



ANNUAL REPORT

2020 - 21

NATIONAL INSTITUTE OF TECHNOLOGY JAMSHEDPUR
राष्ट्रीय प्रौद्योगिकी संस्थान जमशेदपुर

TABLE OF CONTENTS**TABLE OF CONTENTS***i***CHAPTER 1 | THE INSTITUTE**

1.1 Brief Overview	1
1.2 Vision & Mission	2
1.3 Goals	2
1.4 Priorities for Academic Excellence	2
1.5 Message from the Director	3
1.6 Board of Governors	4
1.7 Finance Committee	4
1.8 Building Works Committee	5
1.9 Senate	5
1.10 Deans	5
1.11 Associate Deans	6
1.12 Head of the Departments	6

CHAPTER 2 | EDUCATION SYSTEM

2.1 Academic Programmes offered at NIT Jamshedpur	7
2.2 Best Practices for Academic Excellence	8
2.3 Admission Procedure	8
2.4 Examination and Evaluation	9
2.5 Training and Placement	9
2.6 Hostels	12

CHAPTER 3 | ACADEMIC UNITS

3.1 Department of Chemistry	13
3.2 Department of Civil Engineering	15
3.3 Department of Computer Applications	19
3.4 Department of Computer Science and Engineering	21
3.5 Department of Electrical Engineering	23
3.6 Department of Electronics and Communication Engineering	26
3.7 Department of Humanities, Social Sciences and Management	29
3.8 Department of Mathematics	30
3.9 Department of Mechanical Engineering	32
3.10 Department of Metallurgical and Material & Engineering	38
3.11 Department of Physics	41
3.12 Department of Production and Industrial Engineering	43

CHAPTER 4 | FACULTY ACHIEVEMENTS

4.1 Ongoing Sponsored Research Projects	46
4.2 Consultancy Services/Testing Projects	47
4.3 Patents	49
4.4 Seminar/Symposia/Summer/Winter School/STTP/Workshops	49
4.5 Editorial Board Member of Journals	51
4.6 Ph.D. Degree	52
4.7 Outreach Activities (Expert Lectures)	53
4.8 Publications	56
4.9 Invited Talk (External)	68

CHAPTER 5 GENERAL FACILITIES, SERVICES AND ACTIVITIES	
5.1 Computer Centre	70
5.2 Central Library	70
5.3 TEQIP-III Activities	72
5.4 Planning and Development Division	74
5.5 Institute Health Centre & Hospital Facility	75
5.6 Vehicle Section	76
5.7 Diamond Jubilee Lecture Hall Complex	77
5.8 Students Welfare and National Service Scheme (NSS)	77
5.9 Annual Alumni Meet	83
5.10 10 th Convocation, 2020	85
5.11 National Initiative for Design Innovation (NID)	87
5.12 National Workshop on Transforming Pedagogy in India	88
5.13 Research Conclave 2021	89
5.14 Inculcation of Research Culture in Academic Institutions (IRCAI-2020)	90
5.15 ATAL FDP on Engineering Modelling and Simulation Using CFD	91
5.16 Memorandum of Understanding	92
5.17 Observation of Special Events	92
CHAPTER 6 THE STAFF	
6.1 List of Officers	97
6.2 List of Group – B Staff	97
6.3 List of Group – C Staff	98
6.4 List of Employee on Contract	98
6.5 List of MTS	99
CHAPTER 7 ANNUAL ACCOUNT and SAR REPORT	103



CHAPTER- 1

THE INSTITUTE

ANNUAL REPORT 2020-21
NIT JAMSHEDPUR



CHAPTER-1: THE INSTITUTE

1.1 BRIEF OVERVIEW

National Institute of Technology Jamshedpur, earlier known as Regional Institute of Technology, was established on 15th August 1960 as a joint venture of the Government of India and the Government of Bihar in the chain of REC's (Regional Engineering College) in India with the aim to produce technical graduates of the highest standards who could provide technological leadership to the region. It was among the first eight Regional Engineering Colleges (RECs) established as part of the Second Five-Year Plan (1956 - 1961). This was the only REC in the country which was named as RIT (Regional Institute of Technology). Therefore, RIT Jamshedpur was actually the REC of undivided Bihar & Jharkhand. The foundation stone of RIT (REC) Jamshedpur was laid by Dr. Srikrishna Sinha, the then chief minister of Bihar, with the aim of nurturing talent and setting high standards of education and excellence. On 27th December 2002, on the line of all other RECs of India, RIT Jamshedpur (may be read as REC Jamshedpur too) was converted to National Institute of Technology Jamshedpur with the status of a Deemed University as per the decision of the Govt. of India. The Institute is fully funded and governed by the Ministry of Education (MoE), Government of India since 1st April, 2003. On 15 August 2007, NIT Jamshedpur was given the status of the Institute of National Importance through an act of Parliament known as the NIT Act. The Institute has 12 departments including engineering, science and humanities. The Institute, with 136 faculty, 3890 students, 168 administrative and supporting staff, functions on a self-contained campus. It is located on the outskirts of Jamshedpur on 341.3 acres of sprawling, wooded land. It combines the natural beauty of the countryside with the urban glamour of an industrial area. The flowing river and picturesque backdrop of low hills on one side and large tracts of forest on the other make the campus an ideal place for higher learning and research. It has been growing

from strength to strength ever since it was established in 1960. Situated in the heart of the rich mineral and industrial belt of Jharkhand State, the campus encompasses the Main building, the Library, the Computer Centre, 13 hostels (9 Boys hostels and 4 Girls hostels), staff quarters, Guest House, a Students Gymkhana, a Post-office, a branch of State Bank of India, two ATMs, central store and a dispensary. The hostels and departments are connected with high-speed LAN. The institute maintains courts for basketball, volleyball, badminton and tennis. Apart from this, it also has cricket, hockey and football grounds. The institute is poised for a bright and promising future. The courses have been completely restructured and prepared as per the needs of society and industries. There is refreshing development on every front. The institute has achieved impressive placement for its students, with top industrial houses and software companies recruiting the students in large numbers.

NIT Jamshedpur is situated in the western part of the city of Jamshedpur which is in the southern end of the state of Jharkhand which in turn is bordered by the states of Orissa and West Bengal. It is just far enough to ensure that the city with its noise is too distant to distract and just near enough to guarantee that all city facilities are immediately available. The institute is strategically located with the unique advantage of being surrounded by giant and medium scale industries like Tata-Steel, Telco, Indian Steel Wire Products, Tata Tubes, Tinsplate Company, Tata Timken etc. and reputed Institutes like the National Metallurgical Laboratory, Xavier Labour Relations Institute, Indo Danish tool room etc.

Overall placement record of the institute in this academic session (2020-21) has been excellent; amounting to 92.07% with average overall CTC of 9.25 LPA in which CSE topped the list with 100% placement with av CTC of 15.5 LPA.





1.2 VISION & MISSION



1.3 GOALS

- To offer effective teaching-learning to students.
- To provide the knowledge and skills to students to become global citizen as well as become socially responsible.
- Training the students to meet the changing needs due to rapid technological advancement, so that they may offer the society and industry the necessary technologies in order to become self-reliant.
- To provide facilities, infrastructure and resources to conduct meaningful research and to develop an understanding and awareness of the social

relevance of indigenous materials, capacities and technologies.

- To act as centres of excellence in technical education catalysing absorption, innovation, diffusion and transfer of higher technologies for improved productivity & quality of life at national and global level.
- To have regional consideration with regards to local needs relevance, strength, limitations and the community services.

1.4 PRIORITIES FOR ACADEMIC EXCELLENCE

- Modification of curricula in line with the NEP 2020
- Quality faculty and students
- Effective teaching, research and learning processes
- Strong leadership and good governance (processes and procedures, clear communication of policies, transparent and fair processes, supporting culture)
- Development of learning resources, infrastructure and technologies
- Industry and Alumni relations
- Involvement of people (students, faculty, staff and alumni)
- Welfare of the people (Students, faculty and staff)
- Community welfare and economic development





DIRECTOR'S DESK

1.5 MESSAGE FROM THE DIRECTOR



Greetings!

National Institute of Technology, Jamshedpur is one of the premier technical institutes in the country, imparting quality education. Since its inception, the institute has a vision to facilitate scientific and technological research, coupled with a mission to develop human potential for the benefit of the society.

In consonance with its vision, the institute is contributing substantially to our country's technological growth. The curriculum is regularly updated inline with the demand of the industry and to keep abreast with the latest developments in the scientific and technological spheres. The faculty members of the institute are well qualified and highly committed for carrying out fundamental, translational, and applied research.

The Academic year of 2020-21 has been unprecedented and eventful. It gave us opportunity to explore and implement online teaching, learning and the evaluation processes. National Institute of Technology, Jamshedpur utilized the facilities of online learning and imparted education through the virtual mode. Students are also encouraged to utilize courses available on NPTEL / SWAYAM platform. Institute has witnessed increase in sponsored research projects and publications.

Year after year, with its exemplary placement record, NIT Jamshedpur has reinforced its brand image as a leading technical institution. The students of the institute have been selected by most of the prominent Indian and multinational companies and PSUs and research

organizations. During the year 2020-21, placement record has improved a lot and students have successfully achieved more than 90% placement of the eligible UG students with an increase in the average salary. The exposure provided at this institute inculcates in the students not only technological acumen, but also an overall cognizance of the world. Our distinguished Alumni, several of them holding high offices, both in India and abroad, have been a perennial source of sustenance to us. Institute has organized several webinars for the students utilizing alumni resources. We march on as we look forward to continue our endeavour by chiselling worthy and humane engineers for a better tomorrow.

Much has been achieved but we need to travel collectively towards the path of progress. An institution grows with the contribution of its stakeholders who together resolve to put organisational goals before their own. We need to pursue our mission with dedication and responsibility in order to realize this vision of the institute. I am confident that the faculty members, the students and alumni will work in synergy to solve the problems related to the society through technological innovations leading to societal and Industrial development of the country as a whole.

With Best Regards
Dr. Karunesh Kumar Shukla
DIRECTOR



ADMINISTRATION

1.6 BOARD OF GOVERNORS

Board of Governors is the apex administrative body. The Director is the Principal Academic and Executive Officer of the Institute and is responsible for the proper administration of the Institute and for imparting instructions, maintenance of discipline therein. The Board of Governors of the National Institute of Technology (NIT) - Jamshedpur (Jharkhand) as per Section 11 of the NIT Act, 2007 and NIT (Amendment) Act 2012.

S. N.	NAME AND DESIGNATION OF NOMINATED PERSONS	SERVES AS
1.	Vacant (Director is acting as chairman)	Chairman & Ex-officio
2.	Prof. Karunesh Kumar Shukla Director, NIT Jamshedpur	Member
3.	JS & FA Ministry of Education, Govt. of India	Member
4.	ADG Ministry of Education, Govt. of India	Member
5.	Director, Higher Technical Education and Skill Development Government of Jharkhand Nominee	Member
6.	Director, B.I.T. Sindri Government of Jharkhand Nominee	Member
7.	Director I.I.T. Patna	Member
8.	NIT Council Nominee	Member
9.	NIT Council Nominee	Member
10.	Prof. A.K.L. Srivastava Professor, Senate Nominee, NIT Jamshedpur	Member
11.	Dr. Uday Kumar Assistant Professor, Senate Nominee, NIT Jamshedpur	Member
12.	Col. Nisheeth Kumar Rai (Rtd.), Registrar, NIT Jamshedpur	Secretary

1.7 FINANCE COMMITTEE

The Finance Committee of the National Institute of Technology (NIT) - Jamshedpur (Jharkhand) as per Section 10(1) of the NIT Statutes and with the approval of the competent authority is as follows:

S. N.	NAME AND DESIGNATION OF NOMINATED PERSONS	SERVES AS
1.	Vacant (Director is acting as chairman)	Chairman & Ex-officio
2.	Prof. Karunesh Kumar Shukla Director, NIT Jamshedpur	Member
3.	JS & FA Ministry of Education, Govt. of India	Member
4.	ADG Ministry of Education, Govt. of India	Member
5.	NIT Council Nominee	Member
6.	NIT Council Nominee	Member
7.	Col. Nisheeth Kumar Rai (Rtd.), Registrar, NIT Jamshedpur	Ex-officio Member, Secretary



1.8 BUILDING WORKS COMMITTEE

The members of building works committee of the National Institute of Technology (NIT) Jamshedpur (Jharkhand) as follows:

S. N.	NAME	DESIGNATION
1.	Prof. Karunesh Kumar Shukla, Director, NIT Jamshedpur	Ex-officio & Chairman
2.	Dr. Virendra Kumar, Dean (Planning & Development)	Member
3.	Prof. Anil Kumar Choudhary, Professor, Civil Engineering Department, NIT Jamshedpur	Member
4.	Mr. Man Mohan Kumar, Superintendent Engineer JBVNL, Government of Jharkhand	Member
5.	Shri. Vivek Prakash Srivastava, Chief Engineer, I.I.T. Kharagpur	Member
6.	JS & FA, Ministry of Education, Govt. of India	Member
7.	ADG, Ministry of Education, Govt. of India	Member
8.	Col. Nisheeth Kumar Rai (Rtd.), Registrar, NIT Jamshedpur	Ex-officio Secretary

1.9 SENATE

List of Members, Senate

S. N.	NAME	POSITION
1.	Prof. Karunesh Kumar Shukla	Chairman
2.	Prof. Amaresh Kumar	Member
3.	Prof. A. M. Tigga	Member
4.	Prof. Arun Kumar Singh	Member
5.	Prof. A. K. L. Srivastava	Member
6.	Prof. Anil Kumar Choudhary	Member
7.	Prof. Danish Ali Khan	Member
8.	Prof. Dilip Kumar Yadav	Member
9.	Prof. HiraLal Yadav	Member
10.	Prof. Mrityunjay Kumar Sinha	Member
11.	Prof. M. K. Paswan	Member
12.	Prof. Niranjana Kumar	Member
13.	Prof. (Mrs.) Prabha Chand	Member
14.	Prof. Rajendra Prasad Singh	Member
15.	Prof. R. V. Sharma	Member
16.	Prof. R. N. Mahanty	Member
17.	Prof. Sanjay	Member
18.	Prof. Shailendra Kumar	Member
19.	Prof. S. N. Singh	Member
20.	Prof. Tarni Mandal	Member
21.	Prof. U. Laha	Member
22.	Prof. Y. P. Yadav	Member
23.	Prof. Anjali Gera Roy, IIT Kharagpur	Member
24.	Prof. N.C. Shiva Prakash, IISC Bangalore	Member
25.	Dr. Indranil Chattoraj, Director NML Jamshedpur	Member
26.	Col. Nisheeth Kumar Rai (Rtd.), Registrar	Secretary

1.10 DEANS

S. N.	NAME AND DEPARTMENT	SERVES AS
1.	Prof. Prabha Chand Dept. of Mechanical Engineering	Dean, Faculty welfare
2.	Dr. Virendra Kumar Dept. of Civil Engineering	Dean, Planning and Development
3.	Prof. Amaresh Kumar Dept. of Production and Industrial Engineering	Dean, Academic and e-Governance
4.	Prof. Tarni Mandal Dept. of Mathematics	Dean, Students Welfare
5.	Prof. Ram Vinoy Sharma Dept. of Mechanical Engineering	Dean, Research and Consultancy
6.	Prof. Niranjana Kumar Dept. of Electrical Engineering	Dean, Industry and Alumni Relations



1.11 ASSOCIATE DEANS

S. N.	NAME AND DEPARTMENT	SERVES AS
1.	Dr. Subhash Singh Dept. of Production and Industrial Engineering	Associate Dean, Faculty Welfare
2.	Dr. Awdhesh Kumar Choudhary Dept of Civil Engineering	Associate Dean, Planning and Development (Civil works)
3.	Dr. Sanjay Kumar Dept. of Electrical Engineering	Associate Dean Planning and Development: Electrical Works and Engineering Services
4.	Dr. M. A. Hassan, Dept. of Mechanical Engineering	Associate Dean, Academics
5.	Dr. Mrutyunjay Rout Department of Electronics & Communication Engineering	Associate Dean, Academics
6.	Dr. Prashant Kumar Dept. of Electronics & Communication Engineering	Associate Dean, Students Welfare
7.	Dr. Kumari Namrata Dept. of Electrical Engineering	Associate Dean, Students Welfare
8.	Dr. Vishesh Ranjan Kar Dept. of Mechanical Engineering	Associate Dean, Research and Consultancy
9.	Dr. Tushar Banerjee Dept. of Production and Industrial Engineering	Associate Dean, Industry and Alumni Relations
10.	Dr. Chintalacheruvu Madhusudana Rao Dept. of Civil Engineering	Assistant Dean, Academic: Recognition and Accreditation

1.12 HEAD OF THE DEPARTMENTS

S. N.	NAME	DEPARTMENT
1.	Dr. Balram Ambade	Chemistry
2.	Dr. Akhileshwar Kumar Singh	Civil Engineering
3.	Dr. Sanjay Kumar	Computer Science and Engineering
4.	Prof. Shiva Nand Singh	Electronics & Communication Engineering
5.	Dr. Ashok Kumar Akella	Electrical Engineering
6.	Dr. Maninder Kapoor	Humanities, Social Sciences and Management
7.	Dr. Dilip Kumar Shaw	Computer Applications
8.	Dr. Sunil Kumar	Mathematics
9.	Prof. Shalendra Kumar	Mechanical Engineering
10.	Dr. Ashok Kumar	Metallurgical & Materials Engineering
11.	Prof. A. K. L. Srivastava	Physics
12.	Dr. Shashi Bhushan Prasad	Production and Industrial Engineering

The illustration features a large, stylized laptop as the central element. A person wearing a graduation cap is seated on the left side of the laptop screen, holding a book. Another person stands in the center, gesturing towards the screen. A third person is seated on the right side of the laptop, working on a laptop. The laptop is placed on a stack of books. A large yellow pencil lies horizontally across the bottom left of the stack. The background is white with large, stylized green leaves on the right side. The text is overlaid in a bold, dark green font.

