the book fair in Agartala	2nd April, 2023
28	Musical Sunday	Malhar	A weekly contest which lasts Monday to Saturday and results on Sunday	Every Sunday
29	Agomoni	Gymkhana	Agomoni is a traditional celebration primarily observed during the Durga Puja festival.	28 Sept, 2022
30	Dandiya Night	Gymkhana	Dandiya Night celebration is a vibrant and lively event that typically takes place during the festive season, often as part of Navaratri or other cultural festivities.	14 Nov, 2022
31	Aayam Maestro	Malhar	Solo singing competition	28th Jan , 2023
32	Group song competition	Malhar	A group song competition was organised	28th Jan , 2023
33	Muzenac	Malhar	Guess the songs by their into, was a fun and entertaining game	27th- 28th Jan, 2023
34	Open mic	Malhar	An open mic for singing was organised by MALHAR	28th Jan , 2023

Technical Activities:

Our college was a centre of creativity and technical proficiency in the previous academic year, with 15 passionate technical clubs leading a variety of interesting and educational activities and events. These organisations, each with a distinct focal area, worked tirelessly to plan

workshops, seminars, hackathons, and competitions that sparked our students' interest in technology. These clubs did everything possible to create a culture of ongoing learning and development, from robotics to coding, electronics to artificial intelligence. Additionally, our flagship annual tech fest served as a

showcase for our technological advancements and drew visitors from far and wide. It was a celebration of invention, creativity, and striving for excellence, displaying the extraordinary talent that abounds in our college. We take pride in having given our students a platform to not only broaden their technical horizons but also to demonstrate their abilities and expertise to a larger audience. Our dedication to fostering the

the subsequent generation of tech enthusiasts and problem solvers is demonstrated through these technological activities and events.

Workshops conducted:

Throughout the past year, our college hosted a series of engaging workshops and events aimed at enhancing students' skills and knowledge. These workshops covered various areas such as web development, Git and GitHub, last-minute internship preparation, effective utilization of LinkedIn, and the advantages of competitive programming. Moreover, the topics of motor vehicle automation and electric vehicles were explored in-depth, offering valuable insights into these cutting-edge technologies. These events reflect our commitment to fostering a culture of continuous learning and innovation within our college community.

SLNo.	EVENT	ORGANIZER	ACTIVITY
1	Introduction to Web Development	DCC	The Web Development Orientation Workshop aims to provide participants with an introductory understanding of the field of web development, its various aspects, and the essential skills required to embark on a career in web development.
2	Git and Github	GDSC	Git and Github are distributed version control systems that allow developers to track and manage changes in their codebase.
3	Last Minute Preparation for Internships	DCC	This workshop aims to provide participants with practical tips, insights, and strategies to excel during their internships and create a strong foundation for future career growth.
4	Effective use of LinkedIn	DCC	This workshop aims to guide individuals, from beginners to advanced users, on how to effectively utilize LinkedIn's features to build a strong online presence and leverage the platform for career opportunities.
5	Benefits of Competitive Programming	DCC	This workshop is designed for aspiring programmers and computer science enthusiasts looking to enhance their problem-solving skills, algorithmic thinking, and

			competitive edge in the tech industry.
6	Motor Vehicle Automation	M-Baja	This workshop aims to introduce participants to the principles, applications, and benefits of automation in the automotive industry, including autonomous vehicles and smart transportation systems.
7	Electric Vehicle	E-Baja	A project where we showed our innovation with the Bicycle. We converted the simple bicycle into a battery and motor-based cycle. It runs on battery power which aims to spread awareness among young innovative minds for future needs.
8	Inizio	E-CELL	Inizio, organized by E-Cell NITA, offered a platform to exhibit entrepreneurial skills via the Idea Pitching Competition. The event spanned two rounds: first, participants submitted their innovative ideas, detailing their startup concepts. In the second round, shortlisted candidates presented their ideas, highlighting the potential impact, feasibility, and uniqueness. Inizio provided a remarkable chance to delve into the startup ecosystem, fostering creativity and offering exposure to budding entrepreneurs.
9	INITIATE	E-CELL	Initiated the spark of entrepreneurship in the freshers by introducing them to different segments of the club. The success stories of students from our institute served as an inspiration for the young minds. This event was successful in cultivating awareness towards the entrepreneurial ecosystem.

10	Carpediem	E-CELL	Carpe diem, in a literal sense means 'Seize the day'. And it is the same feeling that we instil in our event. Carpe Diem is the flagship event of E-Cell NIT, Agartala and was the first ever E-Summit of North East India. It's motive is to outreach the concepts of entrepreneurship among the students and give them a hands-on learning experience. With immense enthusiasm and zeal we conduct these events that encourage and motivate budding entrepreneurs to succeed in their ventures.
11	Startup auction	E-CELL	<p>This was an auction where in the participants could form an organization or a company from scratch helping them in understanding the structure of the corporate world and the finances through the auction process.</p> <p>This was an online event and was a pre -carpediem event.</p>
12	ILLUMINATE	E-CELL	Annual event organised by E-Cell NIT Agartala exclusively for the 1st year students. Participants were divided in teams and given a problem statement after workshops on Entrepreneurship & Business models. They had 24 hours to brainstorm the potential solution & present before the jury.
13	Orientation	Sanganan Prayog	Sanganan Prayog kicked off the year with an inspiring orientation event for the juniors, featuring Mr. Sai Kiran, founder of SUMVN software solutions and Space App India. Mr. Sai Kiran shared valuable insights and motivated our members to pursue excellence in their chosen fields.
14	Released Magazine	Sanganan Prayog	Sanganan Prayog successfully published and distributed an online science and technology magazine named, 'COSMOUNITY'. The magazine featured articles, research papers, and interviews with experts, making it a valuable resource for our members and the community.

15	Sandbox Simulation	Sanganan Prayog	Sanganan Prayog's tech-fest featured a sandbox simulation event where participants explored virtual environments and engaged in immersive learning experiences.
16	Sky Gazing	Sanganan Prayog	As part of the annual tech-fest, Sanganan Prayog organized a mesmerizing sky gazing event. Participants had the opportunity to observe celestial objects through telescopes and learn about astronomy.

Activities in AAYAM 8.0 (TECHNICAL FEST)

SLNo.	EVENT	ORGANIZER	ACTIVITY
1	Airplane Flying	ANIMA	Demonstrated the flight of a fixed-wing RC aircraft, manufactured in the college itself.
2	Wear your art, Brush Brawl, Clay Clash, Doodle-dee-do, Digital Fusion, The Artlantic, Canvas Chaos, Snap Station, Pep'r Game	Fine Arts Club & Pixels	Fun events were conducted by both clubs in collaboration to increase engagement.
3	Game of Code	DCC	It was an opportunity for programmers of all levels to showcase their skills and compete against each other in a fun and challenging environment.
4	Capture the Flag	DCC	A three-day event that was packed with engaging questions and activities that challenged and entertained at every turn. The best part, we'd hidden hints and clues all around the campus, so one had to use detective skills to uncover them and solve the puzzles.
5	IPL Auction 2.0	Entrepreneurship Cell	IPL Auction held on day 1 of Carpe Diem 3.0 was aimed to providing hands-on experience in financial optimization, budget planning within limited resources, teamwork and strategic planning for taking calculated risks to stay ahead of the competition.
6	Aviation Concept Demonstration	ANIMA	Demonstration of some working principles and concepts related to flight. Also explained some of our previous models

7	Middle Ground	NITA Literary Club	Through this event the participants would be exposed to the technical side of the modern world during their research for the General discussion and Debates which will be conducted in the Asian style.
8	Drone Show	ANIMA	A drone aerobatic show, in which our model drones performed some aerobatic stunts.
9	Robo Soccer	ANARC	Two players were given the control of two bots where the bots played football
10	Maze Runner	ANARC	Two players were given two robots which entered the maze from two openings. The robots were controlled by the players.
11	FIFA	Phewsion	Through this event the contestants would take a great leap to show their gaming expertise and skills to succeed one over the other and would be a feat of entertainment for the audience who are curious about the esports culture.
12	Chess	Phewsion	Through this event the contenders facing each other showcased their problem-solving tactics and availed themselves of their strategic thinking skills to take the triumph and the audience would really love to see the clash of two players involving the abstract reasoning and the peer pressure.
13	Seminar on Python	Phyiscus	Seminar was specifically for the application of its in astrophysics, cosmology and applied physics.
14	Tambola	NITA Literary Club	A popular version of Bingo and Housie. A fun game to take us back to those nostalgic times.
15	JW Telescope	Sanganan Prayog	A short seminar on the use of James Webb Telescope, its works and Future predictions.
16	Pixela'	Pixels Club	These events aimed to provide a Cumulative Contest for Designers for their real live performances to shine in one of the biggest tech fest.
17	Panel Discussion (Mysterio) : North East Entrepreneurs	Entrepreneurship Cell	Entrepreneurs from the North East India namely, Mr. Swattik Chakraborty (Founder at Bamboowala, DPIIT recognised Startup, Tripura), Mr. Riten Debnath (Founder at Fueler.io, Entrepreneur) and Mr. Abhishek Saha (Founder at Babuana, Tripura).
18	Mysterio - Case Study Competition	Entrepreneurship Cell	This event aimed at: Bringing out the creative solutions at the same time empowering them with the necessary skill and thought process of taking up responsibility, studying about the various problems faced by a startup and to bring up

			solutions which will help the future generations to lead a better future!
19	Rubik's Cub	ANARC	It had automated scanning and solving of a 3*3 rubik's cube under 15 sec and 1 min as per user requirement
19	Lane Detection	AVIDA	The goal of this project was to create a simple pipeline to detect road lines in a frame taken from a roof-mounted camera.
20	Star Gazing	Sanganan Prayog	Taught how to use a telescope, adjust its lens and explore outer terrestrial objects like planets, star clusters etc.
21	Solimation	E-BAJA	This was basically a certification program which aimed to make students aware of Design and Simulation softwares used in industry nowadays.
22	Electric Bicycle	E-BAJA	A project where we showed our innovation with the Bicycle. We converted the simple bicycle into a battery and motor-based cycle. It runs on battery power which aims to spread awareness among young innovative minds for future needs.
23	Aeromodelling Session	ANIMA	session related to fixed wing aeroplanes, and drones(construction and working of our past projects)
24	Grand Arena	Physicus - The Physics Club	A cosplay, where two famous demons of physics introduced by prominent physicists performed and one physicist listened to both of them and will rethink his understanding of the physics and its application in grand scheme.
25	Drone simulation	ANIMA	Running simulations of RC aircraft, and/or drones. Students were able to control and fly them by visiting our stall.
26	Blind Coding Challenge	GDSC	A blind coding challenge is an event designed to test and improve a programmer's coding skills without the use of visual aids or direct access to a computer screen.
27	Onspot GAMING	Phewsion	Mortal Kombat, FIFA, BGMI, Free-fire, Mini Militia
28	Tournaments	Phewsion	Valorant, Chess, Mobile Legends

19.6 Other Activities

Certainly, the students of NIT Agartala are not only active participants in their own college's events but also eagerly take part in national-level technical fests organized by various IITs and NITs. This speaks to their dedication and eagerness to showcase their skills and compete at the highest level on the technical front.

Furthermore, their engagement in a wide range of technical and cultural clubs, including Music, Photography, Dance, Robotics, Magazines, Fine Art, Drama, Soft Skill Development, Programming, Meditation, Science, and Trekking Clubs, demonstrates their well-rounded interests and commitment to both their academic and personal growth.

On Engineer's Day, organized by NITA (NIT Agartala) and the IEI Tripura chapter, our students actively participate in different activities, highlighting their enthusiasm for celebrating engineering excellence and innovation. These initiatives not only contribute to their holistic development but also reflect the dynamic and vibrant spirit of our college community.

Inter-college attended: 6

SL NO.	FESTIVAL NAME /EVENT NAME
01	IIT Goa Aftab debate 2022
02	IIT Guwahati alcheringa MUN 2022
03	NLD-Springfest 2022
04	A Mighty Pen-Springfest 2022
05	Write-a-thon 2022, VIT Vellore
06	(De) Battle of Lits (Impressions '22, Shri Shikshayatan College)

Inter-college hosted: 5

SL NO.	FESTIVAL NAME /EVENT NAME
01	CP Titans 1.0
02	CP Titans 2.0
03	Fastforces Series (Codeforces)
04	Winter Debates 2021
05	Spill the ink

20.0 CENTRE FOR CAREER DEVELOPMENT

20.1 Introduction:

The Institute has a dedicated Centre for Career Development for organizing industrial training, study tours, Apprenticeship Training and Placement for all the students. The placements have relented the institute with proud statistics from the past year with an outstanding percentage of almost 95.40% of total eligible students being placed in organizations of high repute. Last year, total 705 offers (Total eligible students of B.Tech is 739) have been received from different companies and organizations like EIL, BEL, Saint Gobain, Google, Amazon, L&T Group, Capgemini, Nokia, Wipro, Oracle, Virtusa, Infosys, Reliance Group, Vedanta Ltd, Tata Group, DXC Technology, Alstom, Accenture, Byju's, Optum, CGI, Amdocs, Samsung R&D etc.

CCD also provides internship to pre final year and final year engineering students during summer and winter vacations in different organizations like Airports Authority of India, Bharat Coking Coal Limited, CSIR-Institute of Minerals and Materials Technology, Hindustan Petroleum Corporation Limited, Tripura State Pollution Control Board, ILS Hospital Agartala, Hetero Biopharma, Vertex Living Mordernised, Tripura Housing & Construction Board, Tribeni Construction Limited, Tata Steel Limited, Google India, IOCL Bongaigaon Refinery, Identiv Technologies, IIT Kharagpur, Linux World Pvt. Ltd. etc.

Details of the number of students placed during the period under report are given below as against those registered during 2022-23

a. Detailed placement report for UG level

Branch	Total student eligible in UG level	Name of the Company	Total offer in UG level Based on eligibility	Placement Percentage As per total offers
Bio Engineering	30	Mu-Sigma TATA ELXSI Futures First PWC Intellipaat Fractal Analytics Zycus Intellipaat QSpiders The Affordable Organic Store InMovidu Technologies Pvt Ltd. TCS InMovidu Technologies Pvt Ltd. Drishti Group	18	60
Chemical Engineering	55	Phone Pe EXL Service ITC Infotech Deloitte Wipro Intellipaat	43	78.2

		Fractal Analytics L&T ECC RIL Intellipaat Capillary Technologies AlgoTest Aarti Industries Limited ICICI Bank Vedanta HMEL Linde InMovidu Technologies Pvt Ltd.		
Civil Engineering	83	Mu-Sigma Argusoft O9 Solutions EXL Service Quantiphi ABCI Infra Saint Gobain ITC Infotech Nation with Namu Deloitte Axis My India Dassault Systemes Wipro PWC L&T ECC L&T ECC WNS KEC International QSpiders PRADAN Ashiana Housing Ltd InMovidu Technologies Pvt Ltd. HDFC Life InMovidu Technologies Pvt Ltd. Drishti Group	71	83.5
Computer Science and Engineering	127	OLX Qbit Labs Google MathWorks Samsung, Bangalore CaaStle Technology Tekion Cashfree TATA ELXSI Comviva Fanatics Oracle Gameskraft Amazon Vassar Labs	137	100

		Mavenir Brane IDFC First Bank Argusoft Broadridge / Itiviti O9 Solutions BlackRock Digite Infotech Pvt Ltd Godigit Publicis Sapient GEP Ngarro Delhivery ITC Infotech Appcino Teradata Amdocs Junglee Games GE Digital Nation with Namu Deloitte AWS Young Soft OMCS _Oracle Discovery Zscaler Oracle Netsuite Fractal Analytics Jio Platforms Zycus CGI C-DOT Target Corporation Cradlepoint Mpowered Health Strand Life Science Synchrony Paypal Denso Aakash Byju's Jio Platforms Axis Bank Huron ICICI Bank Network Intelligence PRADAN InMovidu Technologies Pvt Ltd. TCS		
Electrical Engineering	88	Yellow Class Phone Pe Mu-Sigma Samsung, Bangalore	100	100

		Tekion Comviva Infosys Oracle Info Edge Argusoft Netmeds Celigo Digite Infotech Pvt Ltd Talent Recruit Ashok Leyland Alstom ORI Ngarro Infra Market ITC Infotech Amdocs Piramal Deloitte AWS Terahedron Amadeus CGI Arcesium Target Corporation L&T ECC L&T ECC RIL KEC International Arcelor Mittal Nippon Steel Intellipaat Collegedunia TATA IQ Suzuki Motor HMEL ORC Engineering TCS NOKIA Future Market Insights Drishti Group		
Electronics & Instrumentation Engineering	63	Mu-Sigma Samsung, Bangalore Oracle Info Edge O9 Solutions Netmeds Alstom Ngarro Infra Market Amdocs OMCS _Oracle Wipro	54	85.7

		Intellipaat Zycus Target Corporation L&T ECC RIL Paypal Axis Bank Huron ICICI Bank Cairn Oil & Gas Vedanta HMEL ORC Engineering InMovidu Technologies Pvt Ltd. TCS Future Market Insights InMovidu Technologies Pvt Ltd. People Strong		
Electronics and Communication Engineering	113	Yellow Class Phone Pe Google Mu-Sigma Samsung, Bangalore CaaStle Technology Tekion Cashfree TATA ELXSI Comviva Oracle Amazon Mavenir Argusoft EXL Service Celigo Digite Infotech Pvt Ltd Talent Recruit Quantiphi Publicis Sapient ORI Ngarro Infra Market Appcino Amdocs Piramal Junglee Games LatentView Analytics Deloitte AWS OMCS _Oracle Dassault Systemes Wipro Intellipaat	114	100

		Jio Platforms CGI C-DOT Target Corporation Mpowered Health Groww Live your best Life MIQ Digital Optum Number Theory Accolite Jio Platforms Huron LatentView Analytics Stellantis Network Intelligence Cogoport ORC Engineering TCS NOKIA		
Mechanical Engineering	101	Phone Pe Mu-Sigma TATA ELXSI Argusoft O9 Solutions EXL Service Ashok Leyland Alstom Caterpillar ABCI Infra Virtusa Deloitte Terahedron Axis My India Wipro PWC Zycus Tata Advance System Schlumberger L&T ECC RIL Denso Tredence Analytics Arcelor Mittal Nippon Steel Maruti Suzuki Intellipaat Aakash Byju's ICICI Bank Cubastion Network Intelligence Suzuki Motor Vedanta	105	100

		HMEL ORC Engineering BPCL TCS		
Production Engineering	77	Phone Pe The Math Company Mu-Sigma Infosys Argusoft O9 Solutions EXL Service Netmeds Futures First Alstom ITC Infotech Fiat India Automobiles Pvt. Ltd Terahedron Zscaler Dassault Systemes Wipro PWC Intellipaat Fractal Analytics Tata Advance System Adani Group Schlumberger Arcelor Mittal Nippon Steel Mindlance Intellipaat Aakash Byju's Axis Bank ICICI Bank QSpiders ORC Engineering The Affordable Organic Store HDFC Life InMovidu Technologies Pvt Ltd.	62	80.5
Total Eligible in UG	739		704	95.3

b. Detailed placement report for PG level:

Branch	Total student eligible in PG level	Name of the Company	Total student Placed in PG level	Placement Percentage
Civil Engineering	49	L&T ECC Vedanta TATA Power InMovidu Technologies Pvt Ltd. Jacobs Solutions	12	24.5

Computer Science and Engineering	13	Alstom Deloitte C-DOT CDAC Bangalore Daimler Truck	5	38.5
Electrical Engineering	18	Terahedron Luminous Power Technologies InMovidu Technologies Pvt Ltd. TATA Power	5	27.8
Mechanical Engineering	8	BAJAJ AUTO LIMITED Bosch Rexroth	2	25
MCA	12	OFSS AMDOCS Soti Acadecraft THE TECH DESTINY	16	100
MBA	18	HNR Speech & Hearing Clinic ICICI Prudential Axis Bank The Affordable Organic Store InMovidu Technologies Pvt Ltd. HDFC Life	21	100
BTMT	8	PWC Jhonson Control ICICI Bank Future Market Insights	6	75
BSMS	58	Acadecraft Byjus-Academic Specialist The Affordable Organic Store Byjus ATP	16	27.6
Total	184		83	45.1

20.2 Others:

CCD also provides internship to pre final year engineering students during summer and winter vacations in different organizations like Airports Authority of India, Bharat Coking Coal Limited, CSIR-Institute of Minerals and Materials Technology, Hindustan Petroleum Corporation Limited, Tripura State Pollution Control Board, ILS Hospital Agartala, Hetero Biopharma, Vertex Living Mordernised, Tripura Housing & Construction Board, Tribeni Construction Limited, Tata Steel Limited, Google India, IOCL Bongaigaon Refinery, Identiv Technologies, IIT Kharagpur, Linux World Pvt. Ltd. etc. Last academic year (2020-21) total 595 students participated during Summer Vacation and 335 Students participated during Winter Vacation in training & internship activities.