CHAPTER- 2

EDUCATION SYSTEM

ANNUAL REPORT 2020-21

NIT JAMSHEDPUR



CHAPTER-2: EDUCATION SYSTEM

NIT Jamshedpur offers educational programmes namely, undergraduate Postgraduate and the Doctoral programmes with well-designed curriculum. NIT Jamshedpur has been following semester system with internal and continuous evaluation since its inception. The nomenclatures of programmes are B.Tech. (Hons.), M. Tech, M.Sc, MCA and Ph.D.



2.1 ACADEMIC PROGRAMMES OFFERED AT NIT JAMSHEDPUR

2.1.1 B. TECH. (HONS.) 4 YEARS DURATION

S. N.	NAME OF PROGRAMME
1.	Civil Engineering
2.	Computer Science and Engineering
3.	Electronics and Communication Engineering
4.	Electrical Engineering
5.	Mechanical Engineering
6.	Metallurgical and Materials Engineering
7.	Production and Industrial Engineering

2.1.2 POST GRADUATE PROGRAMMES: M.TECH (2 YEARS DURATION)

S. N.	NAME OF DEPARTMENT	SPECIALIZATION
1.	Civil Engineering	Structural Engineering Geotechnical Engineering Water Resources Engineering
2.	Computer Science and Engineering	Computer Science
3.	Electronics and Communication Engineering	Communication Systems Engineering Embedded Systems Engineering
4.	Electrical Engineering	Power System Engineering Power Electronics & Drives
5.	Mechanical Engineering	Computer Aided Design and Manufacturing Thermal Engineering Energy Systems Engineering
6.	Metallurgical and Materials Engineering	Foundry Technology Materials Technology
7.	Production and Industrial Engineering	Manufacturing System Engineering
8.	Chemistry	Surface Science and Engineering
9.	Computer Applications	Information Systems Security Engineering

2.1.3 MCA (3 YEARS DURATION):

S. N.	NAME OF DEPARTMENT	SPECIALIZATION
1.	Computer Applications	Master of Computer Applications

2.1.4 M.SC. (2 YEARS DURATION)

S. N.	NAME OF DEPARTMENT	SPECIALIZATION
1.	M. Sc.	Physics Chemistry Mathematics

2.1.5 Ph.D. ALL THE DEPARTMENTS OF THE INSTITUTE OFFER DOCTORAL PROGRAMMES.



2.2 BEST PRACTICES FOR ACADEMIC EXCELLENCE

Academic excellence is the brand image of NIT Jamshedpur. The best practices implemented for the academic excellence are:

- Lectures, examination, and evaluation in online mode during COVID-19 pandemic.
- Automated UG, PG, Ph.D. admission process has been introduced since the year 2013. In this admission process the complete details/database including bio-metrics of the student are captured on the first day of his/her admission. RFID multipurpose ID card is issued to each student on the spot. The OBC, SC and ST certificates are scanned and are sent for further verification at their respective offices.
- All academic programmes are scheduled as per the academic calendar. Academic calendar is distributed to all students during first week of both autumn and spring semesters.
- Academic registration process is made online through MIS.
- The detailed course handout which includes course description, scope, objectives, text & reference books, course plan, evaluation scheme, and chamber consultation hour etc. are shared with students.
- Online verification of degree certificate.
- Digital library (with e-text books, e-journals and e-learning resources).
- Visiting faculty from industry for teaching assignment.
- Equal emphasis on both, teaching and research.
- Flexibility of academic programmes and curriculum.
- Usage of learning resources and MOOCs.
- Online student feedback for various aspects of the course and its teaching. The results of the feedback are shared with teachers after grade submission for the course or next semester. The results of the student feedback are uploaded on the Institute website.
- Sharing laboratory experiments through online platform

In pursuance of academic excellence, NIT Jamshedpur is successfully implementing the above best practices for effective teaching and learning.

2.3 ADMISSION PROCEDURE

PROGRAMME	ADMISSION PROCEDURE
B.Tech	Admissions are made on the basis of JEE(Mains) and counselling is conducted by CSAB, on behalf of the Govt. of India, MoE
M.Tech	Admissions to the regular M.Tech. Programmes are made only on the basis of the GATE score through Centralized Counselling for M.Tech. admission in NITs (CCMT)
MCA	Admissions to M.C.A. programme are made on the basis of the rank in NITs MCA Common Entrance Test (NIMCET)
M.Sc.	Admissions to M.Sc. (Mathematics, Physics & Chemistry) programme are made on the basis of the rank of Joint Admission Test for M.Sc. (JAM) conducted by IITs and counselling conducted by CCMN
Ph.D.	Admission to Ph.D. (Regular/ Part-time / Sponsored) programme is conducted on the basis of the rank in online entrance test conducted by the Institute followed by a personal interview



2.4 EXAMINATION AND EVALUATION

Internal and continuous evaluation scheme:

- Solutions are shared with students through online platform.
- Answer books are open to revisit by students, if desired.
- Resorting to any unfair means during online examination incurs heavy penalty

Evaluation Scheme

S. N.	Evaluation Component	Duration	Weightage
1.	Mid semester	2 hrs	30%
2.	End Sem. Exam	3 hrs	50%
3.	Assignment/Tutorial	---	20%

- Attendance is made compulsory for online classes.
- Entry of daily class attendance and regular marks assessment details in MIS by faculty members.
- The academic division coordinates the overall examination system and the declared results are kept online and also sent by SMS to students.

2.5 TRAINING AND PLACEMENT

The Training and Placement Cell was established in the year 1973-74. The Training & Placement Cell handles all activities related to campus placements and internships of both UG & PG programs.

2.5.1 DEPARTMENT WISE PLACEMENT STATISTICS (UG)

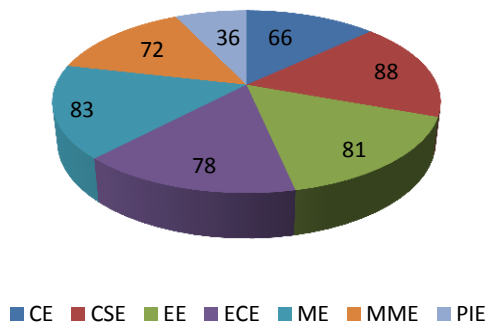
Department	Registered students	Placed students	% Placement	Av. CTC (in LPA) INR	Median CTC (in LPA) INR
CE	66	51	77.27	6.50	6.25
CSE	88	88	100	15.50	15.00
EE	81	76	93.83	7.70	7.00
ECE	78	75	96.15	11.47	9.80
ME	83	79	95.18	7.70	7.90
MME	72	63	87.50	6.05	6.00
PIE	36	32	88.89	6.30	6.00

Highlights

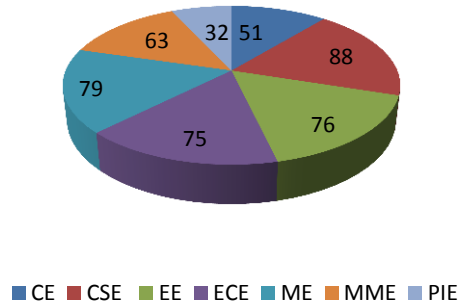
- Total students registered for placement: 504
- Single placement: 464
- Overall % placement: 92.07
- Overall, Max CTC: 37.5.00 (in LPA)
- Overall Av CTC: 9.25 (in LPA)
- Overall Median CTC: 7.8 (in LPA)



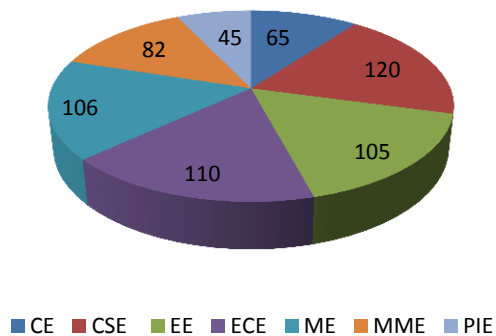
Registered students 2020-21



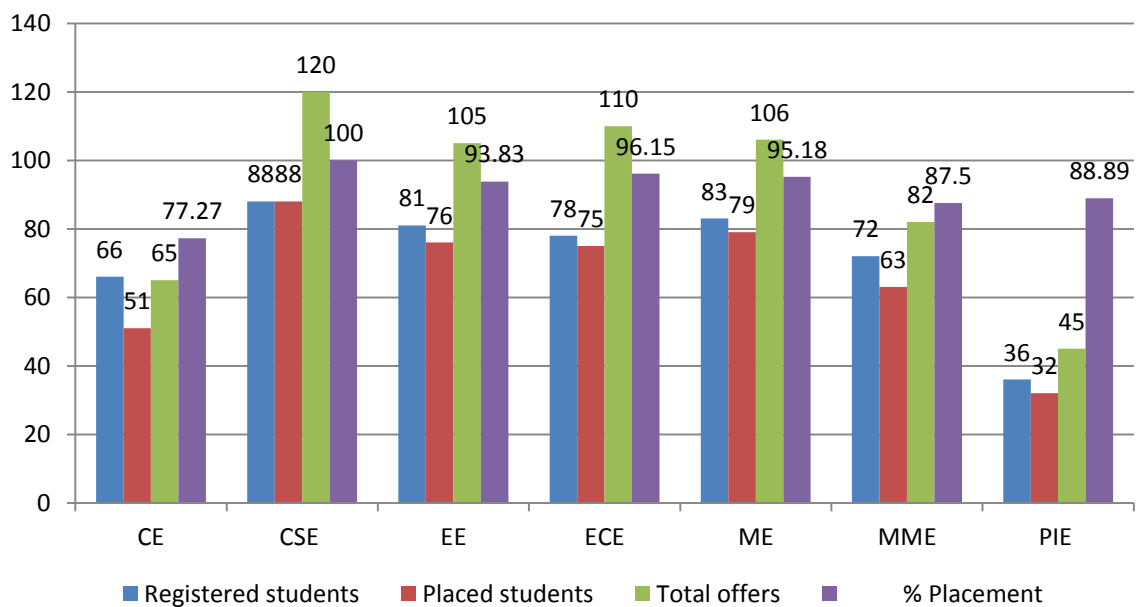
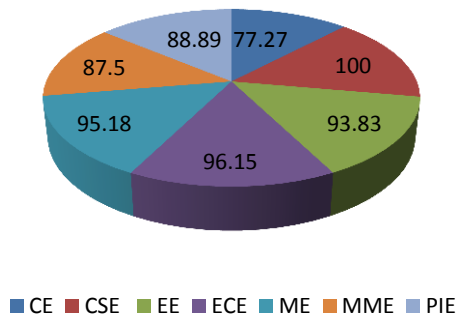
Single placement 2020-21



Placement offers 2020-21



% Placement 2020-21





PLACEMENT STATISTICS (PG)

DEPARTMENT	REGISTERED STUDENTS	PLACED STUDENTS	TOTAL OFFERS	% PLACEMENT
MCA	84	56	67	66.67
M.Tech	204	45	45	22.06

2.5.2 LIST OF COMPANIES

Name of the Company	Name of the Company	Name of the Company	Name of the Company
Aditya Birla Capital	Oracle Financial Services Software	Hero Motocorp	Deloitte
Cargil	Sigmoid Analytics	Ola Cabs Technologies	Tatametlics PPO
AMNS	Halfick	Adobe	Jio
Flipkart	OYO Rooms	Pradan NGO	Techno Electric
09 Solution	L&T ECC	Vedanta	Wipro
EXL	L&T Internship	Nokia	MAQ Software
Alstom Transport	Wipro Turbo	Axis bank	Anglo Eastern Pvt. Ltd.
Amazon (PPO)	Wipro Internship	Jindal Steel Limited	Srijan NGO
Amazon	EXL Decision Analytics	JIVOX	SNL Bearings
Techracers	Publicis Sapient	Tata Steel	Indus valley partner
Futures First	L&T Limited	Aditya Birla Hindalco	AFCONS Infrastructure Ltd.
Directi	UHG Optum	Reliance Jio Phase 2	Tata Steel Internship
Capgemini	UHG Optum Intern	Tata TinPlate	JSW Steel Ltd
ZF Wabco	General Electric	Tata Metaliks	MAQ software
Directi	Capgemini	Think & Learn (Byju's)	Merilytics
Buyhatke PPO	Zemoso Labs	Tata Steel (EEE & ECE)	Volvo Eicher Commercial Vehicles
Buyhatke	Philips	JCAPCPL	Miles Software
Buyhatke Intern	ShopClues	Reliance Jio Phase 3	Amdocs
Musigma	Reliance IT Hydrocarbons	Tata Hitachi	Amdocs Internship
Cerner (MCA)	Virtusa	Ebizon	Siemens
Accolite PPO	KPIT Technologies	L&T (CSE)	FIITJEE Limited
Accolite	Vassar Labs	JK Tyres	BuroHappold Engineering
Oracle GBU	Saint Gobain	JK Paper	Valued Epistemics(GREedge)
Wipro PPO	Saint Gobain Intern	LTI	Grey B
Juspay	Medlife	Bajaj Auto	India Power Corporation Limited
Amdocs	Samsung R&D Noida	KEC International	USHA MARTIN LTD.
Verizon	Saint Gobain PPO	DMI Finance	Tata steel long product
ZS Associates	Fortitude Info Services	Lowe's India	Toujours Peritus I
Mahindra Comviva	Reliance Jio	Axeela Advisory	Infosys
Tata Metaliks	IBM	Nu horizon	Nokia Internship
Incur Technologies	Infosys	Proc DNA	Samsung R&D Noida
Tata Steel PPO	Verizon	Tekion	Evosys
Tata Steel Intern	Honeywell Technology Labs	Sabre	Vodafone Phase 2
Tredence	Intecons Software Labs	Commvault	Edviso Internship
L&T ECC PPO	Tata Motors	Mentor Graphics	TCS Digital
Maruti Suzuki	Nucleus Software	Paytm	Myntra
Coviam	ThinkSys	Hyper verge	Pinclik
Ashok Leyland	Enfoedge	Oracle	Gupta Power
Smartprix	HyperVerge	OYO Rooms	Comviva
Meesho	Ganit	GE Healthcare	Jusco
Parul university	Vedanta		

Apart from this some of the Students prefers for higher Studies.



2.6 HOSTELS

There are a total of thirteen hostels also known as Halls of Residence, nine for boys and four for girls. They have been named in honour of great Indian personalities. All halls have internet access through Institute wide LAN. Each hostel has a mess and a common room. Each hall of residence also has its own badminton and volleyball courts. Girls' hostels are situated adjacent to the Computer Centre in the Institute's Residential Area, where the Faculty Quarters are located. The boys' hostels are located on either side of the Institute's Main building in two complexes- Up Hostels Complex, and Down Hostels Complex. The Up Hostels Complex holds hostels A, B, C and D. The Up Hostels Complex is home to 1st year and 2nd year students of the B. Tech Programme. The Down Hostels Complex holds hostels E, F, G, H, I, J and K. These are home to students of 3rd and 4th years of the B. Tech programme. . In addition, 1000 capacity boys' hostel has also been approved to cater the increased strength of students.



S. N.	NAME OF THE HOSTEL	BOYS/GIRLS	MAX. CAPACITY
1.	Rani Lakshmi Bai Hall of Residence	Boys	96
2.	Ambedkar Hall of Residence	Boys	96
3.	Visveswaraiah Hall of Residence (Hostel-E)	Boys	125
4.	Shivaji Hall of Residence (Hostel-F)	Boys	125
5.	S.C. Bose Hall of Residence (Hostel-G)	Boys	125
6.	Abul Kalam Hall of Residence (Hostel-H)	Boys	130
7.	Hall of Residence (Hostel-I)	Boys	300
8.	Hall of Residence - J (Hostel - J)	Boys	740
9.	Hall of Residence - K (Hostel - K)	Boys	740
10.	Aryabhatta Hall of Residence (Hostel-A)	Girls	180
11.	Nirala Hall of Residence (Hostel-B)	Girls	180
12.	Bhabha Hall of Residence (Hostel-C)	Girls	180
13.	Rajendra Prasad Hall of Residence (Hostel-D)	Girls	180
TOTAL			3197

2.6.1 DISCIPLINARY COMMITTEE

The institute has a disciplinary committee to impart social and ethical values among the students and to maintain a disciplined environment for studies with a motive to produce law abiding and disciplined engineers for the nation. The understated are the guidelines for the students which must be followed:

- All the students of N.I.T. Jamshedpur are warned not to leave the Hostel/Classroom/Campus without the prior permission of the concerned Warden/HOD/Faculty Coordinator.
- In particular, the Students are strictly prohibited from venturing viz. Kharkai river / Lake / Pond or similar places.
- The Students are hereby directed not to indulge in any type of intoxication.
- Further the Students are warned to abide by the rules and regulations of the Institute and the Hostels for maintaining discipline in the Institute Campus.
- The Students who are found to violate the rules of the Institute/Hostel, stern disciplinary action will be taken against those students.
- The "Standing Institute Disciplinary Committee (SIDC)" is constituted for two years (ie. 2019-20 and 2020-21).
- For an offence committed (a) in a hostel, (b) in the department or a classroom and (c) elsewhere, the Warden, the Head of the Department and the Dean, Students Welfare respectively shall have the authority to reprimand or impose fine or take any other suitable measure.
- All cases involving punishment other than reprimand shall be reported to the Chairperson of the Standing Institute Disciplinary Committee



CHAPTER- 3

ACADEMIC UNITS

ANNUAL REPORT 2020-21
NIT JAMSHEDPUR



TCHAPTER-3: ACADEMIC UNITS

3.1 DEPARTMENT OF CHEMISTRY

Department of chemistry, National Institute of Technology Jamshedpur was originally founded as a department under regional institute of technology in 1960 to nurture talent and set high standards of education and excellence. The department offers instruction in general chemistry and engineering chemistry to the students in different branches of engineering students at B.Tech. Level. The department started the post graduate programme (M. Tech.) In surface science and engineering in 1982. The department is equipped with various instruments. Besides teaching, the

highly qualified and energetic faculty members of the department have contributed a lot to elevate the prestige of the institute through their research activities of both basic and applied areas of chemistry.



3.1.1 VISION AND MISSION

Vision

- To create the Department of Chemistry as a centre of excellence in science and technology through enhanced collaboration between Industries and academia and serving the country.
- Building world class research facilities to train young minds through an extensive research curriculum.
- To provide a pool of bright scientists for the advanced scientific endeavour of our country.






Mission

- To provide good fundamental concepts of Chemistry applied to the Engineering field.
- To introduce the importance of Chemistry in industry as well as in the research field.
- To study the importance of chemicals, chemical reactions and physical phenomena, synthesis in higher study of Engineering.

3.1.2 FACULTY

S.N.	NAME OF THE FACULTY	SPECIALIZATION/ RESEARCH AREA	PHOTO
1.	Dr. Shailesh Kumar Prasad, Ph.D., Associate Professor	Organic Chemistry, Radio, Analytical Chemistry, Surface Chemistry	
2.	Dr. Balram Ambade, Ph.D., Associate Professor & Head	Environmental Chemistry and Analytical Chemistry	
3.	Dr. Sudhanshu Shekhar Pati, Ph.D., Assistant Professor	Magnetic Materials, Functional Nanoparticles, Energy Materials, Nanomaterials for Biomedical Applications like Magnetic Hyperthermia and Drug Delivery	
4.	Dr. Subrata Mahanta, Ph.D., Assistant Professor	Physical Chemistry	



5.	Dr. Prabhat Kumar, Ph.D., Assistant Professor	Organic and Materials Chemistry	
6.	Dr. Naveen Kumar Veldurthi, Ph.D., Assistant Professor	Photocatalysis	
7.	Dr. Moumita Mondal, Ph.D., Assistant Professor	Inorganic Chemistry	
8.	Dr. Tapas Das, Ph.D., Assistant Professor	Organic Chemistry	
9.	Dr. Sekharpandi Sakthivel, Ph.D., Assistant Professor	Organic Chemistry	

3.1.3 ACADEMIC PROGRAMMES

The Department offer the following courses:

(a) Post-Graduate Programmes

M. Tech : Surface Science and Engineering

M.Sc : Chemistry

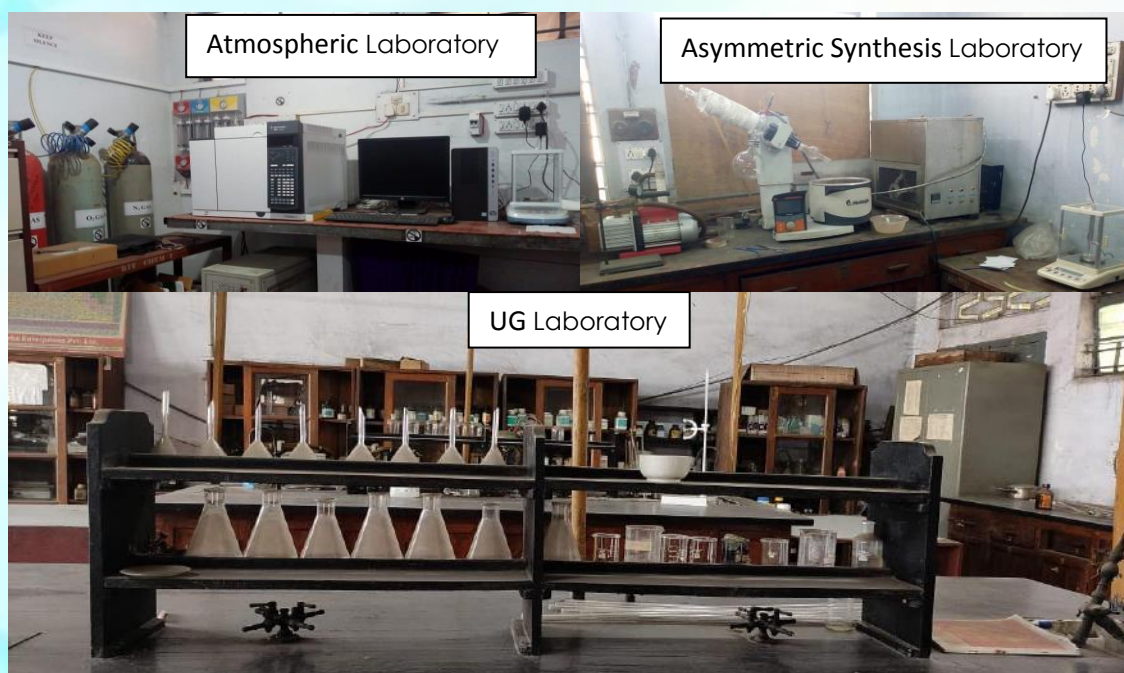
(b) Doctoral Programmes

3.1.4 EQUIPMENT PROCURED

S. N.	EQUIPMENT	COST (INR)	FUNDING AGENCY
1.	Ice Flaking Machine	1.5 Lakh	Institute fund
2.	Hot Air Oven	72,000	Institute fund

3.1.5 LABORATORIES

1. Undergraduate (B.Tech)
2. Organic Chemistry Laboratory (M.Sc)
3. Physical Chemistry Laboratory (M.Sc)
4. Inorganic Chemistry Laboratory (M.Sc)





3.2 DEPARTMENT OF CIVIL ENGINEERING

The Department of Civil Engineering of National Institute of Technology (formerly Regional Institute of Technology) Jamshedpur was started since the institute's inception in 1960. The department is running UG course for B. Tech. (Hons) degree in Civil Engineering and PG courses as M. Tech. degree in the streams of Structural Engineering, Geotechnical Engineering and Water Resource Engineering, and Ph. D. program in various streams of Civil Engineering. The department has well-qualified and experienced faculty members. Apart from teaching and research, faculty members are actively involved in administrative works and other extracurricular activities for all-round development of the Institute. Faculty members of the department are also undertaking design, testing & consultancy works for various organizations leading to resource generation for the Institute. The Under Graduate programme of the department has been accredited by NBA for 3 years in 2019.

3.2.1 VISION AND MISSION






Vision

To become the best department for the research, academic and consultancy with the vigorous participation of faculty, research scholars and students and produce smart solutions with ethics and morals in civil engineering for the benefit of society and industry.

Mission

- To develop modern laboratories, centre of excellence and advanced computational facilities.
- To conduct research in all fields of civil engineering and interdisciplinary areas.
- To motivate research scholars and students towards best professional practices.
- To make graduating students exposed to industry and R & D organizations to get better opportunities.
- To offer educational programmes that imparts inventive knowledge with high levels of ethical and human values.



3.2.2 FACULTY

S. N.	NAME OF THE FACULTY	SPECIALIZATION/ RESEARCH AREA	PHOTO
1.	Dr. Karunesh Kumar Shukla Ph.D., Professor & Director, NIT Jamshedpur	Mechanics, Stability & Solid Mechanics, Smart Structures & Materials, Composite Plates and Shells, Retrofitting & Strengthening of RCC Structures, Computational Dynamics of Structures, Multi-scale Composites	
2.	Dr. Arvind Kumar Lal Srivastava, Ph.D., Professor	Structural Engineering	
3.	Dr. Anil Kumar Choudhary, Ph.D., Professor	Geotechnical Engineering	
4.	Dr. Akhileshwar Kumar Singh, Ph.D., Associate Professor & Head	Geotechnical Engineering	
5.	Dr. Rakesh Pratap Singh, Ph.D., Associate Professor & Head	Geotechnical Engineering	



6.	Dr.Abdhesh Kumar Sinha , Ph.D., Associate Professor	Transportation Engineering	
7.	Dr.Brajkishor Prasad Ph.D., Associate Professor	Structural Engineering	
8.	Dr. Chintalacheruvu Madhusudana Rao, Ph.D., Associate Professor	Water Resources Engineering	
9.	Dr. Prahlad Prasad Ph.D., Associate Professor	Structural Engineering	
10.	Dr. Sanjay Kumar Ph.D., Associate Professor	Structural Engineering	
11.	Dr. Shashi Ranjan Pandey Ph.D., Associate Professor	Structural Engineering	
12.	Dr. Virendra Kumar Ph.D., Associate Professor	Structural Engineering	
13.	Mr. Nigam Prakash M.Sc. Engg., Associate Professor	Water Resources Engineering	
14.	Mr. Sajjan Kumar Paswan M.Sc. Engg., Associate Professor	Geotechnical Engineering	
15.	Mr. Ashok Kumar M.Sc. Engg., Assistant Professor	Structural Engineering	
16.	Dr.Awdhesh Kumar Choudhary Ph.D., Assistant Professor	Geotechnical Engineering	
17.	Dr. Keshav Kumar Sharma Ph.D., Assistant Professor	Structural Engineering	
18.	Dr. Sabyasachi Biswas Ph.D., Assistant Professor	Transportation Engineering	
19.	Dr. Sangeeta Kumari Ph.D., Assistant Professor	Water Resources Engineering	
20.	Dr.Seeram Madhuri Ph.D., Assistant Professor	Structural Engineering	



21.	Dr. Somenath Mondal Ph.D., Assistant Professor	Environmental Geotechnology, Geotechnical Engineering	
22.	Dr. Subhadeep Metya Ph.D., Assistant Professor	Geotechnical Engineering	

3.2.3 ACADEMIC PROGRAMMES

The Department offer the following courses:

(a) Under-Graduate Programme

B. Tech (H): Civil Engineering

(b) Post-Graduate Programmes

M. Tech:

- Geotechnical Engineering
- Structural Engineering
- Water Resources Engineering

(c) Doctoral Programmes

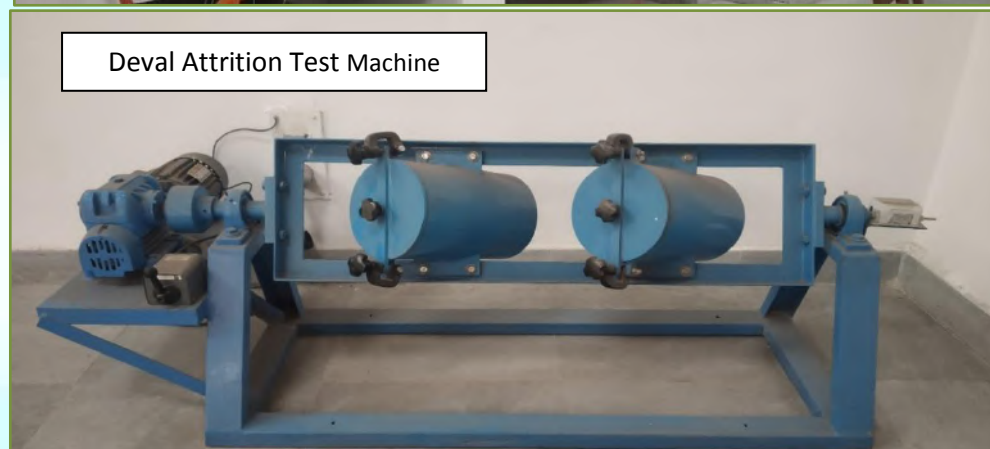
3.2.4 EQUIPMENT PROCURED

S. N.	EQUIPMENT	COST (INR)	FUNDING AGENCY
1.	Digital Compression Testing Machine	3,00,000/-	Institute fund
2.	Rock Tri-axial Test Apparatus (Digital)	3,75,000/-	
3.	Rock Bolt Pullout Test Apparatus	1,25,000/-	
4.	Rock Core Drilling Machine	1,12,000/-	
5.	Rock Core Box	21,000/-	
6.	Rock Hardness Rebound Hammer	14,500/-	
7.	Miniature High-Pressure Permeameter	1,20,000/-	
8.	Pressure Cell and Indicator, Pressure cell, Strain gauge indicator, Load cell and indicator	1,19,700/-	TEQIP-III
9.	Aggregate Crushing Valve Apparatus, Aggregate Impact Test Apparatus with Counter, Los Angeles Abrasion Testing Machine, Shape Test; (Length Gauge & Thickness Gauge), Universal Penetrometer, Ring and Ball Apparatus, Film Stripping Device (Electrically Operated), Ductility Testing Machine, Flash & Fire Point Apparatus, Deval Attrition Testing Machine, Dorry Abrasion Testing Machine, Wheel Rut Shaper, Standard Penetrometer, Viscometer, Marshall Stability & Compaction Apparatus, Benkelman Beam, Surface Irregularity (Merlin), Asphalt Mixing, hardness Tester For Asphalt	14,42,973/-	Institute fund
10.	Multi-Channel Analysis of Surface Waves (MASW)	11,90,861.00	
11.	MATLAB & SIMULINK (Academic Version)	289044	
12.	Rock Direct Shear Apparatus (Digital)	2,62,500/-	



3.2.5 LABORATORIES

1. Soil Mechanics
2. Geosynthetics and Geoenvironmental Engineering
3. Transportation Engineering
4. Concrete and Structure
5. Survey
6. Environmental Engineering
7. Hydraulics & Water Resource Engineering
8. Computational
9. Rock Mechanics & Rock Engineering
10. NDT and Durability of Concrete





3.3 DEPARTMENT OF COMPUTER APPLICATIONS

The Department of Computer Applications at the National Institute of Technology Jamshedpur was founded in 1987. Since its inception, the Department has consistently been recognized all over the country for its excellence. The Department has always produced quality professionals in Computer & Network and strived for excellence in research and development.

3.3.1 VISION AND MISSION






Vision

- To provide leading programs in the field of computer applications.
- The graduates produced would be globally recognized as innovative and well-prepared computing professionals. In addition, these graduates would be leaders and innovators in the industry, education, and other walks of social life.
- The faculty working in the department would influence the national and international agenda through quality in teaching and research.
- Department would strive for inter-disciplinary pursuits that reinforces the impact of computation in other disciplines.
- To Produce "Creators of Innovative Technology".

Mission

- To impart knowledge in the state of art in Computer Applications with relevant theoretical basis.
- To offer high quality graduate programs, to train the students in different aspects of computing discipline and to offer other training programs to enhance, augment, and/or update technical skills of stakeholders.
- To provide a learning environment that helps students be successful in their professional lives and prepare students to be lifelong learners by offering a solid theoretical foundation in computing and applied computing experiences and educating them about their professional and ethical responsibilities.
- To have high quality faculty and staff with appropriate know-how and degrees with a commitment to remain professionally advanced through ongoing research and professional development programs.
- To attract and retain a diverse and multicultural population of students, faculty and staff.
- To participate in design and development process in R&D establishment and industry.
- To promote research of international quality.

3.3.2 FACULTY

S. N.	NAME OF THE FACULTY	SPECIALIZATION/ RESEARCH AREA	PHOTO
1.	Dr. Dilip Kumar Yadav, Ph.D., Professor	Software Engineering, Software Reliability, Fuzzy Logic, Soft Computing, Operation Research	
2.	Dr. Danish Ali Khan, Ph.D., Professor	Optimization Technique, Computer Applications	
3.	Dr. Dilip Kumar Shaw Ph.D., Associate Professor & Head	Network optimization, Data Structures & Program Design, Supply Chain Management	
4.	Dr. Ashok Kumar Mehta, Ph.D., Associate Professor	Computer organization and Architecture, Soft Computing	
5.	Dr. Chandrashekhar Azad, Ph.D., Assistant Professor	Data Mining, Intrusion Detection System, Swarm Intelligence, Artificial Intelligence	



6.