21.0. CAMPUS AMENITIES AND INFRASTRUCTURE DEVELOPMENT INITIATIVES

21.1 Introduction:

The Institute has gone through a rapid growth in its Infrastructural Development as per commitment in its strategic plan, a journey towards excellence. Converting an existing State Level Engineering Institute (erstwhile TEC) having infrastructure and logistic inadequacies into an institute of National Importance is a formidable challenge. But the growth process which has taken place during till now at NIT Agartala is an indication of stipulated growth-oriented programmes with realistic planning, set in the right direction. The storm water drainage system towards the localised water bodies with the aim and objective of rain water harvesting, thus proving a sustainable development which has been recognised by achieving the Green Champion Certificate awarded by Mahatma Gandhi National Council of Rural Education last year. Besides, proper utilisation of the solar power in reducing the energy bills, consequently lesser carbon foot print. Some of features available within the campus are as follows:

- Lush green campus as Green Champion Certificate
- Picturesque Campus with a 4.7 hector land and lake
- Kendriya Vidyalaya
- Round the clock medical facility
- In-house research capabilities
- In-house fabrication facilities
- Serving the oppressed class through different club activities
- Serving the locality with Swachhata (cleanliness) drive etc.
- Serving the society in general
- Promoting incubation
- Update of the quality education & skill development.

21.2 Major Works:

The Institute is spread over an area of 4.7 hector of land. The following major works have been completed in the recent past.

Sl. No.	Name of the Works	Rupees in Lakhs
1.	Construction of 1500 Capacity Boys Hostel at NIT Agartala.	14415.40
2.	Up-gradation of the internal main road with both side footpath including side drain, electric post, sitting arrangement at a certain interval & conduit from main gate-1 to auxiliary gate-2 via housing and boys' hostel & auxiliary gate-2 to main gate-1 and auditorium to existing playground (old) at NIT Agartala	1164.75
3.	Supply, installation, testing & commissioning of 14(fourteen) numbers lifts in Administrative Building 1 & 2, School of Management,	417.13

	International Guest House, Academic Blocks (ECE & EE Dept. & Doner building), Central Library including construction of Lift pit in Academic Block (Doner Building) and wall cladding of Lift lobby of Different building at NIT Agartala.	
4.	Special Repair, retrofitting and up gradation of Library building, at NIT Agartala.	55.51
5.	Up-gradation of 2-storey building besides knowledge Centre at NIT Agartala.	73.2

Work in progress: The following works are in progress.

Sl. No.	Name of the Works	Rupees in Lakhs
1.	Special Repair, retrofitting and up gradation of Dhalai Hostel building at NIT Agartala, Tripura.	99.88
2.	Construction of 200 capacity Girls hostel at NIT Agartala, Tripura.	1677.41
3.	HVAC, Stage Craft, Stage Light, Sound System, Projector System, and Sitting Arrangement in the Seminar Hall at NIT Agartala.	1163.10
4.	Extension of height of existing boundary wall of NIT Agartala.	213.58
5.	Water Supply arrangement at NIT Agartala by way of constructing water treatment plant based on Ground Water including construction of ground water reservoir, installation of Pump sets and pipe line distribution system and other allied works	1196.79
6.	Construction of Lecture Hall Complex at NIT Agartala	3060.68
7.	Construction of balance work of Swimming pool at NIT Agartala, Dist - West Tripura, Tripura. (SH: Electromechanical work and other allied work in the swimming pool of Sports Complex at NIT Agartala)	770.21

21.3 Housing Facilities: As regards residential buildings, staff housing units having 24 (twenty-four) flats in each of H3A, H3B, H4A, H4B, H5 type housing and 24 (twenty-four) flats in two H2B type housing have been completed and functional. The Director's Bungalow and adjacent International Guest House is very much functional. 10(ten) nos duplex type housing are also functional with it's normal occupancy.

21.4 Horticulture: Lots of medicinal plants, flower plants, fruit trees are planted. Gardening staffs are employed by NIT Agartala for maintaining of the campus and other beautification work including horticulture.

21.5 Telephone Facilities: EPBX is nonfunctional because of availability of multiple mobile networks in the campus at marginal rate.

21.6 Guest House: One of the best facility available at North-east as International Guest House having 33(thirty-three) single bed rooms, 10(ten) suits and 05(five) VVIP Suits. There is also one Old Guest House at NIT Agartala having 13 Nos. double bed rooms and a Transit House at Agartala having two Single bed rooms, one double bed room and one conference hall.

- 21.7 Hostel:** Boys Hostel (Aryabhata: 1000 Capacity, Rabindranath Tagore hostel:1500 capacity, Howrah: 128 Capacity, Dhalai: 92 Capacity, Gomati: 128 Capacity), Girls Hostel (Gargi: 500 Capacity) are functional. Additional 200 Capacity Girls hostel block is under construction.
- 21.8 Outpatients Service:** Outpatient services are available for all students, faculties, staff and their family members. Patients from nearby localities are also served
- 21.9 Inpatient Service:** a local dispensary with doctors is available round the clock/on call which is serving the nearby village people besides the students/staff of NIT Agartala.
- 21.10 Emergency services:** Ambulance facility available in the campus for emergency medical service.
- 21.11 Bank:** SBI & Canara Bank, two national banks have their branch in the campus with ATM facility, moreover PNB has an ATM counter in the campus beside the other two banks as mentioned.
- 21.12 Post Office:** Post office is also available in the campus since inception of NIT Agartala.
- 21.13 Cafeteria:** Cafeteria & other shopping places are available within the Market complex of campus. Other than this, there are 7 nos of cafeteria in the campus at various locations for serving the food and beverages.
- 21.14 Transport Services:** NIT Agartala has public transport connectivity with nearby market places as well as with capital city Agartala.
- 21.15 Other:** There is a Library with modern facilities known as **Knowledge Centre** where ample stocks of books, periodicals, e-journals are available. Students, Staff, faculty members can access the resources from morning to late evening.

22.0 CENTRE FOR INDUSTRIAL CONSULTANCY AND SPONSORED RESEARCH

22.1 Introduction:

Our campus is witnessing an exponential growth in R&D activities. Apart from a large consultancy work undertaken by our engineering departments, academic research gains its momentum day by day. Research papers have been published by our faculty members and research scholars in different refereed journals of international and national repute. Research papers have been presented in various conferences and symposia and symposia held at national/international levels. Seminars, conferences, symposia at national level were organized by various departments of our Institute.

Our Institute has signed MOUs with industries and Institutions in and abroad to promote collaborative research and consultancies. Our faculty members have obtained major project funded by SERB, DST, DBT, Department of Atomic Energy, Tribal Research and Cultural Institute, DST-STUTI, DRDO, Central Power Research Institute, New Generation Innovation Network (NGIN) under the Directorate of Information Technology, Government of Tripura, Unnat Bharat Abhiyan and ISRO.

Faculties and students are actively involved in various research activities. Our Institute received **Rs.143,51,013.00** fund in the financial year of 2022-23 under the Sponsored Research Project Grant.

The faculty members of our Institute published 262 numbers of SCI Journals, 421 numbers of SCOPUS Journals on 01.07.2022 to 30.06.2023.

The faculty members of our Institute also individually published 77 International Conferences Publication, 10 National Conference Publication, 02 International Conference Organized 01 National Conference Organized, 08 National Workshop was Organized by the faculty members of NITA, in the year of 2022-23.

Total 24 (Twenty-Four) numbers of patents have been filed, 09 (Nine) numbers of patents have been granted and 19 (Nineteen) numbers of patent have been published in the year of 2022-23.

22.2 Sponsored Research:

<i>Sl No.</i>	<i>Sponsoring Agency</i>	<i>Project Title</i>	<i>Name of the Chief Project Investigator/Project Investigator</i>	<i>Sanctioned Value (Rs. In Lakh)</i>
1	SERB	Transmission of quantum information using perfect state transfer.	Dr. Supriyo Datta, Assistant Prof. of Mathematics Department, NITA and Dr. Subhashish Banerjee, Associate Professor of IIT Jodhpur.	20.40293 Lakhs
2	SERB	Conversion analysis of the syngas production from single-use absorbent waste materials and its applicability for power generation in industries/hospitals through RCCI combustion.	Dr. Paramvir Singh, Assistant Prof. of Mechanical Engineering Department	32.9329 Lakhs

3	SERB	Fabrication and Characterization of Ag doped Al ₂ O ₃ :TiO ₂ Nanowire Array Device for UV-Vis Detection and Breath Sensing Application	PI: Dr. Mitra Barun Sarkar, Assistant Prof. ECE, NITA. Co-PI: Dr. Laishram Robindro Singh, Associate Prof. Department of Nanotechnology, North-Eastern Hill University, Shilong	29.30972 Lakhs
4	SERB	Development analysis and feasibility study of aluminum alloy-air battery for powering electric vehicles.	Dr. Ajay Biswas, Assistant Professor of Mechanical Engineering Department.	56.02 Lakhs
5	SERB	Sustainable machining of Carbon fiber-reinforced polymer composites in a hybrid lubri-cooling environment.	Dr. Uttam Kumar Mondal, Assistant Prof. of Production Engineering Department	49.45688 Lakhs
6	SERB	A low-cost seismic vibration control mechanism for RC building using compliant tuned dampers.	Co-PI: Dr. Dhirendra Kumar Pandey, Assistant Prof. of CE Department	25.58556 Lakhs
7	SERB	Real time non-contact pulse vibration measurement system of radial artery for vata, pita, khapha diagnosis using CMOS camera.	Prof. Ardhendu Saha, EE Department. And Dr. Biswanath Bhunia, Assistant Prof. of Bio Engineering Department.	51.33832 Lakhs
TOTAL				265.046 Lakhs

22.3 Consultancy Programmes:

Institute actively engaged in performing various consultancies and testing works. Academic departments are performing testing & consultancy job in association with National Rural Infrastructure Development Agency Project Proposal for the State of Tripura under Pradhan Mantri Gram Yojana (PMGSY) Payment to the state Technical Agencies (STAs), Tripura Urban Development Authority (TUDA), Teems India Tower Lines Pvt Ltd, Manipur Industrial Development Corporation Limited(Third Party Quality Assurance (TPQA)), PWD, Directorate of School Education, PWD, Medical College, Hapania, HUMANE SOCIETY INTERNATIONAL INDIA and Department of Rural Development, Government of Tripura etc. Institute received **Rs.98,79,941.00** for different testing & consultancy activities in the year of 2022-23.

22.4 Industrial Associateship Scheme:

An Industrial Advisory Committee (IAC) is constituted with leading experts from the Industry associations to provide professional and technical input into curriculum and activities of the students. Experienced person from Industry frequently visit to the institute as examiner, resource person in seminar/ workshop, for syllabus review meeting etc.

22.5 MoUs Agreements signed:

NIT Agartala signed MOUs with industries and various academic institutions to promote collaborative research and consultancies.

22.6 Patents:

Sl.No	Title of the Invention	Inventor(s)	Department	Patent version no.	Date of filling of application
1	A SENSOR-BASED OPTIMAL WATER SELECTION SYSTEM FOR CROP CULTIVATION	Dr. Mrinmoy Majumder, Dr. Uttam Kumar Bera, Dr. Tilottama Chakraborty, Tanmoy Ghoshal,	Civil Engineering	202231024 078A	25.04.2022
2	METHOD OF AN AUTOMATIC MOTOR OPERATOR JACK	Dr. Barnik Saha Roy, Mrs. Parna Chakraborty, Mr. Durjoydhan Sethi.	Mechanical Engineering	202231029 876	24.05.2022
3	DEVELOPMENT OF POROUS ALUMINUM SURFACES BY ELECTRODEPOSITION METHOD TO ENHANCE POOL BHT PERFORMANCE OF R-134A.	Mr. Biswajit Majumder Mr. Ajay Dadabhau Pingale Mr. Anil Shankar Katarkar Miss. Asmita Bhaumik Dr. Sachin Ulhasrao Belgamwar Dr. Swapan Bhaumik	Mechanical Engineering	202231044 863	05.08.2022
4	DESIGN AND SIMULATION OF AN AEROSTATIC THRUST BEARING WITH POROUS MATERIAL AND MULTIPLE ORIFIC RESTRICTORS CONNECTED BY A CIRCUMFERENTIAL PRESSURE-EQUALIZING GROOVE OF A RECTANGULAR SHAPE.	Prof. (Dr.) Prasun Chakraborti, Bivash Chakraborty.	Mechanical Engineering	202231061 239	27.10.2022
5	DISPOSABLE BOX TO CURB POLLUTION	Dr. Mrinal K Deb Barma Dr. Munesh Chandra Trivedi Dr. Harivans Pratap Singh Dr. Brajesh Kumar Singh Dr. Sheo Kumar	Computer Science and Engineering	202231050 980	07.09.2022

6	METHOD FOR SEMANTICS-BASED SEARCH CLUSTERING	Dr. Mrinal K Deb Barma Dr. Munesh Chandra Trivedi Dr. Harivans Pratap Singh Dr. Jhunu Debbarma	Computer Science and Engineering	202231066523	19.11.2022
7	LASER-SCANNING VIRTUAL IMAGE DISPLAY SYSTEM	Dr. Munesh Chandra Trivedi, Mr. Nikhil Debbarma Dr. Swapan Debbarma, Dr. Harivans Pratap Singh	Computer Science and Engineering	202231065534	16.11.2022
8	EMOTION RECOGNITION FROM ELECTROENCEPH ALOGRAPHY SIGNALS USING RNN	Dr. Munesh Chandra Trivedi Dr. Tannistha Pal Mr. Ashok Kumar Yadav,	Computer Science and Engineering	202231067381	23.11.2022
9	AUTOMATIC DETECTION AND CLASSIFICATION OF EYE DISEASE USING DEEP LEARNING APPROACH IN IMAGE PROCESSING.	Dr. Munesh Chandra Trivedi, Dr. Prakash Kumar Singh Dr. Tannistha Pal	Computer Science and Engineering	202231062143	01.11.2022
10	SYSTEM ZUR OPTIMIERUNG DER LEISTUNGS- UND EMISSIONSEIGENSCHAFTEN EINES DIESELMOTORS	Prof. (Dr.) Prasun Chakraborti Bijoy Kumar Deb	Mechanical Engineering	202022107303	30.12.2022
11	DEVELOPMENT AND DESIGN OF DRIVING SUPPORT SYSTEM FOR ELECTRIC VEHICLE BY USING IMAGE PROCESSING TECHNOLOGY.	Dr. Swapan Debbarma	Computer Science and Engineering	202211046622	16.08.2022
12	LASER-SCANNING VIRTUAL IMAGE DISPLAY SYSTEM	Dr. Swapan Debbarma Dr. Munesh Chandra Trivedi Mr. Nikhil Debbarma Dr. Harivans Pratap Singh	Computer Science and Engineering	202231065534	16.11.2022
13	COMPOSITIONS AND METHODS FOR THERMOPLASTICS COMPOSITES BY	Mr. Ashish Soni Dr. Pankaj Kumar Das Mr. Ajay Kumar Pagare Mr. Sanjay Kumar Mr. Vivek Kumar Mishra	Mechanical Engineering	202331008007	08.02.2023

	THE SYNERGY OF RHA, SILICA SAND AND WASTE PLASTICS	Mr. Bharat Singh Chittoriya Mr. Abdul Wahab Hashmi			
14	HEALTH MONITORING DEVICE	Dr. Munesh Chandra Trivedi ,Mr. Nikhil Debbarma, Mr. Prashant Bhardwaj	Computer Science and Engineering	374932-001	01.12.2022
15	POTABLE SOLAR HEATER	Dr. Munesh Chandra Trivedi , Dr. Tanishtha Pal, Dr. Dharavath Ramesh, Dr. Prakash Kumar Singh	Computer Science and Engineering	378678-001	04.02.2023
16	FRICTIONLESS HYDRAILIC WEIGHT LIFTER	Dr. Munesh Chandra Trivedi . Dr. Manoj Kumar Panda, Setu Vinit Goenka,Dr. Suman Deb ,Ekta Singh	Computer Science and Engineering	382247-001	24.03.2023
17	FRICTIONLESS EXTENDABLE ROAD BARRIERS”	Dr. Munesh Chandra Trivedi Dr. Kunal Chakma 3.Dr. Dwijen Rudrapal Harivans Pratap Singh 5.Ms. Adhya Trivedi	Computer Science and Engineering	382118-001	22.03.2023
18	SMART STAND FOR SUN TRACKING SOLAR PANEL	Dr. MUNESH CHANDRA TRIVEDI, Ms. NANDITA GOYAL,Dr. MRINAL KANTI DEB BARMA , Mr. PRASHANT BHARDWAJ	Computer Science and Engineering	378654-001	04.02.2023
19	MOTION SENSOR BASED STREET LIGHT	Dr. Munesh Chandra Trivedi, Mr. Nikhil Debbarma, Dr. Anil kumar Dubey	Computer Science and Engineering	381938-001	21.03.2023
20	IOT BASED WEARABLE DEVICE FOR MONITORING OF VITAL INFORMATION.	Dr. Nirmalya Kar, Dr. Smita Das, Dr. Subhrajyoti Deb, Udit Mamodiya	Computer Science and Engineering	382360-001	27.03.2023
21	IOT BASED HUMIDITY MONITORING SYSTEM USING MACHINE LEARNING APPROACH IN AGRICULTURE	Dr. Munesh Chandra Trivedi, Mr. Dhrubjyoti Bhowmik, Mr. Prashant Bhardwaj, Dr. Vineet Kumar Singh	Computer Science and Engineering	202331005246	26.01.2023
22	REAL-TIME FACE RECOGNITION AND	Dr. Munesh Chandra Trivedi, Dr. Nirmalya Kar, Dr. Harivans Pratap Singh	Computer Science and Engineering	202331001984	10.01.2023

	VERIFICATION SYSTEM				
23	AN APPARATUS FOR ENFORCING STRICT COVID PROTOCOLS	Dr. Arvind Kumar Jain	Electrical Engineering	202331013372	28.02.2023
24	SYSTEM AND METHOD FOR DEHAZING REAL TIME DYNAMIC DEGRADED SCENES USING DEEP RESIDUAL NEURAL NETWORK	Dr. Tannistha Pal	Computer Science and Engineering	202231043788	31.07.2022

22.7 Other Information:

NIT Agartala has established Institute Innovation and Startup as a flagship program which is in line with the National Innovation Policy and Startup initiative. Since November 2020 there had been several National level webinars and student awareness programs conducted on the innovation and startup ecosystem. To foster product-oriented innovation and idea prototyping, pitching and validation the institute has supported 7 number of students innovation prototyping projects with financial aid. The institute has more than 5000 sqft dedicated facility with common workspace, conference room, incubation facility, internet and office support. The institute has signed an MoU with Government of Tripura Directorate of Information Technology for New Generation Innovation Network (NGIN). NIT Agartala has framed its Startup and Innovation Policy along with Intellectual Property Right (IPR) Policy.