Dr. Alekha Kumar Mishra,
Ph.D., Assistant Professor

Network Security



3.3.3 ACADEMIC PROGRAMME

The Department offer the following courses:

(a) Post-Graduate Programmes

- M. Tech :Information Systems Security Engineering
- MCA :Master of Computer Applications

(b) Doctoral Programmes

3.3.4 EQUIPMENT PROCURED

S. N.	Equipment	Cost (INR)	Funding Agency
1.	CPPLUS DVR, DOME Camera, HDD and other accessories	24,587/-	Institute fund

3.3.5 LABORATORIES

- Software Laboratory
- Software Development Laboratory



Software Laboratory



3.4 DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

The Department of Computer Science and Engineering was founded in 1992. Since its inception, the department has always been recognized all over the country for its excellence. The Department has consistently produced quality professionals in the field of Computer Science & Engineering and has striven towards excellence in research and development.

3.4.1 VISION AND MISSION








Vision

Producing high quality, industry ready Computer engineers to cater to the needs of the society.

Mission

To train young minds and to equip them with the best possible technical knowledge to meet the current and future demands of the industry, academia & research. To create infrastructure, motivation and culture for the state-of-the-art research work in the area of Computer Science & Information Technology.

3.4.2 FACULTY

S. N.	NAME OF THE FACULTY	SPECIALIZATION/ RESEARCH AREA	PHOTO
1.	Dr. Sanjay Kumar Ph.D., Associate Professor & Head	Computer Networks, Artificial Intelligence, Parallel Processing, Mobile Computing	
2.	Dr. B. K. Singh Ph.D., Associate Professor	Computer Network, Image Processing, Computerized Tomography	
3.	Mr. Rajiv Ranjan Suman M. Tech., Associate Professor	Software Engineering, Algorithms	
4.	Dr. Dilip Kumar Ph.D., Assistant Professor	Computer Graphics, Operating System, Internet Technology, Network Security	
5.	Dr. Koushendra Kumar Singh, Ph.D., Assistant Professor	Image Processing, Computerized Tomography	
6.	Dr. Subrata Dutta, Ph.D., Assistant Professor	Mobile Computing, Wireless Sensor Network	
7.	Dr. Vinay Kumar, Ph.D., Assistant Professor	Software Engineering Mathematical Modeling Dependability analysis of Computer Based Systems	

3.4.3 ACADEMIC PROGRAMME

The Department offer the following courses:

- (a) Under-Graduate Programme
 - B.Tech (H): Computer Science and Engineering
- (b) Post-Graduate Programmes
 - M.Tech: Computer Science and Engineering
- (c) Doctoral Programmes



3.4.4 LABORATORIES

- Network Laboratory
- Software Laboratory I
- Software Laboratory II



Network Laboratory





3.5 DEPARTMENT OF ELECTRICAL ENGINEERING

The Department of Electrical Engineering was started in 1960. Since its inception, the Department has been consistently producing quality Electrical Engineers and is also involved in research and development activities. As a result, the department's alumni are well placed in both the public and private sectors. In addition to the UG program, the department runs PG programs in Power Systems and Ph.D. programs in different areas of specialization.

3.5.1 VISION AND MISSION

Vision

To be a centre for imparting world class education in the field of electrical engineering, to conduct extensive and quality research and to propel innovations for the betterment of society.





Mission

To train young minds and to equip them with the best possible technical knowledge to meet the current and future demands of the industry, to recognize education and research in close interaction with the industry and to install leadership qualities in young men and women who enter the portals of the institute with sensitivity for social development and with an eye for growth in international perspective.

3.5.2 FACULTY

S. N.	NAME OF THE FACULTY	SPECIALIZATION/ RESEARCH AREA	PHOTO
1.	Dr. Rabindra Nath Mahanty Ph.D., Professor	Power System Protection	
2.	Dr. Arun Kumar Singh Ph.D., Professor	Control System	
3.	Dr. Niranjana Kumar Ph.D., Professor	Power System	
4.	Dr. Ashok Kumar Akella Ph.D., Associate Professor & Head	Control System and Renewable Energy System	
5.	Dr. Krishna Behari Yadav Ph.D., Associate Professor	Electrical Machine	
6.	Dr. Umesh Kumar Sinha Ph.D., Associate Professor	Renewable Energy	
7.	Dr. Kumari Namrata Ph.D., Associate Professor	Renewable Energy	
8.	Dr. Madhu Singh, Ph.D., Associate Professor	Power Electronics and Drives	
9.	Mr. Sushil Kumar Gupta M.Tech., Associate Professor	Power System	



10.	Dr. Sanjay Kumar Ph.D., Assistant Professor	Power System	
11.	Dr. Ananyo Bhattacharya Ph.D., Assistant Professor	Power electronics	
12.	Dr. Jitendra Kumar Ph.D., Assistant Professor	Power System	
13.	Dr. Om Hari Gupta, Ph.D., Assistant Professor	Power System Protection, Microgrid, Renewable-based Distributed Generation, Power Quality	
14.	Mr. Alok Priyadarshi, B.Tech., Assistant Professor	Power System	

3.5.3 ACADEMIC PROGRAMME

The Department offer the following courses:

- (a) Under-Graduate Programme: B. Tech (H):
Electrical Engineering
- (b) Post-Graduate Programmes:
M. Tech:
- Power Systems Engineering
 - Power Electronics and Drives
- (c) Doctoral Programmes

3.5.4 EQUIPMENT PROCURED

S. N.	EQUIPMENT	COST (INR)	FUNDING AGENCY
1.	Microprocessor 8085 Trainer Kit	89,800/-	Institute fund
2.	Microprocessor 8086 Trainer Kit	103800/-	
3.	Microcontroller 8051 Trainer Kit	95800/-	
4.	IDMT over current relay	49000/-	
5.	IDMT Over Voltage Relay	49000/-	
6.	IDMT under Voltage Relay	56000/-	
7.	Characteristics time delay relay	45000/-	
8.	ACB circuit breaker	240000/-	
9.	Directional Overcurrent Relay	79091.25/-	
10.	Earth fault relay testing system	83002.5/-	
11.	Digital Differential Relay	124950/-	

3.5.5 LABORATORIES

- Power Electronics Laboratory
- Control System Laboratory
- Microprocessor Laboratory
- Electrical Measurement Laboratory
- Electrical Machine Laboratory
- Power System Laboratory
- Power System Simulation Laboratory



Differential Current Relay Test Setup



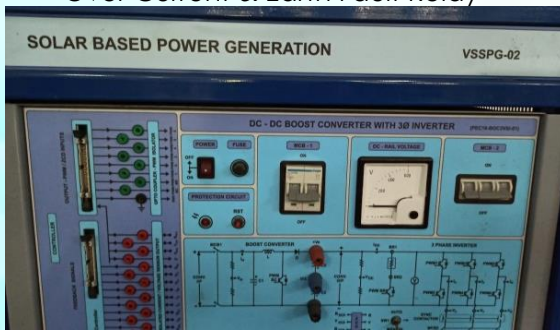
MicroLabBox (dSPACE)



Over Current & Earth Fault Relay



DFIG-based power generation



Solar Based Power Generator



Opal-RT real-time Simulator



3.6 DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

The Department of Electronics and Communication Engineering was started in 1989. The department covers a host of subjects, including Electronic Circuits, Microprocessor, Digital Signal Processing, Analogy Communication, Digital Communication, Mobile Communication, VLSI, Embedded systems, Instrumentation, etc. The department has laboratories catering to all the subjects of study. Five research scholars are working in different specializations under Communication Engineering, VLSI and Embedded systems, Signal Processing, Instrumentation and Soft Computing. The Department has a highly motivated faculty pool to mentor the students.

3.6.1 VISION AND MISSION









Vision

- Global Knowledge Hub
- Excellence in technical and interdisciplinary domain
- Amalgam of research and entrepreneurship in pursuit of Make in India drive
- Beckoning pillar for digital India




Mission

- Imparting total quality education to develop next generation professional scholars, fit for the globally competitive environment.
- Value creation through economic, social, and environmental development using original ideas through discovery, inquiry, innovation, research, transformational scholarship, and creative activities.
- Dramatic increase in product-oriented research for establishing a self-sustaining and wealth creating centre by involving the interaction among committed, diverse faculty, staff, students and community to serve the societal needs of the State of Jharkhand, India and ultimately, the world.

3.6.2 FACULTY

S. N.	NAME OF THE FACULTY	SPECIALIZATION/ RESEARCH AREA	PHOTO
1.	Dr. Shiva Nand Singh Ph. D., Professor	VLSI design & Embedded Systems Softcomputing Instrumentation & IndustrialControl System Solar Technology Powermelectronics Image Processing RF & Microwave Engineering	
2.	Dr. Arvind Choubey Ph. D., Professor, (on lien, currently working as Director, IIT Bhagalpur)	Soft Computing, Digital Signal Processing, Microwave Engineering, Communication Engineering	
3.	Dr. Amit Prakash, Ph. D., Associate Professor & Head	Parallel Computing, Network Reliability, Mobile Communication and Networking, Microprocessor, VLSI Design	
4.	Dr. Akhilesh Kumar, Ph. D., Associate Professor	Antenna Design, Application of VLSI, Microwave Engg., Power electronics, Solar Cell, Communication Engg. Analog and Digital ckt etc.	
5.	Dr. Rashmi Sinha, Ph. D., Associate Professor	Soft Computing, Digital Signal Processing, Antenna Design and Metamaterial Absorber	
6.	Mr. B. N. S. Munda, M.Tech, Associate Professor	Power Electronics, Devices & Circuits and Renewable Energy	
7.	Mr. Dilip Kumar, M.Tech, Associate Professor	Communication Systems Microwave Engineering Devices and Circuits	
8.	Dr. Jayendra Kumar Ph. D., Assistant Professor	Digital signal and Image Processing, IoT, Embedded System	



9.	Dr. Basanta Bhowmik Ph. D., Assistant Professor	Nanoelectronics and VLSI, Micro/Nano material based Sensor, Non-invasive disease diagnosis.	
10.	Dr. Ajay Kumar, Ph. D., Assistant Professor	Optical Fiber Communication, Optical Logic Devices, Sensors	
11.	Dr. Basudeba Behera Ph. D., Assistant Professor	Micro/ Nanoelectromechanical Systems (MEMS/NEMS), Piezoelectric devices, SAW devices/ motors, Internet of Things (IoT)	
12.	Dr. Kunal Singh, Ph. D., Assistant Professor	Microelectronics, Low Power VLSI Devices.	
13.	Dr. Mayank Srivastava, Ph. D., Assistant Professor	Analog integrated circuits and analogue signal processing	
14.	Dr. Nagendra Kumar Ph. D., Assistant Professor	Communication Systems, Wireless communication	
15.	Dr. Mrutyunjay Rout Ph. D., Assistant Professor	Wireless Sensor Network and Signal processing	
16.	Dr. Prashant Kumar Ph. D., Assistant Professor	Communication Systems	
17.	Dr. Swagatadeb Sahoo, Ph. D., Assistant Professor	Microwave Engineering, Broadband Dielectric Spectroscopy	

3.6.3 EQUIPMENT PROCURED

S. N.	EQUIPMENT	COST (INR)	FUNDING AGENCY
1.	Mixed Signal Oscilloscope (Scientech MSO2102A-S 100 MHz 2 Ch)	1,21,000/-	Institute fund
2.	Function Generator (Scientech DG822 25 MHz)	32,500/-	Institute fund
3.	Vector Network Analyzer (Rohde & Schwarz made 20 GHz)	34,84,191/-	Institute fund
4.	Dielectric Probe (Frequency Range 200 MHz-20 GHz)	12,87,300/-	Institute fund
5.	Waveguide (Frequency Range 8.2-12.5 GHz)	2,83,500/-	Institute fund





3.6.4 ACADEMIC PROGRAMME

The Department offer the following courses:

- (a) Under-Graduate Programme
 - B. Tech (H): Electronics & Communication Engineering
- (b) Post-Graduate Programmes
 - M. Tech:
 - Embedded System
 - Communication Systems
- (c) Doctoral Programmes

3.6.5 LABORATORIES

- Basic Electronics Laboratory
- Analog Electronics Laboratory
- Digital Electronics Laboratory
- Microprocessor & Microcontroller Laboratory
- Data Communication & Networking Laboratory
- Communication & DSP Laboratory
- Industrial Electronics & Drives Laboratory
- VLSI Design Laboratory
- Microwave and Antenna Laboratory
- Thin film Devices Laboratory
- Modelling & Simulation Laboratory



Basic Electronic Laboratories



3.7 DEPARTMENT OF HUMANITIES, SOCIAL SCIENCES AND MANAGEMENT

The department came into being as Humanities department since the institute's inception in 1960 as Regional Institute of Technology. Later the department was upgraded as the Department of Humanities and Social Sciences in line with IITs. The Department was engaged in teaching English, Philosophy, Psychology, Political Science, and Economics to B.Sc. (Engg.) students. In 2014, the Department was enhanced to the Department of Humanities, Social Sciences and Management. The Department is currently engaged in teaching English for Communication, Introduction to Soft Skills, Organizational Behaviour and Industrial Psychology, Industrial Economics and Accountancy, Management Information System courses to B.Tech (Hons.) students, and Technical Communication to M.Tech., Communication Skills to M.Sc., Financial Management, Organizational Behaviour and Management to MCA and Electives (Principles of Economics, Entrepreneurship Development). The faculty members of the Department also train students in the area of oral and written communication skills for placement purposes.

3.7.1 VISION AND MISSION

Vision

To contribute to the emergence of NIT Jamshedpur as a world-class institution, producing highly skilled engineers who are the finest specimens of technology at its best merging aesthetics with human values and social responsibility to make this world a better place.

Mission

To contribute to the holistic development of the students' personality to enable them to meet their professional and societal challenges successfully, teach essential human values in them, and make them sensitive to the concerns of the environment.

3.7.2 FACULTY

S. N.	NAME OF THE FACULTY	SPECIALIZATION/ RESEARCH AREA	PHOTO
1.	Dr. Rajiv Bhushan Ph.D., Associate Professor	American Literature	
2.	Dr. Maninder Kapoor Ph.D., Assistant Professor & Head	Indian English Women's Fiction	
3.	Dr. Manish Kumar Jha Ph.D., Assistant Professor	Finance	
4.	Dr. Akanksha Shukla Ph.D., Assistant Professor	Marketing & Finance	
5.	Dr. Shwati Sudha Ph.D., Assistant Professor	Human Resource Management & OB	
6.	Dr. Doreswamy Ph.D., Assistant Professor	English	

3.7.3 ACADEMIC PROGRAMME

The Department offer the following courses:

(a) Doctoral Programmes

Ph. D.

- English
- Management



3.8 DEPARTMENT OF MATHEMATICS

The Department of Mathematics was established with the inception of National Institute of Technology as Regional Institute of Technology, Jamshedpur in 1960. The Department caters to the institute's need by providing teaching to the undergraduate and post-graduate students of engineering in several branches. It also offers two years master's program in Mathematics and Ph. D. program in different areas of Pure and Applied Mathematics. The Department provides an outstanding research environment complemented by excellent teaching for its students to flourish in various areas of academics and industry. The department has produced a good number of Ph.D. students placed in leading institutes and R & D organizations. The Department's faculty members are handling research projects from reputed organizations such as Science & Engineering Research Board (SERB), DRDO, NBHM etc.



3.8.1 VISION AND MISSION

Vision

To be recognized as one of the best Mathematics Departments in the country and establish a reputation in terms of teaching and research.






Mission

- To set high standards of excellence in creating and disseminating knowledge in Mathematics.
- To focus on the emerging area of Research in Pure & Applied Mathematics.

3.8.2 FACULTY

S. N.	NAME OF THE FACULTY	SPECIALIZATION/ RESEARCH AREA	PHOTO
1.	Dr. Tarni Mandal Ph.D., Professor	Operations Research, Fractional Functional Programming Problem, Statistics, Numerical Methods	
2.	Dr. Sripati Jha Ph.D., Associate Professor	Approximation theory, Numerical methods	
3.	Dr. Ramayan Singh Ph.D., Associate Professor	Heat and Mass Transfer, Boundary Layer Theory, Numerical Methods	
4.	Dr. Sunil Kumar Ph.D., Associate Professor & Head	Mathematical Modelling, Fractional Calculus, Mathematical Physics, Numerical Methods, Wavelet Methods	
5.	Dr. Raj Nandkeolyar, Ph.D., Assistant Professor	MHD fluid flow, Numerical Analysis	
6.	Dr. Hari Shankar Prasad, Ph.D., Assistant Professor	Numerical Analysis, Singularly Perturbed differential-difference equations, Delay problems	
7.	Dr. Ratnesh Kumar Mishra, Ph.D., Assistant Professor	Commutative Algebra, Computational Algebra and Fuzzy Algebra	



8.	Dr. Snehasis Kundu Ph.D., Assistant Professor	Mathematical Modeling of Turbulent Flow, Hydraulics, Fractional Modelling	
9.	Dr. Sourav Das Ph.D., Assistant professor	Complex Analysis, Special Functions	
10.	Dr. Sumit Kumar Debnath, Ph.D., Assistant Professor	Cryptology & Network Security, Coding Theory	
11.	Dr. Rajat Tripathi Ph.D., Assistant Professor	Thin Film Flows, Magnetohydrodynamic, Heat and Mass Transfer, Boundary Layer Theory	
12.	Dr. Mahendra Kumar Gupta, Ph.D., Assistant Professor	Linear Algebra & Matrix Theory, Control Theory	

3.8.3 ACADEMIC PROGRAMME

The Department offer the following courses:

(a) Post-Graduate Programmes

M. Sc.: Mathematics

(b) Doctoral Programmes



3.9 DEPARTMENT OF MECHANICAL ENGINEERING

The Department of Mechanical Engineering is one of the oldest (started in 1960) and the largest faculty, students, and activities. The Department offers B.Tech (Hons.) in Mechanical Engineering, M.Tech in Computer Integrated Design & Manufacturing (CIDM), M.Tech in Thermal Engineering (TE) and M.Tech in Energy Systems (ES). Department is also running a PhD Program in various research areas in Mechanical Engineering. It also offers part-time PhD programs, mainly meant for those employed in industries and academic institutions. The department is having highly qualified and experienced faculty in all streams of Mechanical Engineering. An interactive relationship is maintained between the students and staff which enable the students to develop a sound foundation in the stream in a conducive environment. The Under Graduate programme of the department has been accredited by NBA for 3 years in 2019.



3.9.1 VISION AND MISSION






Vision

To be a centre for imparting world-class education in Mechanical Engineering, conduct extensive and quality research, and propel innovations for the betterment of society.

Mission

- To train young minds and equip them with the best possible technical knowledge to meet the current and future demands of the industry, academic & research.
- To create infrastructure, motivation, and culture for the state-of-the-art research work in Mechanical Engineering.
- To enhance the research and teaching by interaction and developing relationships with industry, R&D organizations, and academic institutions.
- To develop an energetic environment for excellence, creativity, and perfection.

3.9.2 FACULTY

S. N.	NAME OF THE FACULTY	SPECIALIZATION/ RESEARCH AREA	PHOTO
1.	Dr. Ram Vinoy Sharma Ph.D., Professor	Heat Transfer, CFD & Energy Studies	
2.	Dr. Shalendra Kumar, Ph.D., Professor & Head	Heat Transfer (Boiling) Tribology, CAD, Thermal Engg	
3.	Dr. Mani Kant Paswan, Ph.D., Professor	Renewable Energy, Manufacturing Process, Power Plant	
4.	Dr. Sanjay Ph.D., Professor	CAD of Thermal Systems Thermodynamics	
5.	Dr. Prabha Chand Ph.D., Professor	Thermal Engg., Aerodynamics & Solar Energy	



6.	Dr.Mrityunjay Kumar Sinha, Ph.D., Professor	CFD, Free Surface Flow, Heat Transfer, Thermal Engg	
7.	Dr. Malay Niraj Ph.D., Associate Professor	Production Management & TPM	
8.	Dr. Parmanand Kumar Ph.D., Associate Professor	Thermal Engg., Refrigeration & Air Conditioning	
9.	Dr. Krishna Deo Prasad Singh, Ph.D., Associate Professor	Solar Energy & Heat Transfer	
10.	Dr. Anil Kumar Prasad Ph.D., Associate Professor	Combustion Engg. Heat Transfer & Pinch Technology	
11.	Dr. Satish Kumar Ph.D., Associate Professor	Rheology of Slurry flow, Erosion wear	
12.	Dr.Laljee Prasad Ph.D., Assistant Professor	Heat Transfer, Solar Energy	
13.	Dr. Naresh Prasad Ph.D., Assistant Professor	Vibration & Noise Control, Composite Materials & Tribology	
14.	Dr. Md. Ashique Hassan, Ph.D., Assistant Professor	Complex non Newtonian fluid flow and heat transfer	
15.	Dr. Deepak Kumar Ph.D., Assistant Professor	Composite Materials, Finite Element Method	
16.	Dr. Vijay Kumar Dalla Ph.D., Assistant Professor	Robotics, Dynamics and Control, Bond Graph Technique, Fatigue	
17.	Dr. Shashank Pandey, Ph.D., Assistant Professor	Computational Structural Mechanics, Composite and Sandwich Structures, Finite Element Analysis	
18.	Dr. Bipin Kumar Ph.D., Assistant Professor	Vibration and Acoustics	
19.	Dr.Dulari Hansdah Ph.D., Assistant Professor	IC Engine, Renewable Energy, Engine emissions and control	
20.	Dr. Vineet Sahoo Ph.D., Assistant Professor	Mechanical System Design, Mechanical Drives, FEM	
21.	Dr.Vishesh Ranjan Kar Ph.D., Assistant Professor	Computational Mechanics, Advanced Composites, Nonlinear FEM, Functionally Graded Materials,	
22.	Dr. Ashok Kumar Mandal, Ph.D., Assistant Professor	Dynamics and Vibration, Non-Linear vibration	



3.9.3 ACADEMIC PROGRAMME

The Department offer the following courses:

- (a) Under-Graduate Programme
 - B. Tech (H) : Mechanical Engineering
- (b) Post-Graduate Programmes
 - M. Tech
 - Computer Integrated Design and Manufacturing,
 - Energy System Engineering,
 - Thermal Engineering
- (c) Doctoral Programmes

3.9.4 EQUIPMENT PROCURED

S. N.	Equipment	Cost (INR)	Funding Agency
1.	Rheometer	16,70,972.15/-	DST SEED –TIASAN
2.	Air jet tester	18,80,050/-	Institute fund
3.	Electromagnetic Flow meter-05	326860.00/-	
4.	Solidworks Software	8,50,500/-	National Initiative for Design Innovations
5.	Kinematic Model, Cam model, Gear model	46000/-	Institute fund
6.	3D Printer	6,03,750/-	National Initiative for Design and Innovation (NID)
7.	Workstations (Qty. 02)	2,42,402/-	SERB Project
8.	High-Speed Camera	9,94,000/-	
9.	Vibration sensors and DAQ system	13,46,000/-	
10.	Computerized four stroke single cylinder research VCR CRDI engine and water-cooled eddy current dynamometer test rig with combustion analyzer system (CAS) & open ECU system	9,78,369/-	

3.9.5 LABORATORIES

- Engineering Mechanics Laboratory
- Engineering Graphics & CAD Laboratory
- Strength of Materials Laboratory
- Fluid Mechanics Laboratory
- Dynamics of Machinery Laboratory
- Heat & Mass Transfer Laboratory
- Metrology Laboratory
- Applied Thermodynamics Laboratory
- Fluid Machinery Laboratory
- Renewable Energy Laboratory

ADVANCED COMPOSITE AND SMART MATERIAL LAB

The main Objective of Advanced Composite and Smart Material (ACSM) Laboratory is to provide state of the art experimental facility to prepare composite and nanocomposite materials.



In-house fabrication facilities developed

PRODUCT DESIGNING AND PROTOTYPING LABORATORY

This laboratory has been developed to support various product development projects of the department. A large volume 3D printer is a major equipment which is procured through NID project to support prototyping work. This 3D printer can print polymer and plastic materials. NID project beneficiaries have used the lab for product development. This lab in future will support research on 3D printing technology and prototyping.



3D printer in Product Designing and Prototyping Laboratory

JC BOSE NONLINEAR MECHANICS LABORATORY

This laboratory has theoretical, experimental, and computational research facilities on nonlinear elasticity, nonlinear vibration, and dynamics. Sophisticated and high-end data acquisition systems, acceleration, eddy current, and laser sensors provide high precision measurement for dynamical systems. In addition, a high-speed camera has been procured to observe dynamical behaviour of nonlinear systems. Currently lab has sponsored projects from two schemes of Govt. of India which costs total 61 lakh. Also, there are high end computational systems to support numerical and theoretical works. This lab is developed for PG research; however, many demonstrations can be performed for UG students.



Major equipment in JC Bose Nonlinear Mechanics Laboratory



Radiation Heat Transfer System



Fluid Mechanics Lab



JET TEST RIG



HIGH TEMPRATURE
EROSION JET TESTER



BERNOULLIS APPARATUS



RHEOMETER (MCR -92)



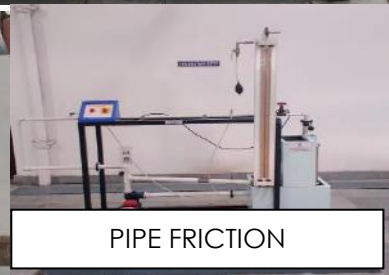
OPEN CHANNEL
FLOW SETUP



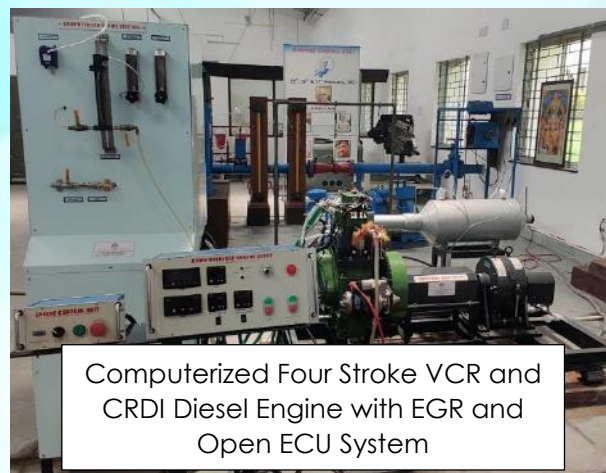
REYNOLDS SET



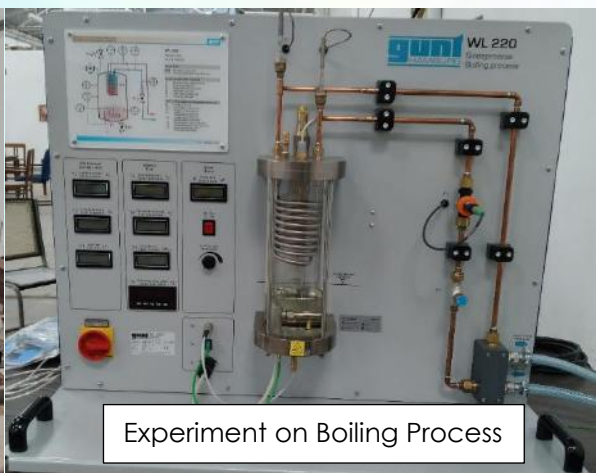
METACENTRIC HEIGHT
APPARATUS



PIPE FRICTION



Computerized Four Stroke VCR and
CRDI Diesel Engine with EGR and
Open ECU System



Experiment on Boiling Process



3.10 DEPARTMENT OF METALLURGICAL AND MATERIAL ENGINEERING

The Department of Metallurgical and Materials Engineering intends to focus on Advanced Materials, Composite Materials, Materials Technology, Foundry Technology, Iron & Steel, Nano-technology, Mineral Beneficiation, Corrosion, and Surface Engineering in which R & D work has been carried out. Materials Engineering was included in the department's curriculum in 1995.

3.10.1 VISION AND MISSION

Vision

To be a centre for imparting world-class education in Metallurgical and Materials Engineering, to perform extensive and quality research and do innovation for the betterment of society.

Mission

- To train young minds and equip them with the best possible technical knowledge to meet the current and future demands of industry, academia, research, and society
- To create facilities for the research activities that motivate the researchers to carry out quality research work in the area of Metallurgical and Materials Engineering

3.10.2 FACULTY

S. N.	NAME OF THE FACULTY	SPECIALIZATION/RESEARCH AREA	PHOTO
1.	Dr. Rajendra Prasad Singh Ph.D., Professor	Mathematical Modelling of Freezing and Melting of a Bath Material on a solid additive	
2.	Dr. Ashok Kumar Ph.D., Associate Professor & Head	Mechanical Metallurgy, Fatigue, Fracture & Failure Analysis, Physical Metallurgy	
3.	Mr. Binod Kumar Singh, M. Tech., Associate Professor	Foundry Technology	
4.	Dr. Ranjit Prasad Ph.D., Associate Professor	Geology and Mineral Beneficiation	
5.	Mr. Chandra Sekhar Choudhary M.Tech., Associate Professor	Extractive Metallurgy of Iron & Steel. Melting Practices, Coke making, Corrosion Science & Engineering	
6.	Dr. Rina Sahu Ph.D., Assistant Professor	Metallic glasses, Nano Structured Materials, Mineral Beneficiation, Hydrometallurgy, Coal characterisation & beneficiation	
7.	Dr. Aravind Gali Ph.D., Assistant Professor	Physical Metallurgy, Thermodynamics, Phase Transformations, Structure-Property-Correlations in Materials	
8.	Dr. Poulami Maji Ph.D., Assistant Professor	Physical Metallurgy, Mechanical Metallurgy	
9.	Dr. Renu Kumari Ph.D., Assistant Professor	Surface Engineering, Corrosion, Biomaterial	
10.	Dr. Sanjay Kumar Vajpai, Ph.D., Assistant Professor	Physical Metallurgy and Materials Design, Powder Metallurgy Processing	
11.	Dr. B. B. JHA Ph.D., Visiting Professor	Physical Metallurgy, Mechanical Metallurgy, Surface Engineering, Thermal Barrier Coatings, Life Assessment of engineering components and Coatings	



3.10.3 ACADEMIC PROGRAMME

The Department offer the following courses:

- (a) Under-Graduate Programme
 - B. Tech (H): Metallurgical and Materials Engineering
- (b) Post-Graduate Programmes
 - M. Tech
 - Foundry Technology
 - Materials Technology
- (c) Doctoral Programmes

3.10.4 LABORATORIES

- Thermodynamics & Kinetics
- Extractive Metallurgy
- Physical Metallurgy
- Heat Treatment
- Geology & Mineral Beneficiation
- Material Testing
- Non-Ferrous Metallurgy & Corrosion
- Manufacturing
- Foundry
- Advance Materials
- Analysis
- Computational
- Surface Engineering
- Workshop



Thermodynamics Lab.



High Temperature Tube Furnace. Operable in air and Vacuum (upto 1700°C)



High Temperature Tube Furnace. Operable in air and Vacuum (upto 1200C)



Vacuum Induction Melting Furnace



Forging Machine



Die-casting Machine



High Temperature Muffle Furnace
(upto 1700°C)



Air Induction Melting Furnace



Furnaces and grinding wheels



3.11 DEPARTMENT OF PHYSICS

The Department of Physics at the National Institute of Technology Jamshedpur was formed in 1960. Since its inception, the department has consistently been recognized all over the country for its excellence. The department has always produced quality professionals in Physics and has strived for excellence in research and development. The Department has six laboratories for carrying out experiments at UG / PG and Research level.

3.11.1 VISION AND MISSION








Vision:

- To impart quality education in Physics to produce good quality, technically trained, world-class human resources.
- To promote research and development in the emerging and thrust areas.

Mission:

To become dynamic, quality conscious, forward looking and responsive to global economically viable technological development by imparting quality technical education

3.11.2 FACULTY

S. N.	NAME OF THE FACULTY	SPECIALIZATION/ RESEARCH AREA	PHOTO
1.	Dr. Ujjwal Laha Ph.D., Professor	Nuclear Physics	
2.	Dr. Hira Lal Yadav Ph.D., Professor	Holography	
3.	Mr. Ajay Kumar Singh M.Sc., Associate Professor	Radio Physics and Electronics	
4.	Dr. Rajeev Ranjan Ph.D., Associate Professor	X-ray crystallography, Holography	
5.	Mr. Bibeka Nanda Kundu M.Sc., Associate Professor	Material Science	
6.	Dr. Uday Kumar Ph.D., Assistant Professor	Spectroscopy	
7.	Dr. Neha Agnihotri Ph.D., Assistant Professor	Computational Physics	

3.11.3 ACADEMIC PROGRAMME

The Department offer the following courses:

- (a) Post-Graduate Programmes
- M. Sc. :Physics
- (b) Doctoral Programmes

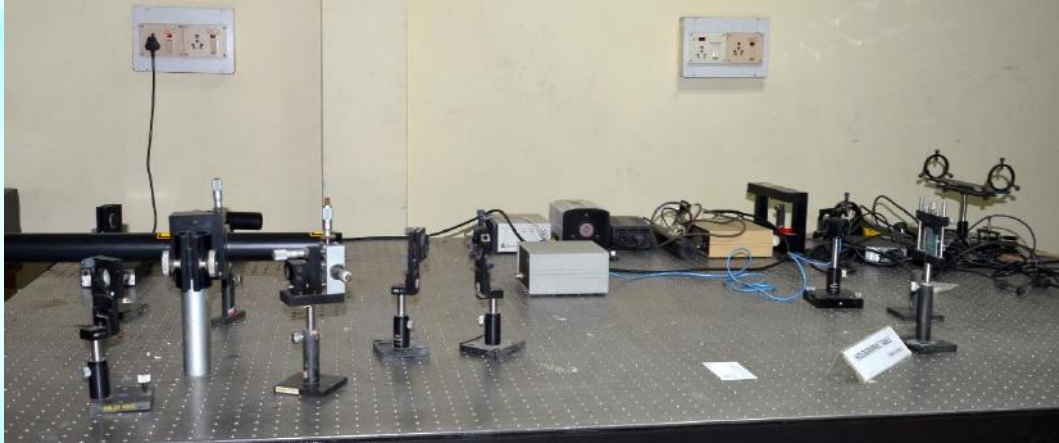
3.11.4 EQUIPMENT PROCURED

S. N.	EQUIPMENT	COST (INR)	FUNDING AGENCY
1.	Dell Mobile Workstation	1,46,000	DST-INSPIRE Research Grant



3.11.5 LABORATORIES

- Physics Laboratory
- Photonics Laboratory
- Advanced Computational Physics Laboratory



Physics Laboratory



3.12 DEPARTMENT OF PRODUCTION AND INDUSTRIAL ENGINEERING

The Department of Production & Industrial Engineering was started in 1988 with "Production Engineering & Management". The name of this Department was changed to Production & Industrial Engineering in the year 2007. The Department offers a UG course for B. Tech. (Hons.) degree in Production and Industrial Engineering and a PG course in Manufacturing Systems Engineering and Ph. D. program in various streams of Production and Industrial Engineering. The Department is currently developing different engineering laboratories like CAD/CAM Lab, Advanced Manufacturing and Flexible manufacturing systems Lab, Non- Traditional Manufacturing lab, Industrial Engineering & Ergonomics lab, and Central workshop. From time to time, curricula/syllabus is upgraded as per the market and technology requirements. The Department has also proposed to start a new PG course in Production Management which will cater to the current industrial need.