Institute Innovation Council, E-cell and Startup (IICES), NIT Agartala is a nonprofit center inside campus to promote Innovation and Entrepreneurship. It provides a platform for start-ups by budding Entrepreneurs and Intrapreneurs to convert their innovative ideas into commercially viable products. It also provides services related to patenting and commercialization. The center is supported under New Generation Innovation Network (NGIN), Govt. of Tripura.

23.0. FINANCE & ACCOUNTS

23.1 Grants from MoE:

(Rs. in Lakhs)

Head		2022-23	2021-22
Income			
Grant from Ministry of Education, Govt. of India			
Object Head-31		4084.00	3853.09
Object Head-36		5811.00	5188.46
Object Head-35		1888.00	810.00
Total		11783.00	9851.55
Expenditure			
Object Head-31		3927.90	3816.18
Object Head-36		5370.84	4488.74
Object Head-35		1884.53	2461.75
Total		11183.27	10766.67

23.1.1 Expenditure Statement:

(Rs. in Lakhs)

Particulars	OH-31	OH-36	OH-35	Total
Opening Balance	-25.10	-440.03	309.60	-155.53
Grant received from Ministry of Education	4084.00	5811.00	1888.00	11783.00
Total Available	4058.90	5370.97	2197.60	11627.47
Total Utilized	3927.90	5370.84	1884.53	11183.27
Reversed to MoE (PFMS)	131.00	0.13	3.47	134.60
Unspent Balance as on 31.03.22	---	---	309.60	309.60
Income from Other Sources	2005.83			

23.1.2 Details Expenditure Statement:

(Rs. in Lakhs)

Particulars	2022-23	2021-22
Object Head-31		
31-1- Retirement Benefit	----	----
31-2- Scholarships/Fellowships	760.54	841.26
31-3- Foreign/Domestic Travels	12.27	7.44
31-4- Security/Housekeeping	1031.18	1013.05
31-5- Exp. on Contractual Employees (Teaching & Non-Teaching)	1398.15	1534.57
31-6- Other Expenses	725.76	419.86
Total- OH-31	3927.90	3816.18

Object Head-36		
36-1- Expenditure on Salary of Regular Faculty	3119.70	2585.53
36-2- Expenditure on Salary of Regular Non-Faculty	294.52	237.14
36-3- Medical Expenses	3.90	2.87
36-4- Leave Encashment	7.65	----
36-5- LTC	21.94	2.68
36-6- CPDA	7.34	3.23
36-7- Retirement Benefits	1670.97	1157.38
36-8- Other Expenses	244.82	499.91
Total- OH-36	5370.84	4488.74
Object Head-35		
35-1- Buildings	1817.90	2314.68
35-2- Equipments	60.14	116.62
35-3- Library	---	---
35-4- Furniture	6.49	30.45
Total- OH-35	1884.53	2461.75
Grand Total (31+36+35)	11183.27	10766.67

***Audit Report
&
Annual Accounts 2022 -2023***

AMG-II-A/Hin./SAR/NITA/AGT/2022-23/ 137

Dated: 08/11/2023



भारती यलेखापरीक्षा और लेखा विभाग,
INDIAN AUDIT AND ACCOUNTS DEPARTMENT
प्रधान महालेखाकार लेखापरीक्षा का कार्यालय, त्रिपुरा, अगरतला
OFFICE OF THE PRINCIPAL ACCOUNTANT GENERAL (AUDIT),
TRIPURA, AGARTALA
पिन/ PIN – 799006 फैक्स/ Fax – 0381-2350158
ईमेल/ email: agautripura@cag.gov.in

सेवा में,

The Registrar,
National Institute of Technology, Agartala,
Barjala, Jirania, Tripura (W),
Pin: 799046.

महोदय/महोदया,

पत्र संख्या AMG-II-A/SAR/NITA/AGT/2022-23/ 221 दिनांक 11/11/2023 आप से
आवश्यक कार्रवाई करने के हेतु इस पत्र के साथ संलग्न किया गया है।

भवदीय,


व.लेखापरीक्षा अधिकारी/मुख्यालय -IIए

AMG-II-A/SAR/NITA/AGT/2022-23/ 22\

Dated: 08-11-2023



भारती यलेखापरीक्षा और लेखा विभाग,
INDIAN AUDIT AND ACCOUNTS DEPARTMENT
प्रधान महालेखाकार लेखापरीक्षा का कार्यालय, त्रिपुरा, अगरतला
OFFICE OF THE PRINCIPAL ACCOUNTANT GENERAL (AUDIT),
TRIPURA, AGARTALA
पिन/ PIN – 799006 फैक्स/ Fax – 0381-2350158
ईमेल/ email: agautripura@cag.gov.in

To
The Registrar,
National Institute of Technology, Agartala,
Barjala, Jirania, Tripura (W),
Pin: 799046.

Subject:- Separate Audit Report (SAR) on the accounts of National Institute of Technology, Agartala for the year 2022-23.

Sir,

I am to send herewith the Separate Audit Report (SAR) of the accounts of National Institute of Technology, Agartala for the Financial Year 2022-23 along with a management letter for further action at your end.

Hindi version of SAR will follow.

Thanking you,

Yours faithfully,

Encl: As stated.


Senior Audit Officer/AMG-IIA

**SEPARATE AUDIT REPORT OF THE COMPTROLLER AND AUDITOR
GENERAL OF INDIA ON THE ACCOUNTS OF THE REGISTRAR, NATIONAL
INSTITUTE OF TECHNOLOGY AGARTALA (NITA), JIRANIA, TRIPURA FOR
THE YEAR ENDED 31 MARCH 2023**

We have audited the attached Balance Sheet of the **National Institute of Technology Agartala (NITA)**, Jirania, Tripura as on **31 March 2023**, the Income and Expenditure Account and Receipts and Payments Account for the year ended on that date under Section 19(2) of the Comptroller and Auditor General's (Duties, Power & Conditions of Service) Act, 1971. These financial statements are the responsibility of the management of the National Institute of Technology Agartala (NITA), Jirania, Tripura. Our responsibility is to express an opinion on these financial statements based on our audit.

2. This Separate Audit Report contains the comments of the Comptroller and Auditor General (C&AG) of India on the accounting treatment only with regard to classification, conformity with the best accounting practices, accounting standards and disclosure norms etc. Audit observations on financial transactions with regard to compliance with the Law, Rules and Regulations (Propriety and Regularity) and efficiency-cum-performance aspects etc., if any, are reported through Inspection Reports/C&AG's Audit Reports separately.

3. We have conducted our audit in accordance with auditing standards generally accepted in India. These standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatements. An audit includes examining, on a test basis, evidences supporting the amounts and disclosure in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of financial statements. We believe that our audit provides a reasonable basis for our opinion.

4. Based on our audit, we report that:

- i) We have obtained all the information and explanations, which to the best of our knowledge and belief were necessary for the purpose of our audit.
- ii) The Balance Sheet, Income and Expenditure Account/ Receipt and Payment Account dealt with by this report have been drawn up in the format prescribed by the Ministry of Education, (Formerly, Ministry of Human Resources Development), the Government of India vide order No. 29-4/2012-FD dated 17 April 2015.

iii) In our opinion, proper books of accounts and other relevant records have been maintained by the National Institute of Technology Agartala (NITA), Jirania, Tripura as far as it appears from our examination of such books.

iv) **We further report that:**

Application of Funds

Loans, Advances & Deposits (Schedule – 8) – ₹ 40.09 crore

Advance to Parties (Schedule – 8A) – ₹ 38.38 crore

A.1. The above includes Advance to BSNL (₹ 0.02 crore) and Tripura Housing and Construction Board (THCB – ₹ 0.76 crore), which are lying unadjusted for more than 10 years. The details regarding advance made to BSNL was not made available to audit. It was also seen that a total advance amount of ₹ 10.71 crore was made to THCB between April 2008 and November 2010 for construction of Academic Block, Library Media Centre and construction of 2nd floor at New Computer Science Building. However, the Institute is yet to receive Utilization Certificate amounting to ₹ 0.76 crore till date. No correspondence was found on record on this matter after August 2019. Since these are very old advances and records regarding some are not available with the Management, the chances of making adjustment against the same seem remote. As such, suitable provisions should be made against the same to reflect a true and fair view in the Accounts. The non-provisioning for the above mentioned advances has resulted in overstatement of “Loans, Advances and Deposits” and “Excess of Income over Expenditure” by ₹ 0.78 crore each.

Application of Funds

Fixed Assets

Tangible Assets (Schedule – 4) – ₹ 695.00 crore

A.2. The above includes “Sports Complex” at the WDV of ₹ 55.39 crore (Gross Block – ₹ 64.40 crore). The electro-mechanical work of the swimming pool included in the Sports Complex was pending and was not taken up during 2022-23. The balance work of the swimming pool commenced only in June 2023 at a project cost of ₹ 7.70 crore and was still under progress during the conduct of audit. As the work was incomplete as at 31 March 2023, the swimming pool component capitalized under the head Sports Complex and the depreciation charged on that component should have been reversed to Capital Works in Progress (CWIP) and Prior period Depreciation respectively. But despite giving assurances in previous years, the reversal was not carried out. This has resulted in overstatement of Tangible Assets, Depreciation and Accumulated Depreciation, the quantum of which could not be ascertained due to unavailability of details regarding the swimming pool component capitalized under Tangible Assets.

B. Income and Expenditure Account – Nil

C. General – Nil

D. Grant-in-Aid

Details of Grant-in-Aid received and utilisation there against by the Institute during 2022-23 is shown below:

(₹ in lakh)

Object Head	Opening Balance	Received during the year	Total Grant	Utilized during the year	Returned through PFMS	Closing Balance
OH-31 (Recurring Head)	(25.10)	4084.00	4058.90	3927.90	131.00	0.00
OH-36 (Salary Head)	(440.03)	5811.00	5370.97	5370.84	0.13	0.00
OH-35 (Capital Assets Head)	309.60	1888.00	2197.60	1884.53	3.47	309.60
Total	(155.53)	11783.00	11627.47	11183.27	134.60	309.60

During the financial year 2022-23, the Institute received ₹ 11783 lakh under different heads as mentioned above as Grant-in-Aid from the Government of India. Against a total available fund of ₹ 11627.47 lakh, the Institute could utilize only ₹ 11183.27 lakh. An amount of ₹ 134.60 lakh of grant was reversed back to Government of India through Public Financial Management System (PFMS) as unutilized grant while an unspent balance of ₹ 309.60 lakh as on 31 March 2023 under Capital Assets Head (OH-35) is still lying with the Institute. This unspent amount lying with the Institute represents grant received prior to the introduction of PFMS system in the Institute in July 2021. The amount is lying idle in the Savings Bank account of the Institute (SBI, NITA Branch A/c No. – XXXX9684) which is contrary to the idea of fiscal discipline.

E. Management Letter

Deficiencies which have not been included in the Audit Report have been brought to the notice of the National Institute of Technology Agartala through a Management Letter issued separately for remedial/corrective action.

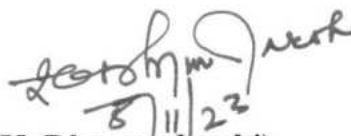
5. Subject to our observation in the preceding paragraphs, we report that the Balance Sheet and Income and Expenditure Account and Receipts and Payments Account dealt with by this report are in agreement with the books of Accounts.

6. In our opinion and to the best of our information and according to the explanations given to us, the said financial statements read with the Accounting

Policies and Notes on Accounts, and subject to the Significant matters stated above and other matters mentioned in Annexure to this Audit Report, give a true and fair view in conformity with accounting principles generally accepted in India:

- a. In so far it relates to the Balance Sheet of the state of affairs of the National Institute of Technology Agartala as on 31.03.2023,
- b. In so far as it relates to Income and Expenditure Account of the excess for the year ended on that date.

**For and on behalf of
Comptroller & Auditor General of India**

A handwritten signature in black ink, appearing to read 'H. K. Dharmadarshi', with the date '8/11/23' written below it.

(H. K. Dharmadarshi)

Principal Accountant General (Audit), Tripura

Date: 08 November 2023

Place: Agartala

Annexure

INTERNAL CONTROL AND INTERNAL AUDIT

Audit evaluation of internal control and internal audit system is summarised as under:

1. Adequacy of Internal Control system:

- (i) NITA has not prepared any Accounts Manual of its own.
- (ii) NITA does not have a Purchase & Procurement manual.
- (iii) Advances to parties have been lying unadjusted for multiple years. A mechanism for periodic review of unadjusted advances needs to be put in place.
- (iv) There were two nos. of dormant bank accounts as on 31 March 2023.
- (v) Liability of certain expenditures was not considered while preparing the accounts.
- (vi) The MIS report of NITA does not reflect the transactions in their entirety.

2. Adequacy of Internal Audit system:

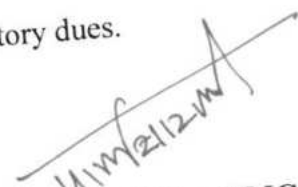
- (i) Internal audit manual had not been prepared by NITA.
- (ii) NITA does not have any Internal audit Wing. An internal audit for the year 2022-23 was conducted by a Chartered Accountant firm.

3. System of Physical Verification of Fixed Assets and Inventory:

A three member committee was constituted (08 May 2023) for conducting physical verification of fixed assets and consumable goods for the financial year 2022-23. The report of the committee was submitted on 01 August 2023. It was observed that the status of fixed assets and consumable goods procured before 2022-23 was not mentioned in the verification report. It was also seen that no certificate of verification conducted has been recorded in any stock register. Further, the status of any obsolete or unserviceable or surplus stock items was also not mentioned in the report.

4. Regularity in payment of statutory dues:

The Institute has been regular in the payment of all its statutory dues.


Sr. Audit Officer AMG-IIA

No.AMG-II-A/SAR/NIT/2023-24/223

Date: 08/11/2023



भारती यलेखापरीक्षा और लेखा विभाग,
INDIAN AUDIT AND ACCOUNTS DEPARTMENT
प्रधान महालेखाकार लेखापरीक्षा का कार्यालय, त्रिपुरा, अगरतला
OFFICE OF THE PRINCIPAL ACCOUNTANT GENERAL (AUDIT),
TRIPURA, AGARTALA
पिन/ PIN – 799006 फैक्स/ Fax – 0381-2350158
ईमेल/ email: agautripura@cag.gov.in

To
The Registrar,
National Institute of Technology, Agartala,
Jirania, West Tripura,
Pin – 799046.

Subject: Management Letter on the annual accounts of the NIT, Agartala, for the year ended March 2023.

Sir,

Certification audit on the annual accounts of NIT, Agartala for the year ended 31 March 2023 was taken up by this office under Section 19(2) of the Comptroller and Auditor General's (Duties, Powers, and Conditions of Service) Act, 1971. A Separate Audit Report (SAR) incorporating final comments of C&AG is issued along with this letter. Apart from the audit comments issued in SAR, audit has noticed 15 points which require management's action to ensure compliance to the instructions of Ministry of Education with respect to preparation of annual accounts.

Yours faithfully,

Enclosed: As stated.

P. V. 
8.11.23
Deputy Accountant General/AMG-II

ANNEXURE TO THE MANAGEMENT LETTER

1. The Institute during its formation in 2006 has taken over net assets worth ₹ 16.08 crore from erstwhile Tripura Engineering College. However, the Institute is yet to incorporate these assets and liabilities into its accounts even though it is in possession of the same.
2. (i) A balance of ₹ 4.49 lakh held with Canara Bank (Non-Plan Account No. – XXXX0876) is being carried in the books of the Institute for more than 10 years. The Institute has also been losing interest on the amount as it is kept in a non-interest-bearing account.
(ii) The Institute has another account under NIT Transit House Fund with State Bank of India (A/c No. – XXXX6195) which has also become inoperative as a result of no transactions being carried out.

As such, the need for carrying on with the dormant/ inoperative accounts may be reviewed by the Management.

3. (i) An amount of ₹ 43.10 crore was not shown under the head “Addition during the year” and was wrongly showed as “Income from Investments made of the Funds” under Corpus Fund.
(ii) An amount of ₹ 16.76 crore was wrongly shown as “Income from Investments made of the Funds” instead of showing under the head “Addition during the year” under Retirement Benefit Fund.
(iii) An amount of ₹ 6.83 lakh was wrongly shown as “Income from Investments made of the Funds” instead of showing ₹ 6.25 lakh under the head “Addition during the year” and ₹ 0.58 lakh “Interest on Savings account” under Infrastructure Development Fund.
4. Payment of GPF contribution amount of ₹ 0.17 crore made to Sri Niranjana Ghosh (March 2023), was neither shown as “Addition during the year” nor as “Revenue Expenditure” under Retirement Benefit Fund.
5. Expenditure amounting to ₹ 0.06 crore pertaining to the year 2021-22 was wrongly booked under “Administrative and General expenses” (Schedule – 17) rather than under “Prior period expenses” (Schedule – 22).
6. The income of Educational Institutions is exempt from Income Tax under the provisions of Section 10 (23 C) of the Income Tax Act, 1961. During 2022-23, the bankers of the National Institute of Technology, Agartala (NITA) had deducted a sum aggregating to ₹ 67.62 lakh on account of “Tax Deducted at Source (TDS)” on the interest income earned by NITA on the Fixed Deposits (FD) maintained with the said banks (i.e. State Bank of India and Tripura Gramin Bank). Furthermore, other agencies had deducted a sum aggregating to ₹ 0.86 lakh as TDS on the payments made to NITA. NITA secured an Income Exemption Certificate from the Income Tax Department under the provisions of 10 (23C) of the Income Tax Act, 1961 for the FYs 2021-22 to 2023-24. However, despite having the exemption certificate, it did not ensure the effective implementation of the same.

7. As per Format of the Ministry, where an Institute has a separate Corpus Fund as an Earmarked Fund, the heading in the Balance Sheet and in the Schedule concerned should be changed as "Capital Fund" to avoid confusion. The Institute, however, retained the heading on the face of Balance Sheet as "Corpus/ Capital Fund" despite having a separate "Corpus Fund" under Designated/ Earmarked Fund (Schedule – 2).
8. In Schedule – 4 (Fixed Assets), the second column under the head "Depreciation" mentions "On additions during the year" which is incorrect as the column provides details of depreciation provided during the year. The column head should read "Depreciation for the year" as per the approved Format.
9. As per the approved Format, Fixed Assets created out of Plan funds and Non-plan funds are to be exhibited distinctly. The additions during the year from Plan, Non-plan and other funds and the depreciation on those additions respectively are to be exhibited distinctly in Sub-schedules A, B, C and D to the main schedule of Fixed Assets (Schedule-4). However, the same was not followed properly by the Institute. The words "Non-plan Fund" is mentioned under the head "Intangible Assets", but no such segmentation is provided under the head "Tangible Assets". Further the Sub-schedules as mentioned before have also not been provided in the Accounts.
10. In terms of instructions and accounting principles, the amount of caution money refundable to students during 12 months from the balance sheet date should be shown in the following manner:
 - From current students
 - From ex-students

But it was noticed from the Schedule-3 of the Annual Accounts that caution money was shown under two separate heads, viz. "Deposits from students" (which represents Library caution money) and "Hostel caution money" instead of showing bifurcation of caution money refundable to students in the aforesaid manner, thus being in contravention to the prescribed format.

11. The Institute has shown an amount of ₹ 1.93 crore as "All other Fees" under Academic Collection which should be bifurcated, as per the MHRD format requirement.
12. (i) The Transit House Fund (SBI A/c No. – XXXX6195) held with **Kunjavan Branch** has been wrongly shown in the accounts under the Current Assets (Schedule – 7) as held with **NITA Branch**.
 (ii) The Non-Plan Fund (Canara Bank A/c No. – XXXX0876) is a **Current Account** but has been wrongly categorized as Savings Accounts under the Current Assets (Schedule – 7).

Balance Sheet - Application of Funds - Investment from Earmarked / Endowment Funds (Schedule – 5) – ₹ 168.01 crore

13. The above includes "Mutual Fund with SBI, NITA Branch – NITA Corpus Fund" amounting to ₹5 crore. Scrutiny of records revealed that an amount of ₹ 5 crore was invested in SBI Savings Fund during November 2020. However, the amount was initially switched out on 22 March 2021 to SBI Banking & PSU Fund and again on

12 January 2023 to SBI Magnum Income Fund. As switch-outs from a particular Mutual Fund (MF) scheme are treated as redemption and switch-ins are treated as new investments, the face value (investment amount) changes each time switch-outs are done from any scheme. As such, the investment amount (cost price) of the Mutual Fund as on 31 March 2023 stands at ₹ 5.39 crore while the income received from the investment (capital gain) is ₹ 0.39 crore. The value of the MF as on 31 March 2023 stands at ₹ 5.45 crore thereby having an accrued income of ₹ 0.06 crore. The Institute has accounted for an accrued income of ₹ 0.25 crore on the MF on an arbitrary basis. Hence, "Mutual Fund with SBI, NITA Branch – NITA Corpus Fund" is understated by ₹ 0.39 crore, "Interest received on Investments" is understated by ₹ 0.39 crore while "Accrued Interest on Investment" is overstated by ₹ 0.19 crore.

Application of Funds- Investment from Earmarked/ Endowment Funds (Schedule – 5) – ₹ 168.01 crore - Fixed Deposits with scheduled banks – ₹ 163.01 crore

14. The above is overstated by ₹ 5.36 lakh due to wrong accounting of face value of one Fixed Deposit (FD) held with State Bank of India, NITA Branch under "Retirement Benefit Fund" (FD No. 30359168928). The face value of the FD as on 31 March 2023 stands at ₹ 28.98 lakh while the Institute entered the face value as ₹ 34.34 lakh, which is the value of the FD as on 02 April 2023 (FY 2023-24) on renewal. The Institute has accounted the entire interest of ₹ 3.91 lakh as "Interest received" (Interest received ₹ 5.36 lakh *minus* opening accrued interest of one year ₹ 1.45 lakh) while an additional "Accrued interest" of ₹ 1.72 lakh has also been accounted for. However, the Institute should have accounted for an "Accrued Interest" of ₹ 1.79 lakh for the FY 2022-23 while there was no interest received as the FD did not mature during the year. As such, the "Fixed Deposits with scheduled banks" is overstated by ₹ 5.36 lakh, "Interest received on FD" is overstated by ₹ 3.91 lakh (after adjusting for opening accrued interest of ₹ 1.45 lakh) while "Accrued interest on FD" is understated by ₹ 0.07 lakh.

Sources of Funds- Current Liabilities and Provision (Schedule -3) – ₹. 13.54 crore

15. The above is understated by ₹ 17.62 lakh due to non-provision of expenditures pertaining to the financial year 2022-23 which were paid during 2023-24. This also resulted in overstatement of "Excess of Income over Expenditure" for the current year by the same amount.


Sr. Audit Officer/AMG-II-A



NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA
Internal Audit Report for the period from 01.04.2022 to 31.03.2023

With reference to the letter No. NITA.4 (10-Accounts)/SAR/2022-23/655 dated 13th June 2023, we have conducted the Internal Audit of NIT Agartala for the period from 01.04.2022 to 31.03.2023 and our observations in this respect are as follows:

1. **GRANT-IN-AID:**

- Grant allocated under PFMS from Ministry of Education, New Delhi through TSA system, during the financial year 2022-23 as follows:

For Object Head - 31:

Sl. No	Sanction Memo	Date of sanction	Amount in lakhs
1	F.36-4/2022-TS-III	25.04.2022	375.00
2	F.36-4/2022-TS-III	06.05.2022	375.00
3	F.36-4/2022-TS-III	14.06.2022	375.00
4	F.36-4/2022-TS-III	19.07.2022	313.00
5	F.36-4/2022-TS-III	16.08.2022	313.00
6	F.36-4/2022-TS-III	06.09.2022	313.00
7	F.36-4/2022-TS-III	26.10.2022	334.00
8	F.36-4/2022-TS-III	03.11.2022	334.00
9	F.36-4/2022-TS-III	12.12.2022	332.00
10	F.36-4/2022-TS-III	27.01.2023	340.00
11	F.36-4/2022-TS-III	07.02.2023	340.00
12	F.36-4/2022-TS-III	03.03.2023	340.00
		Total	4084.00

For Object Head - 36:

Sl. No	Sanction Memo	Date of sanction	Amount in lakhs
1	F.36-4/2022-TS-III	25.04.2022	334.00
2	F.36-4/2022-TS-III	06.05.2022	334.00
3	F.36-4/2022-TS-III	14.06.2022	332.00
4	F.36-4/2022-TS-III	19.07.2022	203.00
5	F.36-4/2022-TS-III	16.08.2022	203.00
6	F.36-4/2022-TS-III	06.09.2022	203.00
7	F.36-4/2022-TS-III	26.10.2022	401.00
8	F.36-4/2022-TS-III	03.11.2022	401.00





SA MAJUMDAR & ASSOCIATES
Chartered Accountants

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Krishnanagar, Agartala
West Tripura- 799001
syamalendumajumdar@gmail.com
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9	F.36-4/2022-TS-III	12.12.2022	400.00
10	F.36-4/2022-TS-III	27.01.2023	1000.00
11	F.36-4/2022-TS-III	07.02.2023	1000.00
12	F.36-4/2022-TS-III	03.03.2023	1000.00
		Total	5811.00

For Object Head - 35:

Sl. No	Sanction Memo	Date of sanction	Amount in lakhs
1	F.36-4/2022-TS-III	06.05.2022	462.00
2	F.36-4/2022-TS-III	03.11.2022	426.00
3	F.36-4/2022-TS-III	27.01.2023	1000.00
		Total	1888.00

- The status of Grant-in-aid during the financial year 2022-23 is as follows:

(Rupees in lakhs)

Object Head	Unspent balance as on 01.04.2022	Grant-in-aid	Total Fund	Utilized	Reversed to GoI	Unspent balance as on 31.03.2023
OH-31	-25.10	4084.00	4058.90	3927.90	131.00	---
OH-36	-440.03	5811.00	5370.97	5370.84	0.13	---
OH-35	309.60	1888.00	2197.60	1884.53	3.47	309.60
Total	-155.53	11783.00	11627.47	11183.27	134.60	309.60





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2. CASH BOOK:

OBSERVATIONS:

- Cash Books have been properly maintained and closed on daily basis.
- We made test check of the Cash Book, Bank vouchers related to the Month of April2022, May2022, July2022, November2022, January2023, February2023 and March2023 and found to be in order.
- Bank statements have been obtained from SBI, NIT, Agartala Branch on monthly basis and monthly balance is confirmed through reconciliation. Closing Bank Balance as per cash book as on 31.03.2023 are as follows:

Sl. No	Name of Bank, Branch	A/c No	Balance as on 31.03.2023 (Rs)
1	SBI, NIT Agartala Br	30358199684	10,05,15,566/-
2	Canara Bank, NIT Agartala Br	4121101001663	13,20,482/-
3	SBI, NIT Agartala Br	30369892838	3,98,37,461/-
4	Canara Bank, NIT Agartala Br	876	4,48,955/-
5	Canara Bank, NIT Agartala Br	412113200005	11,68,69,932/-

- NIT Agartala maintained separate bank accounts for projects. The details are as follows:

Sl. No	Name of Project	A/c No	Balance as on 31.03.2023 (Rs)
1	NPS Tier I	30471674447	65,29,561/-
2	Project Fund	30533908751	1,14,93,668/-
3	Retirement Benefit Fund	30693303036	30,22,20,169/-
4	Student Welfare Fund	30534089717	28,66,712/-
5	NITA Corpus Fund	30534091012	44,62,04,292/-
6	EMD & Security Fund	30936141729	1,66,31,159/-
7	Sponsored Project Fund	30773081908	96,95,036/-
8	Staff Welfare Fund	30534092027	3,65,814/-
9	Deptt. Promotional Fund	30534090278	66,08,354/-
10	Staff Benefit Trust Fund	31509918149	4,19,314/-
11	Guest House Fund	31664487420	1,16,48,782/-
12	NIT Transit House Fund	31092166195	3,61,215/-
13	Infra. Development Fund	8026010030064	41,50,330/-





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Chartered Accountants

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COMMENTS:

- Maintenance of Cash Books and other related books and records is satisfactory

3. ADVANCES:

OBSERVATIONS:

- NIT Agartala has maintained Advance Register separately.
- No temporary advance to employee lying unadjusted as on 31.03.2023.
- Unadjusted advances given to third parties as on 31.03.2023 under Non-Recurring items are as follows:

Sl. No	Name of Party/Agency	Amount of Advance as on 31.03.2023 (Rs)	Remarks
1	BSNL-Agartala	1,72,764/-	
2	THB-Agartala	76,40,420/-	
3	DWS Deptt	3,59,00,000/-	
4	CPWD-Agartala	34,00,58,114/-	
	Total	38,37,71,298/-	

4. FIXED ASSETS:

- Computerized Fixed Assets Register has been maintained by NIT Agartala.
- Depreciation has been charged in Straight Line Method as per rates specified in the guidelines and format of Ministry of Education, Government of India.
- No insurance coverage for any Fixed Assets is taken.

5. FIXED DEPOSITS/MUTUAL FUND:

- Fixed Deposit/Mutual Fund Register has been maintained by NIT Agartala.
- Fixed Deposit/Mutual Fund was made with State bank of India, Canara Bank and Tripura Gramin Bank.

6. STATUTORY DUES REGISTER:

- Statutory Dues Register has been maintained by NIT Agartala.
- No due is outstanding during the financial year 2022-23.





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Chartered Accountants

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7. Overall Observations:- Nil

We thankfully acknowledge the Co-operation extended by the Officers/officials of NIT Agartala in conducting the Internal Audit.

For,

SA MAJUMDAR & ASSOCIATES
(Chartered Accountants)

[Signature]
(CA. SA Majumdar)
Chartered Accountant

Date:

Place: Agartala

UDIN- 230 50476 BAWADY 5504





M/s S. Basu Thakur & Co
Chartered Accountants

Office: Madhyapara,
Agartala
Tripura (West)- 799001
dpmajee@gmail.com
Ph: 9862218061

ACCOUNTANT'S REPORT ON COMPILATION OF UNAUDITED FINANCIAL STATEMENTS

To the Management of – NATIONAL INSTITUTE OF TECHNOLOGY (NIT) AGARTALA

On the basis of the accounting records and other information and explanation provided to us, by the management, we have compiled the unaudited balance sheet of "**NATIONAL INSTITUTE OF TECHNOLOGY (NIT) AGARTALA**" as at 31st March, 2023 and the related profit and loss for the period then ended.

The management of the **NATIONAL INSTITUTE OF TECHNOLOGY (NIT) AGARTALA** is responsible for –

- (a) Completeness and accuracy of the underlying data and complete disclosure of all material and relevant information to the accountant.
- (b) Maintaining adequate accounting and other records and internal controls and selecting and applying appropriate accounting policies.
- (c) Preparation and presentations of financial statements in accordance with the applicable laws and regulations, if any.
- (d) Establishing controls to safeguard the assets of the entity and preventing and detecting frauds or other irregularities.
- (e) Establishing controls for ensuring that the activities of the entity are carried out in accordance with the applicable laws and regulations and preventing and detecting any non-compliance.

The compilation engagement was carried out by us in accordance with the Standard on Related Services (SRS) 4410, "Engagements to Compile Financial Information", issued by the Institute of Chartered Accountants of India.

The balance sheet and the profit and loss account are in agreement with the books of account. We have not audited or reviewed these financial statements and accordingly express no opinion thereon.

Place: Agartala

Date: 16/06/2023,



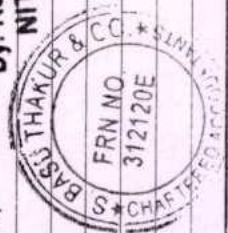
For, S. BASU THAKUR & CO
Chartered Accountants

(CA, DP Majee)
Partner

UDIN-23063788B6VCV09438

FORM OF FINANCIAL STATEMENTS (NON- PROFIT ORGANISATIONS)
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA
BALANCE SHEET AS AT 31.03.2023

I. SOURCES OF FUNDS		Amount in ₹	
CORPUS / CAPITAL FUND AND LIABILITIES	Schedule	Current year 2022-2023	Previous year 2021-2022
CORPUS / CAPITAL FUND			
DESIGNATED / EARMARKED/ ENDOWMENT FUNDS	1	7514395990	7509938459
CURRENT LIABILITIES & PROVISION	2	2463607549	1836195817
	3	135399912	83382438
TOTAL ₹		10113403451	9429516714
II. APPLICATION OF FUNDS			
FIXED ASSETS			
i) Tangible Assets	4	6950007092	7117155592
ii) Intangible Assets	1	11175515	11175515
iii) Capital Works-in-Progress	5	0	0
INVESTMENTS - FROM EARMARKED / ENDOWMENT FUNDS			
i) Long Terms	6	1680091716	1625494580
ii) Short Terms	7	0	0
INVESTMENTS OTHERS	8	1071237927	419822022
CURRENT ASSETS		400891200	255869004
LOANS, ADVANCES & DEPOSITS			
TOTAL ₹		10113403451	9429516714
SIGNIFICANT ACCOUNTING POLICIES			
CONTINGENT LIABILITIES AND NOTES ON ACCOUNTS			
	23		
	24		
<p><i>Kamlesh</i> Asstt. Registrar (Finance) <i>D. R (F & A)</i> (KAMLESH TILWANI) (Tanmoy Ghosal) For Assistant Registrar (Fin.) Dy. Registrar (F&A) M/s S. Basu Thakur & Co NIT Agartala (Chartered Accountants)</p>		<p><i>Badol</i> Registrar Col. (Dr.) Ashish Badola Registrar, NIT Agartala</p>	<p><i>Sarat Kumar Patra</i> Director Prof. Sarat Kumar Patra Director, NIT Agartala</p>

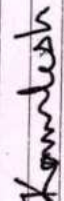

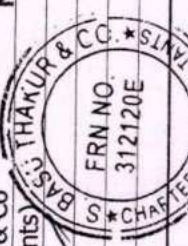




(CA D. P. Majee)
Partner

FORM OF FINANCIAL STATEMENTS (NON- PROFIT ORGANISATIONS)

Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA

INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD / YEAR ENDED ON 31.03.2023

Particulars	Schedule	Current year 2022-2023	Amount in ₹ Previous year 2021-2022
INCOME			
Academic Receipts	9	309245212	276420667
Grants & Subsidies	10	1118326357	1076667121
Income from Investments	11	(2,69,817)	5616009
Interest Earned	12	5119770	6432311
Other Income	13	12857631	2594878
Prior Period Income	14	0	5544475
TOTAL (A)		1445279153	1373275461
EXPENDITURE			
Staff Payment & Benefits (Establishment Expenses)	15	491572007	438995787
Academic Expenses	16	73383681	86997350
Administrative & General Expenses	17	220299887	119137488
Transportation Expenses	18	1491880	883724
Repairs & Maintenance	19	25220269	13403155
Finance Cost	20	35823	30368
Other Expenses	21	21000000	25000000
Prior Period Expenses	22	0	0
Depreciation	4	210721216	214400063
Contribution to Retirement Benefit Fund		167096859	115737653
Corpus Fund		0	200000000
TOTAL (B)		1210821622	1214585588
Balance being Excess/Deficit of Income over Expenditure (A - B)		234457531	158689873
transferred to Capital Fund			
Significant Accounting policies	23		
Contingent liabilities and notes on Accounts	24		
<div> <div>  Asstt. Registrar (Finance) (KAMLESH TILWANI) For Assistant Registrar (Fin.) M/s S. Bhatnagar & Co (Chartered Accountants) </div> <div>  D. R. (F & A) (Tanmoy Ghosal) Dy. Registrar (F&A) NIT Agartala </div> <div>  </div> </div>			
<div> <div>  Registrar </div> <div>  Director </div> </div>			
<div> <div>Col. (Dr.) Ashish Gadola Registrar, NIT Agartala</div> <div>Prof. Sarat Kumar Patra Director, NIT Agartala.</div> </div>			