3.12.1 VISION AND MISSION

Vision

- To produce engineers and researchers with excellent technical knowledge, research acumen, leadership skills and ethical responsibility





Mission

- To educate B. Tech., M. Tech, and Ph. D students with fundamental knowledge in concerned subjects and update them with the state-of-the-art in the field.
- To develop and maintain laboratories that cater to the needs of the students
- Quest for inter-disciplinary research.
- To promote academia- research-industry collaboration.

3.12.2 FACULTY

S. N.	NAME OF THE FACULTY	SPECIALIZATION/RESEARCH AREA	PHOTO
1.	Dr. Anand Mukut Tigga Ph.D., Professor	Production Management, Production/Manufacturing Engg, CAD/CAM	
2.	Dr. Amaresh Kumar, Ph.D., Professor	Computer-Aided Design and Manufacturing, Industrial Engineering, Micro Machining	
3.	Dr. Ashok Kumar Jha Ph.D., Associate Professor	CAD/CAM, Robotics, Production Engineering	
4.	Dr. Shashi Bhushan Prasad Ph.D., Associate Professor & Head	Energy management, Industrial Engineering, Production Management	
5.	Dr. Raj Ballav Ph.D., Associate Professor	Rapid prototyping, Reverse Engineering, CAD, Non Traditional manufacturing	
6.	Dr. Dharmendra Patel Ph.D., Assistant Professor	Industrial Engineering	
7.	Dr. Ashish Das Ph.D., Assistant Professor	Additive Manufacturing, Surface Engineering, Coating, Friction Stir Welding, Metal Matrix Composites.	
8.	Dr. Dinesh Kumar Ph.D., Assistant Professor	Supply Chain Management, Operations Management	



9.	Dr. Kanika Prasad Ph.D., Assistant Professor	Multi criteria decision making Expert systems Operations research	
10.	Dr. Subhash Singh Ph.D., Assistant Professor	Modification of Nano materials Thin coating Synthesis of Nanocrystal line spinel Metal Matrix Composites (MMCs), Polymer Matrix Composites (PMCs) Synthesis of 2D Materials	
11.	Dr. Tushar Banerjee Ph.D., Assistant Professor	Surface Coating, Materials Characterization, High-Speed Machining, Wear Analysis of Cutting Tools, Tribology	
12.	Dr. Mayuri Baruah Ph.D., Assistant Professor	Welding, Additive Manufacturing, Finite Element Modeling of welding process, Residual stress analysis, Optimization in manufacturing processes, Advanced materials, Micro structural Analysis, Materials Processing	

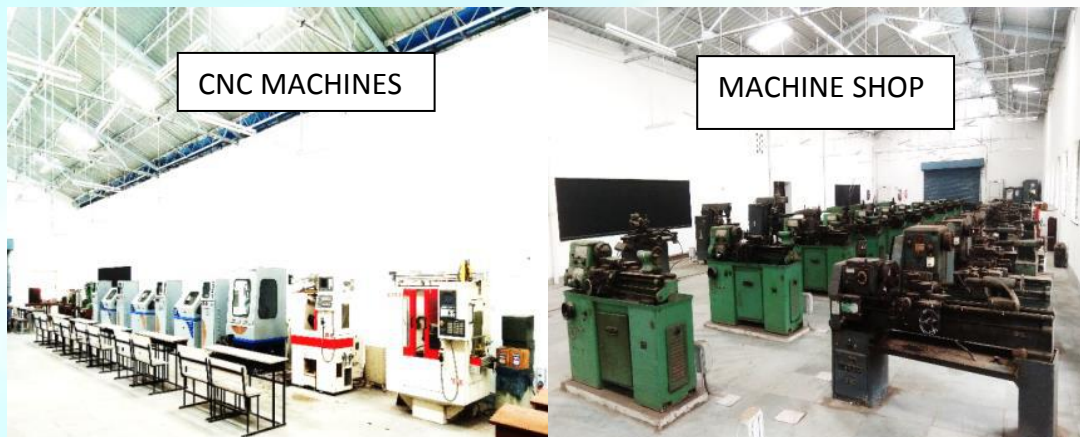
3.12.3 ACADEMIC PROGRAMME

The Department offer the following courses:

- (a) Under-Graduate Programme
 - B. Tech (H): Production and Industrial Engineering
- (b) Post-Graduate Programmes
 - M. Tech: Manufacturing Systems Engineering
- (c) Doctoral Programmes

3.12.4 LABORATORIES

- CAD/CAM Laboratory
- Welding Laboratory
- Machining Laboratory
- Metal Forming Laboratory
- Advanced Manufacturing and FMS Laboratory
- Non-Traditional Manufacturing Laboratory
- Industrial Engineering and Ergonomics Laboratory
- Foundry Laboratory
- Central Workshop





INDUSTRIAL ROBOT



STIR CASTING MACHINE



HORIZONTAL TUBULAR FURNACE



PLASMA-ARC WELDING MACHINE



CHAPTER- 4

FACULTY ACHIEVEMENTS

ANNUAL REPORT 2020-21
NIT JAMSHEDPUR



CHAPTER-4: FACULTY ACHIEVEMENTS

4.1 ONGOING SPONSORED RESEARCH PROJECTS

S. N.	TITLE OF THE PROJECT	PRINCIPAL INVESTIGATOR	FUNDING AGENCY	AMOUNT (IN RS)
1.	Spatial Distribution of Uranium and Associated Water Quality Parameters in groundwater/drinking water of seven districts (East Singhbhum, Saraikela Kharsawan, West Singhbhum, Khunti, Simdega, Gumla, Latehar) of Jharkhand	PI: Dr. Balram Ambade, Dept. of Chemistry; Co-PI: Dr. C.M. Rao, Dept. of Civil Engg.	DAE & BRNS	27,52,000
2.	Polycyclic Aromatic Hydrocarbons (PAHs) in the Atmosphere of Jamshedpur, East India: sources, human health risk Assessment and climate effects	Dr. Balram Ambade, Dept. of Chemistry	SERB	28,99,000
3.	Black carbon Aerosols over Jamshedpur: Source, Radiative Forcing and Climate Impact	Dr. Balram Ambade, Dept. of Chemistry	SERB	36,80,000
4.	Mathematical Modeling and Finite Element Analysis of Wind Turbine Blades (WTB): Coupled 1D Approach	Dr. K.K. Shukla, Dept. of Civil Engg.	DST , SERB	6,60,000
5.	Design and Development of a Centralized Database on Scholarship/ fellowships awarded in S & T sector	Dr. K K Singh, Dept. of Comp. Sci. & Engg.	DST	29,96,000
6.	Identification of factors for successful implementation of Amul like Cooperatives for forest produce	Dr. Akanksha Shukla, Dept. of HSSM	IMPRESS, ICSSR, Govt. of India	4,50,000
7.	A Study on the Role of Social Capital in the Implementation and Effectiveness of NRLM Scheme	Dr. Manish Kumar Jha , Dept. of HSSM	ICSSR, Govt. of India	7,00,000
8.	Wavelet methods for nonlinear fractional partial differential equations with Engineering applications	Dr. Sunil Kumar, Dept. of Mathematics	NBHM, DAE, Govt. of India	13,50,000
9.	Spectral methods for fractional models of mathematical physics with new non-local and nonsingular Caputo-Fabrizio derivative	Dr. Sunil Kumar, Dept. of Mathematics	DST, SERB	22,21,200
10.	Modelling & Simulation of Three-Dimensional Magnetohydrodynamic Nanofluid flows over a Stretching Surface	Dr. Raj Nandkeolyar, Dept. of Mathematics	SERB-DST	17,47,000
11.	Theoretical investigation on non-focal transport of particles in sediments laden turbulent flows using fractional diffusion equation	Dr. Snehashish Kundu , Dept. of Mathematics	SERB-DST	15,51,700
12.	State Estimation and Fault Diagnosis for Differential-Algebraic Nonlinear Control Systems	Dr. Mahendra Kumar Gupta	DST	18,00,000
13.	Blast Analysis of Functionally Graded Materials Plate & Shell Panels	Dr. Shashnk Pandey, Dept. of Mechanical Engg.	Early Career Research Award, SERB-DST	17,36,330
14.	Hydraulic Design of Ash disposal system of thermal plant to minimize the heavy metal contamination of ground water	Dr. Satish Kumar, Dept. of Mechanical Engg.	SERB-DST	22,21,381
15.	Effect of Nano-particles in Viscoplastic Complex Fluids: A Thermo-rheological Characterization and Heat Transfer Investigation	Dr. M.A. Hassan, Dept. of Mechanical Engg.	Early Career Research Award, SERB-DST	28,05,000
16.	Effect of Perforation and Corrugation on the Nonlinear Flexural and Vibration Behaviour of Heated Layered/Graded Composite Panels under Various Loading/Support Conditions	Dr. V R Kar, Dept. of Mechanical Engg.	Early Career Research Award, SERB-DST	11,51,700
17.	Comparative Analysis of TEG and WHR system Used for Energy Harvesting from Engines	Dr. Dulari Hansdah, Dept. of Mechanical Engg.	SERB, DST	21,28,000
18.	Nanoparticle Oxygen Carrier Assisted Chemical Looping Combustion	PI: Prof. Sanjay, Co-PI: Dr. M A Hassan, Dept. of Mechanical Engg.	Core Research Grant, SERB, DST	39,91,400
19.	Investigation of Instabilities and Vibrations in Cables and Belts Travelling over Pulleys	PI : Prof P Wahi (IITK), Co-PI: Dr. A K Mandal, Dept. of ME, NITJSR	Core Research Grant, SERB, DST	65,70,800



20.	Design and Development of Compact Semi-Automatic Parboiling Machine with Dryer for Marginal Farming	PI: Dr. A K Mandal, Co-PI: Dr. M A Hassan, Dept. of Mechanical Engg.	TDP, DST	12,50,000
21.	Development of Functionally Graded HA based Bioactive Composite Coating by Plasma Spraying and Electrophoretic deposition (EPD)	Dr. Renu Kumari, Dept. of MME	SERB, DST, Govt. of India	22,08,500
22.	Computational Modelling of Novel Materials for Efficient, Robust Organic Solar Photovoltaic Cells	Dr. Neha Agnihotri, Dept. of Physics	DST	35,00,000
23.	Transition Metal Carbide Nanomaterials for Energy Storage Application	Dr. Subhash Singh, Dept. of Production and Industry Engg.	Indo-US Science & Technology Forum, India	31,52,200
24.	MXene Based Conducting Electrodes for Dye-Sensitized Solar Cells Application	Dr. Subhash Singh, Dept. of Production and Industry Engg.	SERB, DST	19,84,126
25.	Quantum chemical design of high efficiency sensitized semiconductor solar cells	Dr. Neha Agnihotri, Dept of Physics	SRG, SERB, Govt. of India	19,27,000
26.	Enantioselective desymmetrization of cyclopentendione via [4+2] cycloaddition: Synthesis of highly functionalized alkaloid and terpenoids core structure	Dr. Tapas Das, Dept of Chemistry	SRG, SERB, Govt. of India	23,93,070
27.	Thermo-hydro-mechanical (THM) response of fine-grained soils	Dr. Somenath Mandal, Dept. of Civil Engg.	SRG, SERB, Govt. of India	31,67,140
28.	Erasmus+ International Program	Dr. Koushendra Kr. Singh, Dept. of Computer Science Engg.	European Union with Professor Michalis Zervakis, University of Crete, Greece	10,40,000
29.	Development of low-cost acoustic modem for underwater sensor networks for coastal surveillance and early warning system	Dr. Prashant Kumar, Dept. of ECE	SRG, SERB	14,26,000
30.	Security Analysis & Development of Multivariate Post-Quantum Cryptography Schemes	PI: Dr. Sumit Kr. Debnath Co-PI: Dr. Saurav Das, Dept. of Mathematics	DRDO	39,73,000
31.	NID Projects	Prof. M K Sinha (Coordinator), Dept. of Mechanical Engg.	MHRD	31,39,000
32.	Experimental investigation and CFD modeling of centrifugal slurry pump for handling non – Newtonian solid liquid flow	Dr. Satish Kumar, Dept. of Mechanical Engg.	DST-SERB	37,10,000

4.2 CONSULTANCY SERVICES/TESTING PROJECTS

DEPARTMENT OF CIVIL ENGINEERING

S.N.	Name of the Consultancy/ Testing	Sponsoring Agency	Amount Earned (Rs.)
1.	Testing of Paver Block	M/s BPCL, Jharkhand	28,320
2.	Testing of cubes	M/s Plaban Chakraborty Manager (Project), Kolkata	14,160
3.	Testing of cubes	M/s Suhana Merchandise Pvt. 6 Loyala School area, Jsr	2,832
4.	Mix Design	M/s JWIL- SPML (JV)	1,03,132
5.	Testing of railway track ballast	M/s SIP Services	16,520
6.	Vetting of design & HSD Tank	M/s Trishul Engg. Solutions Pvt. Ltd. Kolkata	23,600
7.	Stability report of ADMM Building	M/s S. K. Tiwari, Deputy Director Projects, Manipal Academy	1,18,000
8.	Proof Checking of design & drawing of 2 Railway Bridges	M/s Mr. Ankit Keshri, Design Engineer, RSR – PBS (JV), Bangalore-94	59,000
9.	Testing of cubes	M/s Mr. Aadarsh R. Diggaj site Engineer (Civil), Get & D India Ltd. New Town, Kolkata	5,664
10.	Testing of rock ballast	M/s Bharat Enterprises, Timber Merchants, Vijaya Garden, Baridih, Jamshedpur	15,340
11.	Proof checking of G+2 building	M/s The Group, Architech & Engg., Gopal Marketing Company, Ashok Nagar	59,000
12.	Fly ash Brick	M/s K. K. Builders Pvt. Ltd., New Kalimati Road, Sakchi, Jsr.	23,600
13.	Concrete mix design	M/s Balaji Constructions, Engineering. & Construction, E-11 Brindaban Garden, Sonari, Jsr	1,07,904
14.	Testing of bitumen for	M/s JUSCO, Jamshedpur	84,960



	Jamshedpur Airport		
15.	Cube test	M/s Sri Santosh Dodrajka Chaibasa, W Singhbhum	16,992
16.	CC Paver block	M/s BPCL, Jharkhand, 831002	28,320
17.	Core recovery of cubing	M/s Director, CSR, NML, Jamshedpur	14,160
18.	Rebound hammer test	M/s Regional Manager, Bistupur, Jharkhand	35,400
19.	Rebound hammer test	M/s Chief Manager, SBI Jadugora	23,600
20.	Consultancy fees for NNDG IRI	M/s Jusco, Jsr	1,41,600
21.	Vetting of structural Audit	M/s Trishul Engg. Solutions Pvt. Ltd. Kolkata	1,18,000
22.	Cube test	M/s Shiva & Co., Sonari, Jsr	11,328
23.	Testing of fly ash of stone dust	M/s Triveni Engicons Pvt. Ltd, West Bengal	40,120
24.	Prrof checking of ROB between Japla- Haidamagar	M/s Mr. Akhileshwar Shashi Managing, (partner) ASP Engg. Consultant, Mahavir Colony, Jsr	30,000
25.	Cement test	M/s The EE & SM (c)-I, IIT Patna Project CWPD, Patna, Bihar	63,720
26.	Cement test	M/s The EE & SM (c)-I, IIT Patna Project CWPD, Patna, Bihar	74,340
27.	Testing of paver block	M/s Dinpuria Enterprises, DVC Road, Mahanand Basti, Jamco, P.o.-Telco, Jsr	18,880
28.	Concrete mix design	M/s Executive Engg. Waterworks, Chaibasa	3,82,320
29.	Testing of soil samples	M/s Suncity Enterprises, Jharkhand	47,200
30.	Mix design (Grade of concrete)	M/s Shri Chandra Shekhar Resident Construction Manager	2,59,836
31.	Cement testing (16 samples)	M/s Executive Engg. (c), IIT Patna, Project Division-1, CPWD, Patna-1, Bihar	1,69,920
32.	Cement testing (10 samples)	M/s The EE & SM (c)-1, IIT Project, Patna, CPWD, Patna, Bihar	1,06,200
33.	Cement testing (9 samples)	M/s The EE & SM (c)-I, IIT Patna, CPWD; Patna Bihar	95,580
34.	Cement testing (7 samples)	M/s The EE & SM (c)-I, IIT, Project, Patna CPWD, Patna, Bihar	74,340
35.	Cube test	M/s Suhana Merchandise Pvt. Ltd, 6, Loyala School Area, Jsr.	5,664
36.	Mix design (grade of concrete)	M/s S. R. K. Construction, Jsr	2,39,776
37.	Cube test	M/s Shiva & Co. Jsr.	5,664
38.	Cube test	M/s Shri Niraj Agarwal, Adityapur Industrial Area, Jsr	2,832
39.	Paver block shape test & Compression test	M/s S & S Industries, Adityapur	18,880
40.	Paver block	M/s Shiv Shakti Enterprises Baridih, NIT, Jamshedpur	28,320
41.	GSB materials test	M/s NTPC Limited Bihar	32,450
42.	Vetting of structural design B+ G+ 1 Public building	M/s Swati Structural Design for B+ G+ 1 Public Building, Delhi	59,000
43.	PCC block testing	M/s Niraj Agarwal (HUF)	2,832
44.	PCC block testing	M/s Suahana Merchandise Pvt. Ltd	5,664
45.	Testing of cement	M/s Shri S. Dhanapandian Project manager, Chhabra's Associates, ESIC, Hospital, Adityapur	10,620
46.	Mix design	M/s Shapoorji Pallanji & Co. Pvt. Ltd, 500 beded hospital, Hazaribagh	2,36,826