FORM OF FINANCIAL STATEMENTS (NON- PROFIT ORGANISATIONS)					
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA					
RECEIPTS AND PAYMENTS FOR THE PERIOD/ YEAR ENDED ON 31.03.2023					
RECEIPTS	(Amount in ₹) Current Year 2022-2023	(Amount in ₹) Previous Year 2021-2022	PAYMENTS	(Amount in ₹) Current Year 2022-2023	(Amount in ₹) Previous Year 2021-2022
I) Opening Balance:			Non-Plan Expenditure:		
In Savings Plus A/c (Non-Plan)			I) EXPENSES:		
Bank (SBI, NIT Agt Br)	448895	20944032	a) Staff Payment & Benefit	489710423	479070591
Bank (Canara Bank Agt Br)	70004831	448895	b) Administrative & Gen. Expenses	225008198	121989357
Cash	70453726	0	c) Academic Expenses	80653306	88819386
			d) Transportation Expenses	1524845	829459
Opening Balance: (Plan)			e) Repair & Maintenance	22480857	12403155
Bank- SBI, NITA Br.	1282868	1248623	f) Finance Cost	35823	819413452
Bank (Canara Bank Agt Br)	44671065	9833858			703142316
Cash	64286410	74172	II) Expenditure on Fixed Assets & Capital Working progress :-		
Canara Bank-Hostel	110240343	23535722	Fixed Assets:		
			Plan	43233891	41191080
II) GRANTS RECEIPTS:			Non-Plan	38450	578331
From MHRD (Govt. Of India)					41769411
a) Object Head-35	188800000	81000000	III) Other Payments		
b) Object Head-31	408400000	385309000	a) Stipend/Scholarship		
c) Object Head-36	581100000	518846000	Otherstate-Stipend		1757700
			Moutoshi Kar Memorial		
III) Interest Received			IV) Advances		
a) Plan Fund	355795	4753979	a) Plan	145452995	230505119
b) Non-Plan Fund	2542192	0	b) Non-Plan	0	230505119
c) Hostel Fund	2221783	1678332	Corpus Fund		
IV) Any other received			Exp. for CSAB & CCMT	230000000	200000000
a) Academic Collection	186870530	257970072	Retirement Benefit Fund	1772430	981455
b) Miscellaneous Receipts	12857631	2594878	Library Caution Money	167096859	115737653
c) Other Income-Hostel	372	0	Grant to KV, NIT Agartala	440000	2985000
d) CSAB & CCMT Fees	1177400	206850	LTC Advance to Faculty & Staff	21000000	25000000
			Temporary Advance	1853200	97000
Fund from Social Justice, New Delhi			Grant Reserve back to FMFS	13460643	15607879
Advance Received			V) Closing Balance		
Salary & Other Statutory dues fro PFMS	6884234		a) In Savings Plus A/c (Non-Plan)		
Otherstate-Stipend Received			Bank-Canara Bank, AGT Br	448955	448895
			Bank-SBI, NITA Br	39837461	70004831
Fixed Deposit matured			Cash		0
Hostel Fee	130828610		b) In Savings Plus A/c (Plan)		
Hostel Fee Structure	21700		Bank-Canara Bank, Agt Br	1320482	1282868
			SBI, NITA Br.	100515566	44671065
			Cash		
			Canara Bank-Hostel	116869932	64286410
					110240343
TOTAL ₹	1702754316	1518277602	TOTAL ₹	1702754316	1518277602

(KAMLESH TILWANI)
Asstt. Registrar (Finance)

Col. (Dr.) Ashish Badola


Prof. Sarat Kumar Patra
Director


FORM OF FINANCIAL STATEMENTS (NON - PROFIT ORGANISATIONS)


Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA

SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2023

	Current Year 2023-2023	Previous Year 2021-2022
SCHEDULE 1-CAPITAL FUND :		
Balance as at the beginning of the year	7509938459	7296212864
Add Contributions towards Corpus/Capital Fund	0	0
Add: Grants from UGC, Govt. of India and State Govt. to the extent utilized for Capital Expenditure	0	0
Add: Assets Purchased out of Earmarked Funds	0	0
Add: Assets Donation/Gift Received	0	0
Add: Other Additions	0	31500000
Add: Other Additions- Hostel Fund	0	23535722
Add (Deduct) balance of Net Income/ Expenditure) transferred from the Income and Expenditure Account.	234457531	158689873
Less: Fund Transfer to Corpus fund (Schedule-2)	230000000	0
BALANCE AS AT THE YEAR - END	7514395990	7509938459


(KAMLESH TILWANI)
 Assistant Registrar (Fin.)
 NIT Agartala.


Col. (Dr.) Ashish Badola
 Registrar, NIT Agartala


Prof. Sarat Kumar Patra
 Director, NIT Agartala.



FORM OF FINANCIAL STATEMENTS (NON- PROFIT ORGANISATIONS)

Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA

SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2023

(Amount - ₹)

TOTAL

FUND- WISE BRAKE UP

SCHEDULE 2- DESIGNATED / EARMARKED FUNDS	Corpus Fund	Retirement Benefit Fund	Staff Development Fund	Infra. Dev. Fund	Endowment Fund	General Fund- Subsidiary (Annexure "A")	Current Year	Previous Year
A.								
a) Opening Balance	967165533	657423222	0	15837378	0	195769684	1836195817	1665885631
b) Additions during year						0	0	0
c) Income from Investments made of the Funds	431044317	167631884		683355		40309147	639668703	160421671
d) Accrued Interest on Investments/advances	35467334	21305605		662211		5665589	63100739	62302887
e) Interest on Savings A/c	5726758	4126072		74010		1467965	11394805	9034549
f) Others (Specify nature)						0	0	
TOTAL (A)	1439403942	850486783	0	17256954	0	243212385	2550360064	1897644738
B.								
Utilisation/Expenditure towards objectives of funds								
i) Capital Expenditure	0	0		0		0	0	0
ii) Revenue Expenditure	0	26873106		149485		59729924	86752515	61448921
TOTAL (B)	0	26873106	0	149485	0	59729924	86752515	61448921
Closing Balance at the end of the year (A-B)	1439403942	823613677	0	17107469	0	183482461	2463607549	1836195817
Represented by								
Cash and Bank balance	446204292	302220169		4150330		59670740	812245531	239127953
Investments- FDs	980866495	520154445		12534071		122431477	1635986488	1582535623
Interest accrued but not due	12333155	1239063		423068		1380244	153755530	14532241
Total	1439403942	823613677	0	17107469	0	183482461	2463607549	1836195817

Kamlesh

(KAMLESH TILWANI)
Assistant Registrar (Fin.)
NIT Agartala.

(Tanmoy Ghosai)
By Registrar (F&A)
NIT Agartala

Col. (Dr.) Ashish Badola
Registrar, NIT Agartala

Prof. Sarat Kumar Patra
Director, NIT Agartala.



General Fund-Subsidiary										TOTAL	
SCHEDULE 2- DESIGNATED / EARMARKED FUNDS	Project Fund	EMD & Security	Student Welfare Fund	Staff Welfare Fund	Sponsored Project Fund	Deptt. Promotional Fund	Guest House Fund	NIT Transit House Fund	Current Year	Previous Year	
A.											
a) Opening Balance	10056425	39752273	2571691	169480	127145052	5670038	10053100	351625	195769684	195204796	
b) Additions during year									0		
c) Income from Investments made of the Funds	6749521	6923167	701011	218171	23481606	772805	1462866		40309147	34026341	
d) Accrued Interest on Investments/advances		1346610			4318979				5665589	7509246	
e) Interest on Savings A/c	263976	407283	73618	7163	249107	165511	291717	9590	1467965	1470111	
f) Others (Specify nature)									0		
TOTAL (A)	17069922	48429333	3346320	394814	155194744	6608354	11807683	361215	243212385	238210494	
B.											
Utilisation/Expenditure towards objectives of funds											
i) Capital Expenditure	0								0		
ii) Revenue Expenditure	5576254	4547004	479608	29000	48939157	0	158901		59729924	42440810	
TOTAL (B)	5576254	4547004	479608	29000	48939157	0	158901	0	59729924	42440810	
Closing Balance at the end of the year (A-B)	11493668	43882329	2866712	365814	106255587	6608354	11648782	361215	183482461	195769684	
Represented by											
Cash and Bank balance	11493668	16631159	2866712	365814	9695036	6608354	11648782	361215	59670740		
Investments- FDs	0	27054750	0	0	95376727	0			122431477		
Interest accrued but not due		196420			1183824				1380244		
Total	11493668	43882329	2866712	365814	106255587	6608354	11648782	361215	183482461	0	
<div> <div> <div>Kamlesh</div> <div>(KAMLESH TILWANI)</div> <div>Assistant Registrar (Fin.)</div> <div>NIT Agartala.</div> </div> <div> <div>Tanmoy Ghosal</div> <div>Dy Registrar (F&A)</div> <div>NIT Agartala</div> </div> <div> <div>Ashish Badola</div> <div>Registrar, NIT Agartala</div> </div> <div> <div>Prof. Sarat Kumar Patra</div> <div>Director, NIT Agartala.</div> </div> </div> <div></div>											



FORM OF FINANCIAL STATEMENTS (NON- PROFIT ORGANISATIONS)

Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA

SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2023

SCHEDULE 3- CURRENT LIABILITIES AND PROVISIONS		(Amount - ₹)	
A) CURRENT LIABILITIES		Current Year 2022-2023	Previous Year 2021-2022
1) Deposits from Staff		0	
2. Deposits from Students (Annexure - "A")		36764199	31518199
3. Hostel Caution Money (Annexure- "F")		5935000	3145000
4) Sundry Creditors			
a) For Goods & Services		0	0
b) For Others		0	0
5) Deposits- Others (including EMD, security Deposit)		0	0
6) Statutory Liabilities (GPF, TDS, WC Tax, CPF, GIS, NPS)			
a) Overdue		0	0
b) Others		0	0
7) Other Current Liabilities:			
a) Salaries & Wages		0	0
b) Receipts against Sponsored Projects		0	0
c) Receipts against sponsored fellowships & scholarship		0	0
d) Un-utilised Grants			
i) Object Head-31 (Annexure- "B")		-	(25,10,000)
ii) Object Head-36 (Annexure- "C")		-	(4,40,03,000)
iii) Object Head-35 (Annexure- "D")		30959930	30959930
e) Grants in Advance		0	0
f) Other Funds- Funds from Social Justice, New Delhi		0	0
g) Other Liabilities:			
i) Fuel Charges		0	32965
ii) Gardening Expenses		603682	1190670
iii) Electricity & Power		1982651	897320
iv) Sweeping & Cleaning		0	1305891
v) Security Services		0	4082319
vi) Printing & Stationery		181556	0
vii) Scholarship-Inst		0	7829635
viii) CSAB, CCMT & Other Fees		3158184	3753214
ix) Stipend payable to Students- Annexure "E"		0	0
x) Repair & Maints-Computer		1111830	0
xi) Salary & other Statutory Dues (PFMS)		52064529	45180295
xii) Electrical Installation		300375	0
xiii) Honarium to Expert		560010	0
xiv) CPDA		150384	0

(KAMLESH TILWANI)
Assistant Registrar (Fin.)

(Tanmoy Ghosal)
Col. (Dr.) Ashish Badola

Prof. Sarat Kumar Patra





xv) Repair & Maints- Building

1627582

0

TOTAL (3A)

135399912

83382438

B. PROVISIONS

1) For taxation

2) Gratuity

3) Superannuation / pension

4) Accumulated Leave Encashment

5) Trade Warranties / Claims

6) Others (Specify)

TOTAL (3B)

TOTAL (A + B)

135399912

83382438

Kamlesh

(KAMLESH TILWANI)
Assistant Registrar (Fin.)
NIT Agartala.

(Tanmoy Ghosal)
Dy. Registrar (F&A)
NIT Agartala

Badola
Col. (Dr.) Ashish Badola
Registrar, NIT Agartala

Prof. Sarat Kumar Patra
Director, NIT Agartala.

Annexure "A" of Schedule- 3

OTHER CURRENT LIABILITIES- LIBRARY CAUTION MONEY

PARTICULARS	Current Year 2022-2023	(Amount - ₹) Previous Year 2021-2022
Library Caution Money		
A.		
a) Opening Balance	31518199	28113199
b) Received during the year	5686000	6390000
c) Others (Specify)		
Total (A)	37204199	34503199
B.		
Utilisation/Expenditure towards objectives of funds		
i) Capital Expenditure	0	0
ii) Revenue Expenditure	440000	2985000
TOTAL (B)	440000	2985000
Un-Utilised	36764199	31518199

Annexure "B" of Schedule- 3

OTHER CURRENT LIABILITIES- UNUTILISED GRANTS - OH-31

PARTICULARS	Current Year 2022-2023	(Amount - ₹) Previous Year 2021-2022
GRANTS FROM MHRD, GOVT. OF INDIA		
A.		
a) Opening Balance	(25,10,000)	9301000
b) Grants received during the year	408400000	385309000
c) Others (Specify)		
Transfer from Corpus/Capital Fund	0	0
Total (A)	40,58,90,000	394610000
B.		
Utilisation/Expenditure towards objectives of funds		
i) Capital Expenditure	0	0
ii) Revenue Expenditure	392789936	381618121
iii) Advances	0	0
iv) Reverse Back to TSA (Through PFMS)	13100064	15501879
TOTAL (B)	405890000	397120000
Un-Utilised Grants	Col. (Dr.) Ashish Badola	(25,10,000)

(KAMLESH TILWANI)
Assistant Registrar (Fin.)

(Tanmoy Ghosal)
Dy. Registrar (F&A)

Col. (Dr.) Ashish Badola
Registrar, NIT Agartala

Prof. Sarat Kumar Patra



Annexure "C" of Schedule- 3

OTHER CURRENT LIABILITIES- UNUTILISED GRANTS - OH-36

PARTICULARS	Current Year 2022-2023	(Amount - ₹) Previous Year 2021-2022
GRANTS FROM MHRD, GOVT. OF INDIA		
A.		
a) Opening Balance	(4,40,03,000)	(11,38,72,000)
b) Grants received during the year	581100000	518846000
c) Others (Specify)		0
Transfer from Corpus/Capital Fund		404974000
Total (A)	53,70,97,000	
B.		
Utilisation/Expenditure towards objectives of funds		
i) Capital Expenditure	0	0
ii) Revenue Expenditure	537083585	448874000
iii) Advances	0	0
iv) Reverse Back to TSA (Through PFMS)	13415	103000
TOTAL (B)	537097000	448977000
Un-Utilised Grants	-	(4,40,03,000)

Annexure "D" of Schedule- 3

OTHER CURRENT LIABILITIES- UNUTILISED GRANTS (PLAN GRANTS) - OH-35

PARTICULARS	Current Year 2022-2023	(Amount - ₹) Previous Year 2021-2022
GRANTS FROM MHRD, GOVT. OF INDIA		
A.		
a) Opening Balance	30959930	196134930
b) Grants received during the year	188800000	81000000
c) Others (Specify)		0
Transfer from Corpus/Capital Fund		277134930
Total (A)	219759930	
B.		
Utilisation/Expenditure towards objectives of funds		
i) Capital Expenditure	188452836	246175000
ii) Revenue Expenditure		0
iii) Advances	0	0
iv) Reverse Back to TSA (Through PFMS)	347164	
TOTAL (B)	188800000	246175000

Prof. Sarat Kumar Patra

(KAMLESH TILWANI) (Tanmoy Ghosal) Col. (Dr.) Ashish Badola
 Assistant Registrar (Fin.) Dy. Registrar (F&A) Registrar. NIT Agartala 30959930

[illegible]

OTHER CURRENT LIABILITIES- HOSTEL CAUTION MONEY		
PARTICULARS	Current Year 2022-2023	(Amount - ₹) Previous Year 2021-2022
Library Caution Money		
A.		
a) Opening Balance	3145000	0
b) Received during the year	2790000	3145000
c) Others (Specify)		
Total (A)	5935000	3145000
B.		
Utilisation/Expenditure towards objectives of funds		
i) Capital Expenditure	0	0
ii) Revenue Expenditure	0	0
TOTAL (B)	0	0
Un-Utilised	5935000	3145000

(KAMLESH TILWANI) (Tanmoy Ghosal)
Assistant Registrar (Fin.) Dy. Registrar (F&A)