DEPARTMENT OF MECHANICAL ENGINEERING

S. N.	Name of the Consultancy/Testing	Sponsoring Agency	Amount Earned (in INR)
1.	Mechanical test of different pipe diameter (6 nos.)	The Assistant Engineer (C), Ranchi	24,780/-
2.	Mechanical test (3 nos.)	M/S Aviskar, Sakchi, Jamshedpur	14,160/-
3.	Mechanical test (2 nos.)	M/S Aviskar, Sakchi, Jamshedpur	9,440/-
4.	Mechanical test (5 nos.)	The Project Manager, JWIL-SPML (J.V), Adityapur, Jamshedpur	21,240/-
5.	Mechanical test	M/S LARSEN & TURBO, Ashok Nagar, Road no.4 Ranchi	42,480/-
6.	Mechanical test (4 nos.)	M/S TECHNOCOM, Guwahati	15,340/-
7.	Mechanical test (1 nos.)	M/S Aviskar, SNP Area, Sakchi, Jamshedpur	4,720/-



4.3 PATENTS (Filed/Published/Granted)

S N.	NAME OF THE FACULTY	PATENT TITLE	APPLICATION NO.	PRATENT STATUS
DEPARTMENT OF CIVIL ENGINEERING				
1.	Dr. S. Madhuri, DCE	Resting and floating house resistant to floods and Earthquake	E-91/16329/2020/CHE, 21.09.2020	Report sent after first examination
2.	Dr. Somenath Mondal	System for Estimating Thermally Induced Volume Change (Tivc) of Soils	202021015318, 07.04.2020	Filed
DEPARTMENT OF COMPUTER APPLICATIONS				
3.	Dr. Alekha Kumar Mishra	A Symmetric Cryptosystem for Secure Data Communication Between Network Devices Using Graph Based Operation	202041032254, 28.07.2020	Granted
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING				
4.	Dr. Vinay Kumar, DCSE	Safety Mask	334582-001, 23.10.2020	Waiting for examination report reply [24 Nov 2020]
DEPARTMENT OF ECELECTRONICS & COMMUNICATION ENGINEERING				
5.	Swagatadeb Sahoo, DECE	A System and a Process for Evaluating Dielectric Relaxation in Dipolar Liquids	Patent number: 2020104029,IP Australlia	Granted
6.	Dr. Basudeba Behera, DECE	Dual drive surface acoustic wave motor and the package	Patent No.-369369, Granted on - 15/06/2021, application no.: 878/KOL/2014	Granted
7.	Prof. Arvind Choubey, Dr. Prakash Ranjan, Mr. Chetan Barde, Dr. Santosh Kumar Mahto, and Dr. Rashmi Sinha, DECE	Zeroth Order Resonator (ZOR) Antenna using slotted Metamaterial structure	Ref. NO. 202031026590, App. Number TEMP/E-1/29503/2020-KOL.	Filed
8.	Bipin Kumar, DME	A Method and a System for Estimating Burst Margin of Rotating Disc	201831048014	Granted

4.4 SEMINAR/SYMPOSIA/CONFERENCES/FDP/WORKSHOPS

S. N.	Title of the seminar/workshop/STTP	Name of the coordinator	Name of the sponsor	Duration
DEPARTMENT OF CHEMISTRY				
1.	Virtual National Conference on Catalysis and Photocatalysis for Clean Energy (CPCE2020)	Dr. Naveen Kumar Veldurthi Dr. Subrata Mahanta Dr. Moumita Mondal	Self-Sponsored	09.10.2020 to 10.10.2020
DEPARTMENT OF CIVIL ENGINEERING				
1.	Advances in Sustainable Construction Materials (ASCM 2020)	Dr. Sanjay Kumar Dr. S. Metya Dr. S. Biswas	Self-Sponsored	03.08.2020 to 04.08.2020
2.	Advance in Structural Engineering NCRASE-2020	Dr. S. Madhuri Dr. S. R. Pandey Dr. K. K. Sharma	TEQIP-III	21.08.2020 to 22.08.2020
3.	Geo-Science and Geo-Structures (GSGS 2020)	Dr. A. K. Choudhary Dr. S. Mondal Dr. S. Metya	TEQIP-III	03.09.2020 to 04.09.2020
4.	Advanced Modelling and Innovations in Water Resources Engineering	Dr. Sangeeta Kumari Prof Nigam Prakash	TEQIP-III	20.02.2021 to 21.02.2021
5.	Stragedy for implementation of New Educational Policy (NEP) in higher technical education institution	Dr. A. K. Choudhary Dr. S. Madhuri	TEQIP-III	07.03. 2021
6.	Transforming pedagogy in India	Prof. A. K. Choudhary	TEQIP-III	01.08.2020 to 03.08.2020



DEPARTMENT OF COMPUTER SCIENCE ENGINEERING				
1.	International conference on IoT and its Application-2020	Dr. Sanjay Kumar Dr.Subrata Dutta Dr. Vinay Kumar	TEQIP-III	26.12.2020 to 27.12.2020
2.	MACHINE VISION 2020	Dr. K. K. Singh	Self-Sponsor	27.07.2020 to 29.07.2020
DEPARTMENT OF ELECTRICAL ENGINEERING				
1.	Electric Power and Renewable Energy Conference (EPREC-2020)	Dr.Omhari Gupta Dr. Jitendra Kumar Prof. A. K. Singh	TEQIP-III	29.05.2020 to 30.05.2020
2.	Online Short-Term Course on Recent Trends in Microgrid-2020 (RTM-2020)	Dr. Om Hari Gupta Dr. Jitendra Kumar Dr. U. K. Sinha	Self-sponsored	27.10/2020 to 31.10.2020
3.	Online Short-Term Course on Recent Trends in Power Electronics and Power System (e-RTPEPS-2021)	Dr. Ananyo Bhattacharya Dr. Madhu Singh	Self-sponsored	17.01.2021 to 22.01.2021
4.	Online Short-Term Course on Recent Trends on FACTS and Renewable Energy Sources(RTFRES-2020)	Dr. A K Akella Dr. Sanjay Kumar	Self-sponsored	24.11.2020 to 29.11.2020
5.	Workshop on Placement Challenges During Prevailing Economic Crisis, Gender Bias And Stress Management In A Post COVID-19 world.	Dr. KumariNamrata Dr. C.M. Rao Dr. Shwati Shudha	TEQIP-III	27.06.2020 to 01.07.2020
6.	Workshop on Student Excellence Learning Program (SELP)	Dr. Kumari Namrata	TEQIP-III	10.08.2020 to 15.08.2020
7.	2nd Electric Power and Renewable Energy Conference (EPREC-2021)	Dr. Om Hari Gupta Dr. Jitendra Kumar Dr. Shailendra Kumar	Self-Sponsored	28.05.2021 to 30.05.2021
8.	A Five-Day Webinar Series on "Energy Conservation" in Association with Petroleum Conservation Research Association (PCRA)	Dr. Kumari Namrata	PCRA	17.05.2021 to 21.05.2021
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING				
1.	Advanced Material Characterization Techniques & Applications (AMCTA-2021)	Dr. Swagatadeb Sahoo	TEQIP-III	06.01.2021 to 10.01.2021
2.	National Conference on Electronics, Communication and Computation (NCECC-2020)	Dr.Mrutyunjay Rout Dr. Prashant Kumar Dr.Jayendra Kumar	TEQIP-III	05.09.2020 to 06.09.2020
3.	Recent Advances in Electronic Devices for Real Life Application (REDA-2020)	Dr.Basanta Bhowmik Dr.Swagatadeb Sahoo Dr. Kunal Singh	Self-Sponsored	24.11.2020 to 28.11.2021
4.	Workshop on Adapting to Changing Scenario in Technology and Leadership	Prof. T. Mondal Dr. Rashmi Sinha Dr. Kumari Namrata	Self-Sponsored	23.12.2020 to 27.14.2020
DEPARTMENT OF COMPUTER APPLICATIONS				
1.	MACHINE VISION 2020 (Jointly with CSE)	Dr. C. Azad	Self-Sponsor	27.07.2020 to 29.07.2020
DEPARTMENT OF HUMANITIES, SOCIAL SCIENCES & MANAGEMENT				
1.	ATAL FDP on Social Enterprise Management	Dr. Akanksha Shukla	AICTE	11.06.2021 to 15.06.2021
DEPARTMENT OF MATHEMATICS				
1.	International Conference on Security & Privacy (ICSP 2020)	Dr. Sumit Kumar Debnath	Self Sponsored	05.11.2020 to 06.11.2020
2.	International Conference on Mathematical Analysis and Applications (MAA 2020)	Dr. Sourav Das	Self Sponsored	02.11.2020 to 04.11.2020
3.	Applications of Algebra in Science and Engineering (AASE) 2020	Dr Ratnesh Kumar Mishra Dr Mahendra Kumar Gupta	Self Sponsored	12.10.2020 to 16.10.2020
4.	The 3 rd International Conference on Frontiers in Industrial and Applied Mathematics, FIAM-2020	Dr. Rajat Tripathi Dr. Raj Nandkeolyar	Self Sponsored	21.12.2020 to 22.12.2020
DEPARTMENT OF MECHANICAL ENGINEERING				
1.	National Conference on Materials, Mechanics and Modelling, NCMMM-2020	Dr. Satish Kumar Dr. V. R. Kar	TEQIP-III	29.08.2020 to 30.08.2020
2.	ATAL FDP on Optimization Technique in Engineering Application	Dr. Satish Kumar	AICTE	18.01.2021 to 22.01.2021



3.	Role of Women in Nation Development [NCRWND-2020], Jointly organized by National Institute of Technology Jamshedpur & Women Institute of Technology Dehradun Under Twinning Activity	Dr. Kumari Namrata Dr. Dulari Hansdah Dr. Shwati Sudha Prof. Prabha Chand	TEQIP-III	5.09.2020 to 6.09.2020
4.	Online Workshop on Research Methodologies"	Dr. Shashank Pandey Dr. Bipin Kumar	SERB Social Responsibility poilicy	19.09.2020
5.	ATAL FDP on Engineering Modeling and Simulation using CFD	Dr. Satish Kumar	AICTE	21.06.2021 to 25.06.2021
DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING				
1.	Advancement in Mineral Advancement in Materials Processing Technology	Dr. Rina Sahu Dr. Ranjit Prasad	Insmart System	31.10.2020 to 01.11.2020
DEPARTMENT OF PRODUCTION AND INDUSTRIAL ENGINEERING				
1.	Online National Conference on Research and Developments in Material Processing, Modelling and Characterization 2020 (RDMPMC2020)	Dr. S. B. Prasad Chairman Dr. Mayuri Baruah, Dr. Poulami maji, Dr. Renu Kumari	TEQIP-III	26.08.2020 to 27.08.2020

4.5 EDITORIAL BOARD MEMBER OF JOURNAL

S. N.	NAME OF THE FACULTY	NAME OF THE JOURNAL	EDITOR/EDITORIAL MEMBER
DEPARTMENT OF CIVIL ENGINEERING			
1.	Prof. A.K. Choudhary	Cogent Engineering	Editor
2.	Dr. S. Madhuri	Journal of The Institution of Engineers (India): Series A	Editorial Member
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING			
1.	Dr. Swagatadeb Sahoo	Journal of Polymer Science and Engineering	Editorial Member
2.	Dr. Mayank Srivastava	International Journal of Telecommunications and Emerging Technologies, International Journal of Digital Communication and Analog Signals	Editorial Member
3.	Dr. Nagendra Kumar	Wireless Communications and Mobile Computing	Guest Editor
DEPARTMENT OF MATHEMATICS			
1.	Dr. Sourav Das	Far East Journal of Mathematical Sciences, Pushpa Publication	Editor
2.	Dr. Mahendra Kumar Gupta	Complexity, Hindawi	Editor
3.	Dr. Raj Nandkeolyar	African Journal of Science and Engineering, Svedberg Open	Editorial Board Member
4.	Dr. Sunil Kumar	Application and Applied Mathematics, Italian J Pure and Appl. Math., Progress in Fractional Differ. Appl., Walailak Journal of Science and Technology, Applied Mathematics and Information Sciences Letters, International Journal of Software and Applied Mathematics, Numerical and Computational Methods in Sciences and Engineering, Engineering, Technology & Applied Science Research, Communication in Numerical Analysis, Malaya Journal of Matematik, Application and Applied Mathematics	Editor
5.		Alexandria Engineering Journal (SCI-IF-2.460)(Elsevier), Beni-Suef University Journal of Basic and Applied Sciences (Springer)	Associate Editor
6.		Computer Modeling in Engineering and Sciences (SCI-IF-0.805), Computers, Materials and Continua (SCI-IF-4.89), Journal of Function Spaces (SCIE-IF-1.005), Hindawi, Journal of Mathematics (SCIE-IF-0.712), Hindawi, Open Physics (SCIE-IF-1.005)	Guest Editor
7.		Entropy, MDPI	Topics Editor
8.	Dr. Sumit Kumar Debnath	SN Computer Science, Springer	Leading Guest Editor Special Issue entitled "Security and Privacy 2020"
DEPARTMENT OF MECHANICAL ENGINEERING			
1.	Dr. Vishesh Ranjan Kar	Journal of the Mechanical Behavior of Materials	Editorial Member



4.6 Ph.D. AWARDED/SUBMITTED

S. N.	THESIS TITLE 4.6	NAME OF THE SCHOLAR	SUPERVISOR(S)	AWARDED/ SUBMITTED
DEPARTMENT OF CHEMISTRY				
1.	Atmospheric deposition of Polycyclic Aromatic Hydrocarbons (PAHs) in East India	Mr. Amit Kumar	Dr. B. Ambade	Submitted
DEPARTMENT OF CIVIL ENGINEERING				
1.	Investigation and Characterization of Thermo Set Resin based Hybrid Composites	Vineet Bhagat	Prof. AKL Srivastava	Awarded
2.	Material Characteristics of Self Compacting Geo- Polymer Concrete	S. Jeeva Chidambaram	Dr. Sanjay Kumar	Awarded
DEPARTMENT OF COMPUTER APPLICATIONS				
1.	Multi-level Image Based Data Security System using Watermarking	Ranjeet Kumar Singh	Dr. Dilip Kumar Shaw	Awarded
2.	Design and Optimization of Traffic Flow Network	Pushpi Rani	Dr. Dilip Kumar Shaw	Submitted
DEPARTMENT OF ELECTRICAL ENGINEERING				
1.	Maximum Power Point Tracking of PV System by Employing Controller with Optimization Techniques	Balamurali Pydi	Dr. U. K. Sinha	Awarded
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING				
1.	Design of microwave bandpass filter using substrate integrated waveguide with regular shape split ring resonators	Rakesh Kumar	Dr. S. N. Singh	Awarded
2.	Metamaterial based structure for Zeroth order resonator antenna and absorbers in microwave applications	Chetan Barde	Dr. Rashmi Sinha	Submitted
3.	Studies on dielectric properties of agricultural residue-based Microwave Absorbing Materials.	Soumya Sundar Pattanayak	Dr. Swagatadeb Sahoo	Submitted
DEPARTMENT OF MATHEMATICS				
1.	Investigation of Shortest Path under Uncertainty with Inconsistent Information	Ranjan Kumar	Dr. Sripati Jha, Dr. Ramayan Singh	Awarded
2.	Investigation of Various Algebraic Notions Introduced Under Some Uncertain Environments	Sudipta Gayen	Dr. Sripati Jha	Submitted
3.	Multi-objective Programming Problem in uncertain Environment	Indrani Maiti	Prof. Tarni Mandal	Awarded
4.	A Treatise of the Magnetohydrodynamic Flow of Non-Newtonian Fluids over Different Geometries.	Amit Kumar	Dr. Ramayan Singh	Awarded
DEPARTMENT OF MECHANICAL ENGINEERING				
1.	Analytical and Computational Analysis of Encapsulated Phase change Thermal Energy Storage System	Mayank Srivastava	Dr. M. K. Sinha	Submitted
2.	Heat Transfer and Friction characteristics in three sides Solar Air Heats with combination of multi-v and transverse wire roughness.	Mr. Dhananjay Kumar	Dr. Laljee Prasad	Submitted
DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING				
1.	Strain and Stress Controlled Cyclic Deformation in SA333 Gr-6 Steel at Elevated Temperatures	Mr. Girendra Kumar	Dr. Ashok Kumar, and Dr. H. N. Bar NML Jamshedpur	Awarded
DEPARTMENT OF PRODUCTION AND INDUSTRIAL ENGINEERING				
1.	Experimental Investigation and Analysis of Machining of Non-Conducting Materials using Electrochemical Discharge Machining	Pravin Anandrao Pawar	Prof. Amaresh Kumar and Dr. Raj Ballav	Awarded