Col. (Dr.) Ashish Badola
Registrar, NIT Agartala

Prof. Sarat Kumar Patra
Registrar, NIT Agartala

FORM OF FINANCIAL STATEMENTS (NON- PROFIT ORGANISATIONS)
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2023

SCHEDULE 4 FIXED ASSETS	Rate of Depn	Cost/ valuation As at beginning of the year	GROSS BLOCK		Cost/valuation at the year-end	As at the beginning of the year	DEPRECIATION		Total up to the year-end	(Amount - ₹)		Remarks
			Additions during the year	Deductio ns during the year			On Additions during the year	Arrear Depreciation		As at the Current year-end	As at the Previous year-end	
LAND												
Freehold		0								0		
Leasehold		0								0		
Building	2%	24896321			24896321	18531568	497926		19029494	5866827	6364753	
Ladies Toilet	2%	115284			115284	93380	2306		95686	19598	21904	
Furniture & Fittings	7.5%	193220295	347120		193567415	119837417	11669425		131506842	62060573	73382878	
Machinery & Equipments	5%	710228542	5258019		715486561	457513935	28775700		486289635	229196926	252714607	
Machinery & Equipments(Grass Cur	5%	40000			40000	39999	-		39999	1	1	
EPBX Machine	5%	409937			409937	409936	-		409936	1	1	
Library Books	10%	5667140			5667140	3654735	263507		3918242	1748898	2012405	
Machinery & Equipments(Air Condi	5%	4961678			4961678	4384994	119575		4504569	457109	576684	
Generator	5%	51000			51000	50999	-		50999	1	1	
COMPUTER & PERIPHERALS	20%	82992095	769575		83761670	80718997	1256956		81975953	1785717	2273098	
Plant & Machinery(Tractor)	10%	385000			385000	384999	-		384999	1	1	
Vehicle	10%	1686081			1686081	1686080	0		1686080	1	1	
ELECTRIC INSTALLATIONS	5%	75305313	588633		75893946	27955415	3794698		31750113	44143833	47349898	
Type II & III Quarters(Buildings)	2%	42596999	23565335		66162334	14051412	1323247		15374659	50787675	28545587	
Boundary Wall	2%	74719126	13005584		87724710	9381664	1754494		11136158	76588552	65337462	
Admn Building & Class Room	2%	19181948			19181948	12379762	383639		12763401	6418547	6802186	
Academic, Library Building	2%	139932447			139932447	62163724	2798649		64962373	74970074	77768723	
Networking(Equipments)	7.5%	63159605			63159605	50792763	4140892		54933655	8225950	12366842	
Sports Equipments	5.0%	1157180			1157180	300751	57859		358610	798570	856429	
Workshop	2.0%	23580479			23580479	3274830	467609		3742439	19838040	20305649	
Boys & Girls Hostel	2.0%	1214183366			1214183366	230694839	24283667		254978506	959204860	983488527	
Internal Road	2.0%	334059718			334059718	47863535	6681195		54544730	279514988	286196183	
33 KV Sub Station	5.0%	40800000			40800000	15300000	2040000		17340000	23460000	25500000	
Main Gate & Auxilary Gate	2.0%	9906684			9906684	1900281	198134		2098415	7808269	8006403	
Basket Ball	2.0%	1215736			1215736	228050	24315		252365	963371	987686	
Central Stores	2.0%	8614183			8614183	1378271	172284		1550555	7063628	7235912	
Housing & Guest House	2.0%	609580501			609580501	67053855	12191610		79245465	530335036	542526646	
School of Management	2.0%	397632958			397632958	43739625	7952659		51692284	345940674	353893333	
Admn. Block & Seminar Hall	2.0%	473117263			473117263	52042898	9462345		61505243	411612020	421074365	
Watch Tower & Security Barrack	2.0%	7276915			7276915	846818	145838		992656	6284259	6430097	
Auditorium Building	2.0%	23598101			23598101	2582405	471962		3054367	20543734	21015696	
Iron Removal Plant	7.5%	4805400			4805400	854588	360405		1214993	3590407	3950812	
500 KVA Substation	2.0%	5868452			5868452	645530	117369		762899	5105553	5222922	
Central School	2.0%	361054872			361054872	39716034	7221097		46937131	314117741	321338838	
Computer Centre	2.0%	372575151			372575151	40983267	7451503		48434770	324140381	331591884	
Workshop, Lab cum Canteen	2.0%	445425791			445425791	48940516	8908516		57849032	387576759	396485275	
Market Complex	2.0%	80109997			80109997	9613200	1602200		11215400	68894597	70496797	

(Tanjmay Ghosh)

(KAMLESH TILWANI)

Col. (Dr.) Ashish Baddla

Prpf. Sarat Kumar Patra



Particulars	Rate	Quantity	Value	Additions during the year	Deductions during the year	Cost/valuation at the year-end	ADJUSTMENT (TR. TO CAPITAL ASSETS)			NET BLOCK		
							As at the beginning of the year	On Additions during the year	On deductions during the year	Total up to the year-end	As at the Current year-end	As at the Previous year-end
Sports Complex	2.0%		644029061			644029061	77283486	12880581	90164067	553864994	566745575	
Central Library	2.0%		424408526			424408526	59417196	8488171	67905367	356503159	364991330	
Duplex Building	2.0%		113282817			113282817	13593937	2265656	15859593	97423224	99688880	
Central Plaza	2.0%		22800000			22800000	2736000	456000	3192000	19608000	20064000	
H4B Building	2.0%		276576301			276576301	33189156	5531526	38720682	237855619	243387145	
1500 Capacity Boys Hostel	2.0%		1458146534			1458146534	87044543	29162931	116207474	1341939060	1371101991	
FURNITURE & FIXTURES	7.5%		1832295			1832295	939707	112794	1052501	779794	892588	
COMPUTER & PERIPHERALS	20%		1891925	38450		1930375	1891924	7691	1899615	30760	1	
ELECTRIC INSTALLATIONS	5%		55991915			55991915	31986957	2757199	34744156	21247759	24004958	
EPBX Machine	5%		421438			421438	421437	-	421437	1	1	
Water Purifier	5.0%		126406			126406	125017	1388	126405	1	1389	
Fax Machine	5%		9000			9000	8999	-	8999	1	1	
INTERNET / V.SET	5%		123291			123291	98640	6165	104805	18486	24651	
Hostel building, quarters etc	2%		19500000			19500000	9995000	390000	10385000	9115000	9505000	
Sports Goods & Equipments	5.0%		1609509			1609509	1203256	43238	1246494	363015	406253	
Machinery & Equipments	5%		10190397			10190397	7569187	505883	8075070	2115327	2621210	
Office Equipments	7.5%		707432			707432	633427	30462	663889	43543	74005	
Musical Instruments	7.5%		165771			165771	141980	3038	145018	20753	23791	
Medical Equipments	5%		38749			38749	38748	-	38748	1	1	
Podium	7.5%		34000			34000	33999	0	33999	1	1	
Library Books	10%		17761577			17761577	16824515	321563	17146078	615499	937062	
Type IV Quarters(Buildings)	2%		34380269			34380269	12618527	687605	13306132	21074137	21761742	
Networking (Equipments)	7.5%		2242620			2242620	2018362	168197	2186559	56061	224258	
Auditorium Building	2%		14838699			14838699	6761184	296774	7057958	7780741	8077515	
Boundary Wall	2%		251005			251005	90362	5020	95382	155623	160643	
Workshop	2%		387633			387633	46518	7753	54271	333362	341115	
TOTAL (i)			8955858728	43572716	0	8999431444	1838703136	210721216	2049424352	6950007092	7117155592	
INTANGIBLE ASSETS												
NON-PLAN FUND												
Computer Software												
Books & Journals	40%		159233515			159233515	159233514	-	159233514	1	1	
Patents												
TOTAL (ii)			159233515	0	0	159233515	159233514	-	159233514	1	1	
CAPITAL WORK-IN-PROGRESS												
Const of Sewerage Treatment Plant (STP)			10447478			10447478	0		0	10447478	10447478	
Const of 200 capacity Girls Hostel			728037	0		728037				728037	728037	
TOTAL (iii)			11175515	0	0	11175515	0	0	0	11175515	11175515	
GRAND TOTAL			9126267758	43572716	0	9169840474	1997936650	210721216	2208657866	6961182608	7128331108	
To be given as to cost of assets on hire purchase basis included above)												

To be given as to cost of assets on hire purchase basis included above)

(KAMISH TILWANI)
(Tanmoy Ghosal)

Col. (Dr.) Ashish Badola

Prof Sarat Kumar Patra

50 ERN-NO.
* 62312120E
ID=62312120E

FORM OF FINANCIAL STATEMENTS (NON- PROFIT ORGANISATIONS)
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2023

SCHEDULE 5- INVESTMENTS FROM EARMARKED / ENDOWMENT FUNDS:	(Amount - ₹)	
	Current Year 2022-2023	Previous Year 2021-2022
1) In Central Govt securities	0	0
2) In State Govt securities		
3) Other approved Securities	0	0
4) Shares	0	0
5) Deventures & Bonds	0	0
6) Terms Deposit with Banks	0	0
i) Long Terms	0	
ii) Short Terms		
Fixed Deposit with SBI Agt Br.-General A/c	4952798	4479802
Fixed Deposit with Canara Bank, Agt. Br.-General A/c	39122428	38449153
Fixed Deposit with Canara/SBI Agt Br.-RBF Fund	520154445	498968560
Fixed Deposit with Canara Bank NITA Br-Inf. Dev Fund	12534071	11914702
Fixed Deposit with TGB NITA Br-SDP Fund	95376727	100060167
Fixed Deposit with SBI Agt Br.-Moutoshi Kar Memorial	30002	30002
Fixed Deposit with SBI Agt Br.-EMD & Security Deposit	27054750	25717840
Fixed Deposit with Canara/SBI NITA Br-NITA Corpus Fund	930866495	895874354
Mutual Fund with SBI, NITA Br- NITA Corpus Fund	500000000	500000000
7) Others (to be specified)	0	0
TOTAL:	1680091716	1625494580

SCHEDULE 6- INVESTMENTS - OTHERS	(Amount - ₹)	
	Current Year 2022-2023	Previous Year 2021-2022
1) In Govt securities		
2) In State Govt securities		
3) Other approved Securities		
4) Shares		
5) Deventures & Bonds		
6) Others (to be specified) Kamlesh		
TOTAL:	0	0

(KAMLESH TILWANI) (Tanmoy Ghosal)
 Assistant Registrar (Fin.) Dy. Registrar (F&A)
 Col. (Dr.) Ashish Badole Prof. Sarat Kumar Patra

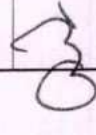


FORM OF FINANCIAL STATEMENTS (NON- PROFIT ORGANISATIONS)
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA

SCHEDULE 5A: DETAILS OF FIXED DEPOSIT ACCOUNTS

Sl. No.	Date of Deposit	Certificate /Account No	Amount (₹)	Maturity date	Maturity Value (₹)	Name of Bank
i) General Accounts						
1	30.05.2022	30268531331	4886708	30.05.2022	5140737	SBI Agt Br.
2	30.05.2022	30772128735	66060	30.05.2022	69494	SBI Agt Br.
3	15.03.2022	2348401000863/5	12417782	15.03.2024	13769546	Canara Bank, Agt Br
4	31.03.2023	3248401000647/5	7217843	31.03.2024	7770773	Canara Bank, Agt Br
5	31.03.2023	3248401000647/6	7365817	31.03.2024	7875737	Canara Bank, Agt Br
6	26.03.2022	3248401000648/1	12121016	26.03.2024	13440474	Canara Bank, Agt Br
TOTAL			44075226		48066761	
ii) Retirement Benefit Fund						
1	02.04.2023	30359168928	3434687	02.04.2026	4104974	SBI, NITA Br
2	19.08.2022	4121401000241/2	11848838	19.08.2023	12514090	Canara Bank, NIT Agt Br
3	19.08.2022	4121401000241/1	11064578	19.08.2023	11685797	Canara Bank, NIT Agt Br
4	06.02.2023	33642380099	4509129	06.02.2024	4797338	SBI, NITA Br.
5	06.02.2023	33642380191	2705475	06.02.2024	2878400	SBI, NITA Br.
6	06.02.2023	33642380351	2705475	06.02.2024	2878400	SBI, NITA Br.
7	06.02.2023	33642380500	2705475	06.02.2024	2878400	SBI, NITA Br.
8	06.02.2023	33642380634	2705475	06.02.2024	2878400	SBI, NITA Br.
9	06.02.2023	33642380736	2705475	06.02.2024	2878400	SBI, NITA Br.
10	06.02.2023	33642380872	2705475	06.02.2024	2878400	SBI, NITA Br.
11	06.02.2023	33642381004	2705475	06.02.2024	2878400	SBI, NITA Br.
12	06.02.2023	33642379708	2705475	06.02.2024	2878700	SBI, NITA Br.
13	06.02.2023	33642379822	2705475	06.02.2024	2878400	SBI, NITA Br.
14	06.02.2023	33642379866	2705475	06.02.2024	2878400	SBI, NITA Br.
15	06.02.2023	33642379968	2705475	06.02.2024	2878400	SBI, NITA Br.
16	12.03.2023	34783448095	1600879	12.03.2024	1704067	SBI NITA Br.
17	12.03.2023	34783447976	1600879	12.03.2024	1704067	SBI NITA Br.
18	12.03.2023	34788447885	1600879	12.03.2024	1704067	SBI NITA Br.
19	12.03.2023	34783447772	1600879	12.03.2024	1704067	SBI NITA Br.
20	12.03.2023	34783447705	1600879	12.03.2024	1704067	SBI NITA Br.
21	12.03.2023	34783447568	1600879	12.03.2024	1704067	SBI NITA Br.
22	12.03.2023	34783447477	1600879	12.03.2024	1704067	SBI NITA Br.
23	12.03.2023	34783447400	1600879	12.03.2024	1704067	SBI NITA Br.
24	12.03.2023	34783447295	1600879	12.03.2024	1704067	SBI NITA Br.
25	31.03.2023	35665978111	7405235	31.03.2024	7882500	SBI NITA Br.
26	31.03.2023	35665977821	7405235	31.03.2024	7882522	SBI NITA Br.
27	31.03.2023	35665977355	7405234	31.03.2024	7882522	SBI NITA Br.
28						


 Prof. Sarat Kumar Patra



 Kamlesh Ghosal
 (KAMLESH TILWANI)
 (Tanmoy Ghosal)
 Cel. (Dr.) Ashish Badola
 31.03.2024

29	31.03.2023	35665976930	7405235	31.03.2024	7882522	SBI NITA Br.
30	31.03.2023	35665976500	7405235	31.03.2024	7882522	SBI NITA Br.
31	31.03.2023	35665976124	7405235	31.03.2024	7882522	SBI NITA Br.
32	31.03.2023	35665975868	7405235	31.03.2024	7882522	SBI NITA Br.
33	03.04.2022	36734493697	6620651	03.04.2023	6931053	SBI NITA Br.
34	03.04.2022	36734493711	6620651	03.04.2023	6931053	SBI NITA Br.
35	03.04.2022	36734493788	6620651	03.04.2023	6931053	SBI NITA Br.
36	03.04.2022	36734493857	6620651	03.04.2023	6931053	SBI NITA Br.
37	03.04.2022	36734493971	6620651	03.04.2023	6931053	SBI NITA Br.
38	03.04.2022	36734523883	6620651	03.04.2023	6931053	SBI NITA Br.
39	30.03.2023	38361800540	58493044	30.03.2024	62322188	SBI NITA Br.
40	30.03.2023	38361789604	58493044	30.03.2024	62322188	SBI NITA Br.
41	14.10.2022	39732434653	16480667	14.10.2023	17312178	SBI NITA Br.
42	14.10.2022	39732431823	16480667	14.10.2023	17312178	SBI NITA Br.
43	14.10.2022	39732433194	16480667	14.10.2023	17312178	SBI NITA Br.
44	14.10.2022	39732435748	16480667	14.10.2023	17312178	SBI NITA Br.
45	14.10.2022	39732498426	16480667	14.10.2023	17312178	SBI NITA Br.
46	14.10.2022	39732499780	16480667	14.10.2023	17312178	SBI NITA Br.
47	14.10.2022	39732501100	16480667	14.10.2023	17312178	SBI NITA Br.
48	14.10.2022	39732436934	16480667	14.10.2023	54834657	SBI NITA Br.
49	17.01.2023	40721649367	51568112	17.01.2024	24834657	SBI NITA Br.
50	17.01.2023	40721647676	51568112	17.01.2024		
		TOTAL	520154445		521380633	

iii) Sponsored Project Fund						
1	22.01.2023	8026141600476	3602714	22.01.2024	3602714	TGB NITA Br.
2	21.01.2023	8026141600479	2882172	22.01.2024	3058833	TGB NITA Br.
3	21.01.2023	8026141600480	2666753	22.01.2024	2830210	TGB NITA Br.
4	21.01.2023	8026141600481	2673559	22.01.2024	2837433	TGB NITA Br.
5	21.01.2023	8026141600482	2673560	22.01.2024	2837434	TGB NITA Br.
6	21.01.2023	8026141600483	2673558	22.01.2024	2837432	TGB NITA Br.
7	21.01.2023	8026141600484	2701621	22.01.2024	2867215	TGB NITA Br.
8	21.01.2023	8026141600485	2705445	22.01.2024	2705445	TGB NITA Br.
9	21.01.2023	8026141600486	2459496	22.01.2024	2610243	TGB NITA Br.
10	21.01.2023	8026141600487	1967599	22.01.2024	2088200	TGB NITA Br.
11	21.01.2023	8026141600488	1475729	22.01.2024	1566183	TGB NITA Br.
12	21.01.2023	8026141600489	985083	22.01.2024	1045463	TGB NITA Br.
13	22.01.2023	8026141600490	491703	22.01.2024	491703	TGB NITA Br.
14	22.01.2023	8026142100058	10293781	22.01.2024	10924731	TGB NITA Br.
15	22.01.2023	8026142100067	10441833	22.01.2024	11081857	TGB NITA Br.
16	22.01.2023	8026142100076	10430869	22.01.2024	11070221	TGB NITA Br.
17	22.01.2023	8026142100085	10430872	22.01.2024	11070225	TGB NITA Br.
18	22.01.2023	8026142100094	8344694	22.01.2024	8856176	TGB NITA Br.
19	22.01.2023	8026142100100	6258526	22.01.2024	6642138	TGB NITA Br.
		TOTAL	520154445		521380633	



Col. (Dr.) Ashish Badola
Prof. Sarat Kumar Patra
(KAMLESH TILWANI)
(Tanmoy Ghosal)

20	22.01.2022	8026142100119	4172343	22.01.2023	4428084	TGB NITA Br.
21	22.01.2023	8026142100128	2086173	22.01.2024	2214043	TGB NITA Br.
22	26.05.2022	8026142103578	2958644	26.05.2023	3118596	TGB NITA Br.
		TOTAL	95376727		100784579	
iv) Infrastructural Development Fund						
1	19.08.2022	4121401000239/1	12534071	19.08.2023	13237794	Canara Bank, NIT Agt Br
		TOTAL	12534071		13237794	
v) NITA Corpus Fund (Institute Development Fund)						
1	19.08.2022	4121401000240/2	18666376	19.08.2023	19714395	Canara Bank, NITA Br
2	19.08.2022	4121401000240/1	11064578	19.08.2023	11685797	Canara Bank, NITA Br
3	06.02.2022	33642377597	2703077	06.02.2023	2875849	SBI NITA Br.
4	06.02.2022	33642378738	2705475	06.02.2023	2878400	SBI NITA Br.
5	12.03.2022	34783371607	8004417	12.03.2023	8520363	SBI, NITA Br.
6	12.03.2022	34783371562	8004417	12.03.2023	8520363	SBI, NITA Br.
7	12.03.2022	34783371459	8004417	12.03.2023	8520363	SBI, NITA Br.
8	12.03.2022	34783371051	8004417	12.03.2023	8520363	SBI, NITA Br.
9	12.03.2022	34783369621	8004417	12.03.2023	8520363	SBI, NITA Br.
10	31.03.2023	35665970393	7405235	31.03.2024	7882522	SBI, NITA Br.
11	31.03.2023	35665969151	7405235	31.03.2024	7882522	SBI, NITA Br.
12	31.03.2023	35665968884	7405235	31.03.2024	7882522	SBI, NITA Br.
13	03.04.2022	36734493631	6620651	03.04.2023	6931053	SBI, NITA Br.
14	03.04.2022	36734493653	6620651	03.04.2023	6931053	SBI, NITA Br.
15	30.03.2023	38361787890	87739567	30.03.2024	93483284	SBI, NITA Br.
16	30.03.2023	38361786557	87739567	30.03.2024	93483284	SBI, NITA Br.
17	30.03.2023	38361785292	87739567	30.03.2024	93483284	SBI, NITA Br.
18	30.03.2023	38361753598	87739567	30.03.2024	93483284	SBI, NITA Br.
19	14.10.2022	39732434347	16480667	14.10.2023	17312178	SBI NITA Br.
20	14.10.2022	39732433229	16480667	14.10.2023	17312178	SBI NITA Br.
21	14.10.2022	39732432351	16480667	14.10.2023	17312178	SBI NITA Br.
22	14.10.2022	39732431084	16480667	14.10.2023	17312178	SBI NITA Br.
23	14.10.2022	39732429097	16480667	14.10.2023	17312178	SBI NITA Br.
24	14.10.2022	39732500865	16480667	14.10.2023	17312178	SBI NITA Br.
25	14.10.2022	39732499984	16480667	14.10.2023	17312178	SBI NITA Br.
26	14.10.2022	39732436865	16480667	14.10.2023	17312178	SBI NITA Br.
27	14.10.2022	39732435691	16480667	14.10.2023	17312178	SBI NITA Br.
28	14.10.2022	39732505922	16480667	14.10.2023	17312178	SBI NITA Br.
29	14.10.2022	39732504521	16480667	14.10.2023	17312178	SBI NITA Br.
30	14.10.2022	39732502579	16480667	14.10.2023	17312178	SBI NITA Br.
31	14.10.2022	39732506674	16480667	14.10.2023	17312178	SBI NITA Br.
32	14.10.2022	39732419942	16480667	14.10.2023	17312178	SBI NITA Br.
33	14.10.2022	39732421724	16480667	14.10.2023	17312178	SBI NITA Br.
34	14.10.2022	39732415697	5493554	14.10.2023	5770723	SBI NITA Br.
35	14.10.2022	KamleshMF- 24962491	500000000	14.10.2023	0	SBI NITA Br.



[Signature]

Col. (Dr.) Ashish Badol
Registrar, NIT Anantnag

(KAMLESH TILWANI)
(Tanmoy Ghosal)

Prof. Sarat Kumar Patra

36	17.01.2023	40721206095	51568112	17.01.2024	54834657	SBI NITA Br.
37	17.01.2023	40721653941	61881734	17.01.2024	65801591	SBI NITA Br.
38	17.01.2023	40721655199	51568112	17.01.2024	54834657	SBI NITA Br.
39	17.01.2023	40721654707	51568112	17.01.2024	54834657	SBI NITA Br.
		TOTAL	980866495		986958019	
vi) EMD & Security Deposit Fund						
1	06.02.2023	33642378772	2705475	06.02.2024	2778400	SBI NITA Br.
2	06.02.2023	33642378909	2705475	06.02.2024	2778400	SBI NITA Br.
3	06.02.2023	33642378976	2705475	06.02.2024	2778400	SBI NITA Br.
4	06.02.2023	33642379038	2705475	06.02.2024	2878400	SBI NITA Br.
5	06.02.2023	33642379107	2705475	06.02.2024	2878400	SBI NITA Br.
6	06.02.2023	33642379232	2705475	06.02.2024	2878400	SBI NITA Br.
7	06.02.2023	33642379301	2705475	06.02.2024	2878400	SBI NITA Br.
8	06.02.2023	33642379436	2705475	06.02.2024	2878400	SBI NITA Br.
9	06.02.2023	33642379538	2705475	06.02.2024	2878400	SBI NITA Br.
10	06.02.2023	33642379606	2705475	06.02.2024	2878400	SBI NITA Br.
		TOTAL	27054750		28484000	
vii) Moutoshi Kar Memorial						
1	01.09.2022	34732977775	30002	01.09.2023	31436	SBI NITA Br.
		GRAND TOTAL	1680091716		1698943222	



[Signature]
 Prof. Sarat Kumar Patra
 Director, NIT Agartala.

[Signature]
 Col. (Dr.) Ashish Badola
 Registrar, NIT Agartala

[Signature]
 (Tanmoy Ghosal)
 Dy. Registrar (F&A)
 NIT Agartala

[Signature]
 (KAMLESH TILWANI)
 Assistant Registrar (Fin.)
 NIT Agartala.

FORM OF FINANCIAL STATEMENTS (NON- PROFIT ORGANISATIONS)
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2023

SCHEDULE 7 CURRENT ASSETS	Current Year 2022-2023	Previous Year 2021-2022	(Amount - ₹)
1) Stock:			
a) Stores and Spares			
b) Loose Tools			
c) Publications			
d) Laboratory chemicals, Consumables and glass ware			
e) Building Materials			
f) Electricals Materials	0		0
g) Stationery			
h) Water supply materials			
2) Sundry Debtors:			
a) Debts Outstanding for a period exceeding six months			
b) Others			
3) Cash and Bank Balances:			
a) With Scheduled Banks:			
i) In Current Accounts			
ii) In term deposit Accounts			
iii) In Savings Accounts			
SBI, NITA Br.-Non Plan(A/c-30369892838)	39837461		70004831
Canara Bank- Non Plan A/c No- 876	448955		448895
SBI, NITA Br.-Plan(A/c-30358199684)	100515566		44671065
Canara Bank, Agt Br.- Plan (A/c-4121101001663)	1320482		1282868
SBI, NITA Br.-Project Fund(A/c-30533908751)	11493668		10056425
SBI, NITA Br.-R. B. Fund(A/c-30693303036)	302220169		157335319
SBI, NITA Br.-Student Welfare Fund(A/c-30534089717)	2866712		2571691
SBI, NITA Br.-NITA Corpus Fund(A/c-30534091012)	446204292		9433217
SBI, NITA Br.-EMD & Security Deposit(A/c-30936141729)	16631159		13847713
TGB, NITA Br.-Inf. Dev Fund(A/c-8026010030064)	4150330		3542450
SBI, NITA Br.-SDP Fund(A/c-30773081908)	9695036		26096895



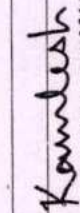


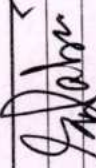

Kamlesh

(KAMLESH TILWANI)
 Assistant Registrar (Fin.)

(Tanmoy Ghosal)
 Dy. Registrar (F&A)

Col. (Dr.) Ashish Badolia
 Registrar, NIT Agartala

Prof. Sarat Kumar Patra
 Director, NIT Agartala.

Canara Bank, NITA Br.-Hostel (A/c-412113200005	116869932	64286410	
SBI, NITA Br.-Staff Welfare Fund(A/c-30534092027)	365814	169480	
SBI, NITA Br.-DPF(Civil)(A/c-30534090278)	6608354	5670038	
SBI, NITA Br.-Guest House Fund(A/c-31664487420)	11648782	10053100	
SBI, NITA Br.-NIT Transit House Fund(A/c-31092166195)	361215	351625	419822022
Cash in hand		0	
b) With Non Sheduled banks			
i) In Current Accounts			
ii) In term deposit Accounts			
iii) In Savings Accounts			
4) Post office Savings Accounts:			
TOTAL			419822022
<div> <div>  (KAMLESH TILWANI) Assistant Registrar (Fin.) NIT Agartala. </div> <div>  (Tanmoy Ghosal) Dy. Registrar (F&A) NIT Agartala </div> </div>	 Col. (Dr.) Ashish Badola Registrar, NIT Agartala	 Prof. Sarat Kumar Patra Director, NIT Agartala.	

FORM OF FINANCIAL STATEMENTS (NON- PROFIT ORGANISATIONS)
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2023

SCHEDULE 8 LOAN, ADVANCES & DEPOSITS	Current Year 2021-2022	Previous Year 2020-2021	(Amount - ₹)
1. Advance to employees: (Non-interest bearing)			
a) Salary	0		
b) Festival	0		
c) Medical Advance	0		
d) Other (to be specified)	0		
i) LTC Advance to Employees	142000		0
ii) Temporary Advance	0		0
2. Long Term Advances to employees: (Interest bearing)			
a) Vehicle loan			
b) Home loan			
c) Other (to be specified)			
3. Advances and other amounts recoverable in cash or in kind or for value to be received.			
a) On Capital account.			
Advance to Parties (OH-35)- Corresponding Schedule "8A"	383771298		238318303
b) to Suppliers			
c) Others			
4. Prepaid Expenses			
a) Insurance			
b) Other expenses			
5. Deposits			
a) Telephone	0		0
b) Lease Rent	0		0
c) Electricity	5100		5100
d) AICTE, if applicable	0		0
e) Others (to be specified)			
6. INCOME ACCRUED			
a) On Investment - Others.			
i) Interest on Fixed Deposit-General A/c	1597272	3013360	
ii) Interest on Fixed Deposit-Earmarked Funds	15875530	17545601	
7. CLAIMS RECEIVABLE	16972802		
TOTAL	400891200		255869004

(KAMILESH TILWANI)

TOTAL (Tanmoy Ghosal)
Dy. Registrar (F&A)

Col. (Dr.) Ashish Bado
Registrar, NIT Agartala

Prof. Sarat Kumar Patra
Director NIT Agartala



FORM OF FINANCIAL STATEMENTS (NON- PROFIT ORGANISATIONS)
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA
SCHEDULES FORMING PART OF SCHEDULE 8 AS AT 31.03.2023

(Amount - ₹)

SCHEDULE 8 A- DETAILS OF ADVANCE TO PARTIES	Current Year			Total	Previous Year
	Opening Balance	Addition during the year	Adjustment during the year and tr. To Fixed Assets		
Advance to:					
B.S.N.L.(Call User Group-CUG)	172764			172764	172764
P.H.E(Iron Removal Plant)	0			0	0
Tripura Housing Board(Academic Building, Library)	7640420			7640420	7640420
DWS Deptt (Water Supply)	35900000	0		35900000	0
EPIL(Const of Workshop)	0		0	0	10200000
CPWD	194605119	145452995	0	340058114	33739471
TOTAL	238318303	145452995	0	383771298	51752655

(Signature)

(Tanmoy Ghosal)
Dy. Registrar (F&A)
NIT Agartala

(Signature)
(KAMLESH TILWANI)
Assistant Registrar (Fin.)
NIT Agartala.

(Signature)

Col. (Dr.) Ashish Badola
Registrar, NIT Agartala

(Signature)

Prof. Sarat Kumar Patra
Director, NIT Agartala.



FORM OF FINANCIAL STATEMENTS (NON- PROFIT ORGANISATIONS)

Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA

SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE PERIOD/ YEAR ENDED 31.03.2023

	Current Year 2022-2023	(Amount - ₹) Previous Year 2021-2022
SCHEDULE 9 - ACADEMIC RECEIPTS		
1) Academic Collection		
Admission Fees	1296000	1292500
Institute Development Fees	6040000	11025000
Tuition Fees	129489980	191673333
All other Fees (Exam Fee, Library Fee, IT Fee and Sports Complex user charges etc)	19301075	19506000
Student Activity Fees	7460575	8328000
Comm Skill Dev. Fees	3667000	6862000
T & P Fees	3218000	3600000
Alumni Fees	1072000	1094000
Medical Fees	2886000	2405600
Prospectus Fees	278700	291300
Identity Card Fees	236800	261400
Grade Card Fees	3681500	4211000
Degree Certificates	367200	411750
Lab Fees	312200	543600
Convocation Fee	1627500	
Late Fee	250000	
2) Others (Specify)-		
Misc. Collection from Students	372	71589
Hostel Fee	128038610	24836834
Hostel Fee Structure	21700	6761
TOTAL	309245212	276420667

Kamlesh
(KAMLESH TILWANI)
Assistant Registrar (Fin.)
NIT Agartala.

Ashish Badola
Col. (Dr.) Ashish Badola
Registrar, NIT Agartala

Sarat Kumar Patra
Prof. Sarat Kumar Patra
Director, NIT Agartala.



FORM OF FINANCIAL STATEMENTS (NON- PROFIT ORGANISATIONS)

Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA

SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE PERIOD/ YEAR ENDED 31.03.2023

		(Amount - ₹)	
SCHEDULE 10 - GRANTS / SUBSIDIES		Current Year 2022-2023	Previous Year 2021-2022
(Irrevocable Grants & Subsidies received)			
1) Central Govt.	0		
a) From Ministry of Education			
i) Utilised Grant- OH-31	392789936	381618121	
ii) Utilised Grant- OH-36	537083585	448874000	
iii) Utilised Grant- OH-35	188452836	246175000	
b) From AICTE	0		
2) State Govt.			
3) Govt. Agencies			
4) Institution / Welfare bodies			
5) International Organisations			
6) others (Specify)			
TOTAL	1118326357	1076667121	
SCHEDULE 11 - INCOME FROM INVESTMENTS		Current Year 2022-2023	Previous Year 2021-2022
(Amount - ₹)			
1) Interest:			
a) On Govt. securities			0
b) Other Bonds/Debenture	0		0
2) Interest on Term Deposit/Mutual Fund	(2,69,817)	5616009	
3) Income accrued but not due on Term Deposits			
4) Interest on Savings Bank Accounts			
5) Others			
TOTAL	(2,69,817)	5616009	
<div> <div> <div>Kamlesh</div> <div>(KAMLESH TILWANI)</div> <div>Assistant Registrar (Fin.)</div> <div>NIT Agartala.</div> </div> <div> <div>(2,69,817)</div> <div>Col. (Dr.) Ashish Badola</div> <div>Registrar, NIT Agartala</div> </div> <div> <div>5616009</div> <div>Prof. Sarat Kumar Patra</div> <div>Director, NIT Agartala.</div> </div> </div>			



Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA

SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE PERIOD/ YEAR ENDED 31.03.2023

			(Amount - ₹)
		Current Year	Previous Year
		2022-2023	2021-2022
SCHEDULE 13 - OTHER INCOME			
A. Income from Land & Building		0	
B. Sale of Institute's Publications			
C. Income from holding events			
D. Others (Specify)-			
a) Misc Income		12857631	2594878
b) Other Income		0	0
TOTAL		12857631	2594878

SCHEDULE 14 - PRIOR PERIOD INCOME		Current Year 2022-2023	Previous Year 2021-2022	(Amount - ₹)
1. Academic Receipts		0	5544475	
2. Income from Investments				
3. Interest earned				
4. Others (Specify) -	Kamlesh (KAMLESH TILWANI)			
TOTAL		0	5544475	

~~Prof. Sarat Kumar Patra~~

Col. (Dr.) Ashish Badola

(KAMLESH TILWANI) (Tannoy Ghosal)
Assistant Registrar (Fin.) Dy. Registrar (P & A)

TOTAL

FORM OF FINANCIAL STATEMENTS (NON- PROFIT ORGANISATIONS)
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA
SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE PERIOD/ YEAR ENDED 31.03.2023

(Amount - ₹)

SHEDULE 15 - STAFF PAYMENT & BENEFIT		Current Year	Previous Year
		2022-2023	2021-2022
a) Salaries and Wages			
i) Regular Faculty & Staffs			
1) Salaries & Allowance- Director		3889800	3631500
2) Salaries & Allowance- Faculty		283997139	234189344
3) Salaries & Allowance- Non- Teaching Staff		27833738	22905863
ii) Contractual Faculty & Staffs			
1) Salaries & Wages- Contractual Faculty		61850415	69503350
2) Salaries & Wages- Contractual Non-Teachinf Staffs		71561272	73824606
3) EPF- Contractual Faculty & Non-Teaching Staffs		5871118	6968616
4) Salaries & Wages- Hostel Supervisor		3042489	3160392
b) Allowances and Bonus			
c) Contribution to Provident fund			
d) Contribution to other funds (Specify)			
e) New Pension Scheme Fund-Tier-I			
1) CPF-Director		252000	252000
2) NPS-Faculty		24913917	20481125
3) NPS-Non- Teaching Staff		1615953	807988
f) Staff Welfare Expenses			
g) Expenses on Employees Retirement and Terminal benefits			
h) LTC Facility			
1) Faculty		2021588	267977
2) Non-Faculty		0	
i) Medical Facility			
1) Faculty		442982	99278
2) Non-Faculty		0	187490
j) Children Education Allowance			
1) Faculty		3262785	2131000
2) Non-Faculty		179962	189000
k) Other (Specify)			
1) Telephone Re-imbursement			
1) Faculty			45524
2) Non-Faculty			27354
2) CPDA		836849	323380
TOTAL		491572007	438995787



(Signature)
 Prof. Sarat Kumar Patra

(Signature)
 (Tanmoy Ghosal) Col. (Dr.) Ashish Badola 491572007
 Dy. Registrar (F&A) Registrar, NIT Agartala

(Signature)
 (KAMLESH TILWANI)
 Assistant Registrar (Fin.)

FORM OF FINANCIAL STATEMENTS (NON- PROFIT ORGANISATIONS)

Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA

SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE PERIOD/ YEAR ENDED 31.03.2023

SCHEDULE 16 - ACADEMIC EXPENSES	(Amount - ₹)	
	Current Year 2022-2023	Previous Year 2021-2022
a) Laboratory Expenses	388933	165165
b) Honararium to Visiting Examiner & others	1325339	1275186
c) Expenses on Workshop	730377	17700
d) Convocation Expenses	1664459	1050758
e) Scholarship-Institute	68849823	84126121
f) Others (specify)	135141	164670
1) Contingency to PhD/M.Tech		
2) Expenses for Research Affairs	289609	197750
3) Expenses for NBA		
TOTAL	73383681	86997350

Kamlesh
(KAMLESH TILWANI)
Assistant Registrar (Fin.)
NIT Agartala.

Tanmoy Ghosal
(Tanmoy Ghosal)
Dy. Registrar (F&A)
NIT Agartala

Ashish Badola
Col. (Dr.) Ashish Badola
Registrar, NIT Agartala

Sarat Kumar Patra
Prof. Sarat Kumar Patra
Director, NIT Agartala.



FORM OF FINANCIAL STATEMENTS (NON- PROFIT ORGANISATIONS)
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA
SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE PERIOD/ YEAR ENDED 31.03.2023

SCHEDULE 17 - ADMINISTRATIVE & GENERAL EXPENSES		(Amount - ₹)	
	Current Year 2022-2023	Previous Year 2021-2022	
A. Infrastructure:			
a) Electricity and Power	23588784	8803084	
b) Water Charges			
c) Rent to NIT Transit House, Delhi	700000	53500	
d) Rent to PWD-Agartala Transit House			
B. Communication			
a) Postage	100750	105000	
b) Telephone & Communication	451175	183620	
C. Others			
1) Printing & Stationery	1216488	894045	
2) Travelling & Conveyance Expenses	951622	744125	
3) Hospitality Expenses	675744	84000	
4) Advertisement and publicity	1805886	1821916	
5) Newspaper & Periodical	25717		
6) Miscellaneous Expenses	1006292	6000	
7) Medicine Expenses	940505	563724	
8) Training & Placement Exp			
9) Recruitment expenses	5283142	450000	
10) NSS Programme	94410	4800	
11) Security Services	51776368	59235197	
12) Gardening Expenses	7982090	7859440	
13) Sweeping & Cleaning	37362650	34210191	
14) Legal Fees	580790	347560	
15) Networking Expenses	5464714	433516	
16) Games, Sports & Cultural Activity	3079394	349100	
17) Internal Audit Fees & others	158120	119770	
18) Startup Expenses	26368	126000	
19) BOG Meeting Expenses	574476	698302	
20) Cable Charges			
21) Mess Charges	76454402	2044598	
TOTAL	220299887	119137488	

Kamlush

(KAMLESH TILWANI)
 Assistant Registrar (Fin.)

Ashish

(Tanmoy Ghosal)
 Registrar (F&A) Col. (Dr.)

Badola

Ashish Badola



[Signature]

Prof. Sarat Kumar Datta

FORM OF FINANCIAL STATEMENTS (NON- PROFIT ORGANISATIONS)

Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA

SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE PERIOD/ YEAR ENDED 31.03.2023

SCHEDULE 18 - TRANSPORTATION EXPENSES		(Amount - ₹)	
	Current Year 2022-2023	Previous Year 2021-2022	
1. Vehicles (Owned by Institution)			
a) Fuel Charges	869331	471766	
b) Repair & Maintenance	302879	129921	
c) Registration, Insurance etc. for Vehicle	120724	127970	
2. Vehicles taken on Rent/Lease			
a) Rent/Lease Expenses	198946	154067	
3. Vehicles hiring Expenses			
TOTAL	1491880	883724	

SCHEDULE 19 - REPAIRS & MAINTENANCE		(Amount - ₹)	
	Current Year 2022-2023	Previous Year 2021-2022	
a) Repair & Maintenance	3155648	2008723	
b) Repairs & Maints-Electricals	2176551	1616321	
c) Repair & Maintenance - Building	12522125	4764871	
d) Repair & Maintenance - Computer & Accessories	5441057	3743942	
e) Repair & Maintenance - Internal Road			
f) Repair & Maintenance - Equipment & Machinery	948971	913086	
g) Repair & Maintenance - Hostel	975917	356212	
h) Others (Specify)			
TOTAL	25220269	13403155	

Kamlesh
(KAMLESH TILWANI)
Assistant Registrar (Fin.)
NIT Agartala.

(Dr.) Ashish Bedola
Col. (Dr.) Ashish Bedola
Registrar, NIT Agartala

Sarat Kumar Patra
Prof. Sarat Kumar Patra
Director, NIT Agartala.



FORM OF FINANCIAL STATEMENTS (NON- PROFIT ORGANISATIONS)

Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA

SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE PERIOD/ YEAR ENDED 31.03.2023

(Amount - ₹)		
SCHEDULE 20 - FINANCE COSTS	Current Year 2022-2023	Previous Year 2021-2022
a) Interest on Fixed Loans	0	0
b) Interest on Other Loans	0	0
c) Bank Commission	19688	26031
d) Bank Commission-Hostel	16135	4337
e) Others (Specify)	0	0
TOTAL	35823	30368

(Amount - ₹)		
SCHEDULE 21 - OTHER EXPENSES	Current Year 2022-2023	Previous Year 2021-2022
a) Provision for Bad and Doughtful Debts	0	0
b) Irrecoverable Balance Written off	0	0
c) Others (Specify)	0	0
Exp. on Moutoshi Kar Memorial Scholarship	0	0
Loan refund to DHE, Govt. of Tripura	0	0
Grant to KV, NIT Agartala	21000000	25000000
TOTAL	21000000	25000000

(Amount - ₹)		
SCHEDULE 22 - PRIOR PERIOD EXPENSES	Current Year 2022-2023	Previous Year 2021-2022
1. Establishment Expenses	0	0
2. Academic Expenses	0	0
3. Administrative Expenses	0	0
4. Transportation Expenses	0	0
5. Repairs & Maintenance	0	0
6. Others (Specify) Kamlesh	0	0
TOTAL	0	0

(KAMLESH TILWANI) Assistant Registrar (Fin.) NIT Agartala
 (Tannoy Ghosal) Dy. Registrar (F&A) NIT Agartala
 Col. (Dr.) Ashish Badola Registrar, NIT Agartala
 Prof. Sarat Kumar Patra Director, NIT Agartala.



FORM OF FINANCIAL STATEMENTS (NON- PROFIT ORGANISATIONS)
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA
CASH FLOW STATEMENT FOR THE PERIOD/ YEAR ENDED 31.03.2023

Particulars	(Amount - ₹)	
	Current Year 2022-2023	Previous Year 2021-2022
A. CASH FLOW FROM OPERATING ACTIVITIES		
Susplus/(deficit) for the year	23,44,57,531	15,86,89,873
Less: Fund tr to Corpus fund (Sch-2)	23,00,00,000	-
Adjustments for the Non-operating Incomes/Expenses		
Depreciation	21,07,21,216	21,44,00,063
Write offs	-	-
Interest expenses on Loans	21,07,21,216	-
(Increase)/Decrease in Current Assets	21,51,78,747	37,30,89,936
Increase/(Decrease) in Current Liabilities	(9,21,61,433)	(18,83,52,627)
		(13,63,69,472)
Net Cash Flow from Operating Activities	12,30,17,314	4,83,67,837
B. CASH FLOW FROM INVESTING ACTIVITIES		
(Purchase)/Sale of Fixed Assets	(4,35,72,716)	(7,61,34,673)
(Purchase)/Sale of Fixed Investments	(11,46,271)	12,08,75,603
Interest received	-	4,47,40,930
Net Cash Flow from Investing Activities	(4,47,18,987)	4,47,40,930
C. CASH FLOW FROM FINANCING ACTIVITIES		
Additions to General Fund during the year	-	-
Grants/funds in nature of founders/promoters contribution	-	5,50,35,722
Endowment fund(principal sum)	-	-
Interest paid on Loans	-	5,50,35,722
Net Increase in Cash Equivalents (A+B+C)	7,82,98,327	14,81,44,489
Cash and cash Equivalents as at the beginning of F.Y.	18,06,94,069	3,25,49,580
Cash and Cash Equivalent at the end of the period	25,89,92,396	18,06,94,069

Kamlesh
(KAMLESH TILWANI)
 Assistant Registrar (Fin.)
 NIT Agartala.

(Tannoy Ghosal)
 Dy. Registrar (F&A)
 NIT Agartala

Col. (Dr.) Ashish Badola
 Registrar, NIT Agartala

Prof. Sarat Kumar Patra
 Director, NIT Agartala.



SCHEDULE-23

SIGNIFICANT ACCOUNTING POLICIES

1. INTRODUCTION:

The National Institute of Technology, Agartala is one among the Institutions of National Importance setup under the National Institutes of Technology Act, 2007 (No.29 of 2007) and supplemented by the first Statute prepared and declared by Government of India, Ministry of Education, New Delhi Vide Gazette of India Part II Section 3 Sub Section (i) dated 23.04.2009.

The Government of India, Ministry of Education, New Delhi release funds to the Institute for Object Head 31, 35 and 36.

The Institute has prepared the Annual Accounts 2022-23 as per the format provided by the Ministry of Education with the approval of the Comptroller and Auditor General of India and communicated to all NITs Vide Letter No. F.29-4/2012-IFD dated 17.04.2015.

2. ACCOUNTING CONVENTION:

The Financial Statements are prepared on the basis of Historical cost Convention unless otherwise stated and on the Accrual method of Accounting.

3. REVENUE RECOGNITION:

Tuition fee payable by students is accounted for on cash basis. Interest on Term Deposits is accounted on accrual basis, and other Misc Income are accounted on cash basis.

4. INVENTORY VALUATION:

The Institute is booking expenditure on spare parts, laboratory chemicals, consumables and other stores on cash basis as and when purchased and hence no closing stock for the same shown in the balance sheet.

Kamlesh
(KAMLESH TILWANI)
Assistant Registrar (Fin.)
NIT Agartala.

Tanmoy Ghosal
(Tanmoy Ghosal)
Dy. Registrar (F&A)
NIT Agartala

Ashish Badola
Col. (Dr.) Ashish Badola
Registrar, NIT Agartala

Sarat Kumar Patra
Prof. Sarat Kumar Patra
Director, NIT Agartala



5. INVESTMENT:

No Investment except Fixed Deposit/Mutual Fund was made during the year. Investments are valued at cost.

6. FIXED ASSETS:

Fixed Assets like equipment, furniture etc., are stated at cost of acquisition inclusive of inward freight, duties and taxes and incidental and direct expenses related to acquisition. The cost of building is taken on the basis of Completion Report. Cost of purchase of Library books, e-books are treated as fixed assets.

7. DEPRECIATION:

Depreciation is provided on straight line Method as per rates specified in the guidelines and format of Ministry of Education, Government of India in respect of following Assets.

Tangible Assets:

- (i) Building- 2%,
- (ii) Electrical Installation- 5%,
- (iii) Plant and Machinery- 5%,
- (iv) Scientific & Laboratory Equipment- 8%,
- (v) Office Equipment- 7.5%,
- (vi) Computer & Peripherals- 20%,
- (vii) Furniture & Fittings- 7.5%,
- (viii) Vehicle- 10%,
- (ix) Library Books- 10%

Intangible Assets:

- (i) e-Books/e-Journal- 40%.

Depreciation has been charged on straight line method.

8. GOVERNMENT GRANT/SUBSIDIES:

i) Government Capital grants for setting up Projects are treated as Capital Receipts.

ii) Fixed Assets acquired out of specific grants are shown at their full value of acquisition

Kamlesh
(KAMLESH TILWANI)
Assistant Registrar (Fin.)
NIT Agartala

Tanmoy Ghosal
(Tanmoy Ghosal)
By, Registrar (F&A)
NIT Agartala

Ashish Badola
Col. (Dr.) Ashish Badola
Registrar, NIT Agartala

Sarat Kumar Patra
Prof. Sarat Kumar Patra
Director, NIT Agartala



SCHEDULE -24 CONTINGENT LIABILITIES AND NOTES ON ACCOUNTS

1. CONTINGENT LIABILITIES:

NIL

2. CURRENT ASSETS, LOANS AND ADVANCES:


In the opinion of the Management, the current assets, loans and advances have a value on realization in the ordinary courses of business, equal at least to the aggregate amount shown in the Balance Sheet.


3. FOREIGN CURRENCY TRANSACTION:


Expenditure is recorded at the prevailing rate on the date of the transaction based on demands raised by State Bank of India, Agartala Branch.


4. Corresponding Figures for the previous year have been re-grouped/re-arranged wherever necessary.

5. Schedules 1 to 23 are annexed to and form an integral part of the Balance Sheet as at 31.03.2023 and Income and Expenditure and Receipts and Payment Accounts for the year ended on that date.


(KAMLESH TILWANI)
Assistant Registrar (Fin.)
NIT Agartala.


(Tanmoy Ghosal)
Dy. Registrar (F&A)
NIT Agartala


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Registrar, NIT Agartala


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Director, NIT Agartala.



FORM OF FINANCIAL STATEMENTS (NON- PROFIT ORGANISATIONS)
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA

BALANCE SHEET AS AT 31.03.2023

STAFF BENEFIT TRUST (GPF)

Liabilities	Current Year 2022-2023		Previous Year 2021-2022		Assets		Current Year 2022-2023		Previous Year 2021-2022	
GPF					Investment with:					
Opening Balance	86073120		79140471		LICI (Opn. Bal)		85983101		77277772	
Add: Subscription during the year	8698000		7970000		Add: Current year		8599000		8705329	
Add: Interest Credited	0		0		Add: Interest Accrued		0		0	
Less: Advance/withdrawal					Less: investment with TGB-NITA		94582101		85983101	
Closing Balance	94771120	0	87110471				819329	93762772	0	85983101
			1037351		TGB-NITA Br					
Interest Reserve:					FD-80261400000037		770329			
Opening Balance	297906		257711		Add: Intt. on FD		24283	794612		
Add: Excess of Income over Expenditure	43774		40195		RD with TGB (8026140000046)		49000			
Closing Balance		341680			Add: this year		84000			
					Add: Interest		3102	136102		
					Bank Balance			419314		387925
					Bank (SBI, NIT Agt Br)					
TOTAL		95112800		86371026	TOTAL			95112800		86371026

Kamlesh
 Asstt. Registrar (Finance)
(KAMLESH TILWANI)
 Assistant Registrar (Fin.)
 For NIT Agartala.
 M/s S. Basu Thakur & Co
 (Chartered Accountants)

D. R. Ghosal
 (Tanmoy Ghosal)
 Dy. Registrar (F&A)
 NIT Agartala

Col. (Dr.) Ashish Badola
 Registrar, NIT Agartala

Prof. Sarat Kumar Patra
 Director,
 Director, NIT Agartala.



FORM OF FINANCIAL STATEMENTS (NON- PROFIT ORGANISATIONS)
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA
INCOME & EXPENDITURE FOR THE PERIOD/ YEAR ENDED ON 31.03.2023
STAFF BENEFIT TRUST (GPF)

	(Amount - ₹)			
	Expenditure	Current Year 2022-2023	Previous Year 2021-2022	Income
Bank Charges		0		Interest Earned 0 Interest Accrued(FD/RD)
Excess of Income over Expenditure		43774	40195	Other Receipts 0
TOTAL		43774	40195	TOTAL
				43774
				40195

Asstt. Registrar (Finance)
(KAMLESH TILWANI)
 Assistant Registrar (Fin)
 For NIT Agartala

M/s S. Basu Thakur & Co
 (Chartered Accountants)



(CA) P. Majee
 Partner

D. R. (F & A)
(Tanmoy Ghosal)
 Dy. Registrar (F&A)
 NIT Agartala

Registrar
Col. (Dr.) Ashish Badola
 Registrar, NIT Agartala

Director
Prof. Sarat Kumar Patra
 Director, NIT Agartala.

FORM OF FINANCIAL STATEMENTS (NON- PROFIT ORGANISATIONS)
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA
RECEIPTS AND PAYMENTS FOR THE PERIOD/ YEAR ENDED ON 31.03.2023
STAFF BENEFIT TRUST (GPF)

RECEIPTS	Current Year 2022-2023	Previous Year 2021-2022	PAYMENTS	Current Year 2022-2023	(Amount - ₹)	
					Previous Year 2021-2022	2022-2023
I) Opening Balance: In Savings A/c Bank (SBI, NIT Agt Br)	387925	2120410	I) EXPENSES: Remittance Others Exp GPF Adv/Final payment disbursed to employee Invest to TGB, NITA Br.	8599000 0 84000	7886000 0 1037351 819329	
II) SUBSCRIPTION: Monthly Subscription GPF Withdrawal Others	8698000 0 0	7970000 0 0	II) In Savings A/c Bank (SBI, NIT Agt Br)	419314	387925	
III) Interest Received	16389	40195				
TOTAL	9102314	10130605	TOTAL	9102314	10130605	

Kamlesh
 Asstt. Registrar (Finance)
(KAMLESH TILWANI)
 Assistant Registrar (Fin.)
 For NIT Agartala.

D.R. (F & A)

(Tanmoy Ghosal)
Dy. Registrar (F&A)
NIT Agartala

M/s S. Basu Thakur & Co
 (Chartered Accountants)

(CA B.P. Majee)
 Partner



(Ashish Badola)
 Registrar

Col. (Dr.) Ashish Badola
Registrar, NIT Agartala

(Sarat Kumar Patra)
 Director

Prof. Sarat Kumar Patra
Director, NIT Agartala.

FORM OF FINANCIAL STATEMENTS (NON- PROFIT ORGANISATIONS)
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA

BALANCE SHEET AS AT 31.03.2023

NPS Tier I

Liabilities	Current Year 2022-2023	Previous Year 2021-2022		Assets	Current Year 2022-2023	Previous Year 2021-2022	
NPS Tier I							
Opening Balance	1656337	1656337		Investment	0	0	
Add: Subscription during the year	42840423	33983946		Add: Interest	0	0	
Add: Interest Credited	0	0		Less: Maturity	0	0	0
Less: Transferred to NSDL	44496760	35640283		Bank Balance			
Closing Balance	38521869	33983946	1656337	Bank (SBI, NIT Agt Br)	6529561		2096653
			5974891				
Interest Reserve:							
Opening Balance	440316	355215					
Add: Excess of Income over Expenditure	114354	85101					
Closing Balance			440316				
			554670				
TOTAL			6529561	TOTAL		6529561	2096653

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 NIT Agartala

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Col. (Dr.) Ashish Badola
 Registrar, NIT Agartala

Director
 Prof. Sarat Kumar Patra
 Director, NIT Agartala.



FORM OF FINANCIAL STATEMENTS (NON- PROFIT ORGANISATIONS)

Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA

INCOME & EXPENDITURE FOR THE PERIOD/ YEAR ENDED ON 31.03.2023

NPS TIER I

Expenditure	(Amount - ₹)	
	Current Year 2022-2023	Previous Year 2021-2022
Intt credited to Subscribers A/c Bank Charges	0	0
Excess of Income over Expenditure	114354	85101
TOTAL	114354	85101

Income

Interest Earned

0

Other Receipts

85101

TOTAL

114354

85101

85101

Asstt. Registrar (Finance)
(KAMLESH TILWANI)
Assistant Registrar (Fin.)
For NIT Agartala.

M/s S. Basu Thakur & Co
(Chartered Accountants)

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NIT Agartala

Registrar
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Director.
Prof. Sarat Kumar Patra
Director, NIT Agartala.



FORM OF FINANCIAL STATEMENTS (NON- PROFIT ORGANISATIONS)
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA
RECEIPTS AND PAYMENTS FOR THE PERIOD/ YEAR ENDED ON 31.03.2023
NPS TIER I

RECEIPTS	Current Year 2022-2023	Previous Year 2021-2022	PAYMENTS	(Amount - ₹)	
				Current Year 2022-2023	Previous Year 2021-2022
I) <u>Opening Balance:</u> <u>In Savings A/c</u> Bank (SBI, NIT Agt Br)	2096653	2011552	I) <u>EXPENSES:</u> Fund tr. To NSDL Bank Charges	38521869	33983946 0
II) <u>SUBSCRIPTION:</u> Own Subscription Institute Contribution Fixed Deposit Maturity	16940845 25899578 0	14315125 19668821 0	II) <u>In Savings A/c</u> Bank (SBI, NIT Agt Br)	6529561	2096653
III) <u>Interest Received</u> Intt on Savings A/c	114354	85101			
TOTAL	45051430	36080599	TOTAL	45051430	36080599

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 (Chartered Accountants)

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