4.7 OUTREACH ACTIVITIES (EXPERT LECTURES)

S. N.	FACULTY NAME	TOPIC OF LECTURE	PLACE OF DELIVERING THE LECTURE
DEPARTMENT OF CHEMISTRY			
1.	Dr. Naveen Kumar Veldurthi	Nanocomposite Materials for Photocatalytic Clean Fuel Generation	Aurora's Degree & PG College, Hyderabad
2.	Dr. Naveen Kumar Veldurthi	Earth is suffering from a 'fever': Causes and Effects	Science Day Lecture Series – 2021, Amrita Vishwa Vidyapeetham-Chennai
3.	Dr. S Sakthivel	Synthesis of chiral main chain polymers - Application to asymmetric catalysis and sensor	Frontiers Research areas in Chemistry -2020, MEPCO Schlenk Engg. college, Sivakasi, Tamil Nadu
4.	Dr. S S Pati	Magnetic Nanoparticles and Their Applications in Targeted Drug Delivery	Advanced Nanomaterials & Their Applications-(I, II, III, IV)" held at National Institute of Technology, Manipur
5.	Dr. B. Ambade	Black carbon	ICCSSTD2020 Virtual International Conference, SVNIT Surat
DEPARTMENT OF COMPUTER APPLICATIONS			
1	Dr. C. Azad	Machine Learning & Information Security	Radha Govind University Ramgarh Date: 18 th July 2020
2		Machine Learning Tools & Techniques,	ARKA Jain University, Jamshedpur Jharkhand held from 20th to 25th July 2020.
3		Machine Learning and its Application in Security	JAY PEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT., 01 September 2020
4		Neural Network	National Institute of Technology Jamshedpur, 06 September 2020
5		Machine Learning,.	IETE & ISVE Ranchi Centre, Jharkhand (India), 13/09/2020
6		Machine learning and its applications	Women's Institute of Technology, Dehradun, 22/01/2021.
7		Application of Machine Learning in Engineering,	Vinoba Bhave University Hazaribagh, Jharkhand, 24th February 2021
DEPARTMENT OF CIVIL ENGINEERING			
1.	Dr. Awdhesh Kr. Choudhary	Recent Trends & Research Opportunities in Civil Engineering Field	Bhagalpur College of Engineering (Government)
2.	Dr. Sangeeta Kumari	Applications of Fuzzy Set Theory In Reservoir Operations	MVSR Engineering College, Nadergul, Hyderabad – 501510.
3.	Dr. K. K. Sharma	Understanding Parallel Flanged Section	MMMUT Gorakhpur.
4.		Laboratory Experiments Using Virtual Lab. in Civil Engineering	MMMUT Gorakhpur
5.		Ductile Detailing And Design	Rajasthan technical University
6.	Dr. S. Biswas	Transportation Engineering and Safety	WIT, Dehradun
7.	Dr. Somenath Mondal	Contemporary issues in geotechnical engineering	WIT Dehradun
8.	Prof. A.K. Choudhary	Geotechnical Investigations Report and Interpretation	Chaitanya Bharathi Institute of technology, Hyderabad
9.		Geotechnical Engineering: Some Facts & Myths	MIT, Muzaffarpur and SIT Sitamarhi.
10.		Sustainable Development: A General Overview	Rajkiya Engineering College, Banda (U.P.)
11.		National Education Policy 2020	G.B Pant Institute of Engineering & Technology, Pauri-Garhwal, Uttarakhand
12.		NEP 2020: Implementation and Implications in HEI	Cochin University of Science and Technology, Kerala
13.	Dr. Virendra Kumar	Material Properties at Elevated Temperatures and Performance of RC Structures after Fire Following Earthquake	SVNIT, Surat, (Gujarat)
14.		Behaviour of Reinforced Concrete Tunnel under Fire and Necessity of Tunnel Lining	SVNIT, Surat, (Gujarat)



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

1.	Dr.Subrata Dutta	Security as Pect of Internet of Things	Maulana Abul Kalam Azad University of Technology, West Bengal (Online Lecture)
2.	Dr. K. K. Singh	MatLab: computational Tool	CTP 2020, SVNIT Surat
3.		Image Processing	CSIPT, GCE Gaya
4.		Current Traends in Engineering Projects	GCV Bilaspur
5.		Virtualization	NCE, Chandi Gaya
6.		Medical data applications using deep learning	ATAL on AIML, GEC Gunupur
7.	Dr. Vinay Kumar	Model Checking	Gaya College of Engineering, Gaya (Govt. of Bihar)

DEPARTMENT OF ELECTRICAL ENGINEERING

1.	Dr. Om Hari Gupta	Introduction to Microgrid and Islanding Detection	Indira Gandhi Institute of Technology (IGIT), Sarang.
2.		Microgrid – Requirement, Protection Challenges and Islanding	Veer Surendra Sai University of Technology (VSSUT), Burla.
3.		Protection aspects of modern Transmission and Distribution Systems	Gaya College of Engineering (GCE), Gaya
4.		Protection of modern transmission & distribution systems	Maulana Azad National Institute of Technology (MANIT), Bhopal.
5.		Protection of modern power system	National Institute of Technology (NIT) Srinagar.
6.		Use of FACTS Devices & their Impacts on Transmission Line	Shrinathji Institute of Technology & Engineering.
7.	Dr. Jitendra Kumar	Advanced Protection Algorithm Design in FACTS	Seemanta Engineering College, Odisha
8.		Recent advancement in Power System Protection	Raj Kumar Goel Institute Of Technology, Ghaziabad
9.		Advancement in Power System Protection	Gaya College of Engineering (GCE), Gaya
10.	Prof. A. K. Singh	Industrial Controller	Chaibasa Engineering College, Chaibasa
11.	Dr. Sanjay Kumar	Optimal location of FACTS devices	Seemanta Engineering College, Odisha
12.		Introduction to FACTS Controller	Chaibasa Engineering College, Chaibasa
13.	Dr. Kumari Namrata	Performance Evaluation and Techno-Economical Analysis of a Solar based Smart Grid System	Veer Surendra Sai University of Technology (VSSUT), Burla.
14.	Dr. Jitendra Kumar	Adaptive distance relaying schemes in the presence of FACTS devices	College of Engineering Roorkee (online)

DEPARTMENT OF ELECTRONICAS AND COMMUNICATION ENGINEERING

1.	Dr. Ajay Kumar	Design and Analysis of Optical Digital Computation Techniques using Some Optical Switching Units	Department of Electronics Engineering, SVNIT-Surat and MMMUT Gorakhpur
2.	Dr. Prashant Kumar	Basic Mobile Communication	Webinar at Government Polytechnic Tekari, Gaya, Bihar
3.		Anti-Ragging Laws for our students	Webinar at Chaibasa College of Engineering, West Singhbhum, Jharkhand
4.		Signal Processing for Underwater Wireless Communication and Applications	STTP at BPUT Odisha
5.		Introduction to Wearable Devices	STTP at BPUT Odisha
6.		Application of deep neural network and deep reinforcement learning in Device-to-device Communication	STTP at BPUT Odisha
7.	Dr.Basudeba Behera	Surface Acoustic Wave based Actuators for Real life Applications	Shri Vithal Education & Research Institute, COLLEGE OF ENGINEERING, PANDHARPUR- 413 304, District: Solapur (Maharashtra)
8.		Advanced Actuators for	Shri Vithal Education & Research Institute,



		wearable devices	COLLEGE OF ENGINEERING, PANDHARPUR- 413 304, District: Solapur (Maharashtra)
9.	Dr. Mayank Srivastava	Modern Active Elements and their Applications in Non-conventional Analog Signal Processing	National Institute of Technology, Utrakhand, Srinagar (U.K.)
10.	Dr. Rashmi Sinha	Era of Artificial Intelligence	University College of Engineering and technology, VBU, Hazaribagh.
11.	Dr. Jayendra Kumar	IoT application and Protocol	ARKA JAIN University, Jamshedpur
12.		Prospect of Solar Technology in Rural India	Guru Govind singh Educational Society Technical campus, Bokaro
13.		Artificial Intelligence and its role in Pandemic Situation.	ADGITM, New Delhi
14.	Dr. Mrutyunjay rout	Smart Sensors and its Technology	Jaipur Engineering College and Research Center, Jaipur
15.		Smart Sensors and Wireless Sensor Networks	CVM University, Gujarat
16.		Soft Computing Techniques in Healthcare	Seemanta Engineering College, Odisha, India
DEPARTMENT OF HUMANITIES SOCIAL SCIENCES AND MANAGEMENT			
1.	Dr. Akanksha Shukla	Event Risk Management	Dr. Hari Singh Gaur University, Sagar (MP)
2.	Dr. Maninder Kapoor	Teaching English Online: Opportunities and Challenges	Virtual FDP organized by School of Commerce and Management, Arka Jain University and Vamnicom, Pune
3.	Dr. Akanksha Shukla	Management Buy-out and Leverage Buy-out	Invited talk at Department of Commerce, Chandigarh University, Mohali, Punjab)
DEPARTMENT OF MATHEMATICS			
1.	Dr. Sourav Das	LaTeX	S. V. National Institute of Technology Surat, India
2.		Topic: LaTeX	Maulana Azad National Institute of Technology Bhopal, India, (November 03-13, 2020).
3.		MATHEMATICA	S. V. National Institute of Technology Surat, India
4.	Dr. Snehasis Kundu	Recent data driven methods in fractional modelling of turbulent open-channel flows	IIST Shibpur
5.	Dr Ratnesh Kumar Mishra	Applications of Group Theory in Real Life	Amity University, Uttar Pradesh, Noida
6.		Development of Fourier Series	Amity University, Uttar Pradesh, Noida
7.	Dr. Rajat Tripathi	of a Droplet in a Self Re-Wetting Liquid with/without Magnetic Interaction	Vellore Institute of Technology Chennai, India
DEPARTMENT OF MECHANICAL ENGINEERING			
1.	Dr. M A Hasan	Basics of NBA	WIT Dehradun
2.		Filling SAR	WIT Dehradun
3.	Dr. Deepak Kumar	Finite Element Procedures	SVR Infotech. Pvt. Ltd., Pune
4.	Dr. Ashok Kumar Mandal	Dynamic modelling in robotics: Euler-Lagrange formulation	Government College of Engineering, Kalahandi, Bhawani Patna, Odisha 766002
5.	Dr. Vishesh Ranjan Kar	Finite Element Analysis	G. H. Raisoni Institute of Engineering and Technology, Pune, India
6.		Finite Element Analysis of Composite Materials	AICTE Sponsored Six Days Virtual STTP organized by Sri Sairam Engineering College, Chennai, India from 3rd-8th Aug 2020
7.	Dr. Ashok Kumar Mandal	Dynamic modelling using Lagrangian Mechanics	Arya Institute of Engineering and Technology, Jaipur
DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING			
1.	Dr. Sanjay Kumar Vajpai	Introduction to Powder Compaction Techniques	IIT Indore
2.		Developing Tailored Microstructure through Powder Metallurgy Route	IIT Indore
3.	Dr. Poulami Maji	Structure -Property Correlations in Advanced Silicides	ISM Dhanbad
4.	Prof. Bharat Bhushan Jha	NEP 2020: Towards Education for All(Keynote Address)	Summit on "EDUCATION FOR ALL" organised by KITS University, Bhubaneswar



DEPARTMENT OF PHYSICS			
1.	Dr. U. Kumar	Raman spectroscopy for material science: An emerging field in physical science.	Darbhangha, L. N. Mithila University.
DEPARTMENT OF PRODUCTION AND INDUSTRIAL ENGINEERING			
1.	Dr. Mayuri Baruah	Finite Element Modelling of Metals and Polymeric Materials by Laser-Based Micro Welding process	Department of Mechanical Engineering North Eastern Regional Institute of Science and Technology, Itanagar, Arunachal Pradesh, India.
2.		Robotics and Automation in welding	The Indian Institute of Welding, Jamshedpur Branch
3.		Micro welding of Advanced Materials	Department of Mechanical Engineering Veer Surendra Sai University of Technology Burla, Odisha, 768018, India.
4.	Dr. Ashish Das	Industrial Robotics	Department of Mechanical Engineering, Chaibasa Engineering College, Jharkhand, Sponsored by TEQIP-III
5.		Friction Stir Welding: A Sustainable Way	Department of Mechanical Engineering Veer Surendra Sai University of Technology Burla, Odisha, 768018, India.

4.8 PUBLICATIONS

4.8.1 JOURNALS (INTERNATIONAL/NATIONAL)

DEPARTMENT OF CHEMISTRY

Sau, M., Verma, K., & Das, T. (2020). Synthesis of N-heterocycles via [4 + 3] cycloaddition of azomethine imine. *Journal of Heterocyclic Chemistry*, 57, 3722-3734.

Das, T. (2020). Desymmetrization of Cyclopentene-1,3-Diones via Alkylation, Arylation, Amidation and Cycloaddition Reactions. *Chemistry Select*, 5, 14484-14509.

Thakur, S., Das, A., & Das, T. (2021). 1, 3 Dipolar Cycloaddition of Nitrones: Synthesis of Multisubstituted, Diverse Range of Heterocyclic Compounds. *New journal of Chemistry*, 45, 11420-11456.

Das, A., Thakur, S., & Das, T. (2021). Indole-2-Carboxaldehyde: An Emerging Precursor for the Construction of Diversified Imperative Skeleton. *Chemistry Select*, 6, 4591-4619.

Ambade, B., Sankar, T.K., Panicker, A.S., Gautam, A., S., & Gautam, S. (2021). Characterization, Seasonal variation, source apportionment and health risk assessment of black carbon over an urban region of East India. *Urban Climate*, 38, 100896.

Pradhan, S. K., Ambade, B. (2020). Extractive separation of rare earth elements and their determination by inductively coupled plasma optical emission spectrometry in geological samples. *Journal of Analytical Atomic Spectrometry*, 35, 1395-1404.

Hasan, M.F., Nur-E-Alam, M., Salam, M.A., Rahman, H., Paul, S.C., Rak, A.E., Ambade, B., & Islam, A.R.M.T. (2021). Health Risk and Water Quality Assessment of Surface Water in an Urban River of Bangladesh. *Sustainability*, 13(12), 6832

Ambade, B., Sethi, S.S., Kumar, A., & Sankar, T.K., (2021). Health Risk Assessment, composition and distribution of Polycyclic Aromatic Hydrocarbons (PAHs) in Drinking Water of Southern Jharkhand, East India. *Archives of Environmental Contamination and Toxicology* 80, 120-133.

DEPARTMENT OF CIVIL ENGINEERING

Agarwal, E., Pain, A., Mukopadhyay, T., Metya, S., & Sarkar, S. (2021). Efficient computational system reliability analysis of reinforced soil retaining structures under seismic conditions including the effect of simulated noise. *Engineering with Computers*. 1-23.

Choudhary, A. K., & Dash, S. K. (2020). Influence of soil density on performance of geocell-reinforced vertical anchor in sand. *Geosynthetics International*, 1-12.

Kumar, A., Kumar, V., & Prasad, B. K. (2021). Strength development and flexural behaviour of reinforced concrete beam using one-part alkali-activated binder. *Construction and Building Materials*, 281.

Metya, S., Chaudhary, N., & Sharma, K. K. (2021). Pseudo Static Stability Analysis of Rock Slope Using Patton's Shear Criterion. *International Journal of Geo-Engineering*, 12(7).

Mondal, S., Singh, D. N., Tang, A. M., & Pereira, J. M. (2020). A finite difference model for undefined end boundary to analyse the heat transfer in dry sands. *International Journal of Geotechnical Engineering*, 1-7.

Prasad, B., Ganeshan, S., Singh, P., & Kumar, A. (2021). Fundamental Strength Properties of Polymer Concrete – Effect of Heating. *Journal of Structural Engineering*, 47(6), 1-10.

Sharma, K. K., Imam, A., Anifowose, F., & Srivastava, V. (2020). Compressive strength modeling of blended concrete based on empirical and Artificial Neural Network techniques. *Journal of Structural Integrity and Maintenance*, 5(4), 252-264.

DEPARTMENT OF COMPUTER APPLICATIONS

Mishra, A. K., Sinha, M., & Tripathy, A.K. (2020). A Sinkhole Prevention Mechanism for RPL in IoT. *International Journal of Computational Science and Engineering*, 23(3), 1-9.

Dhal, P., & Azad, C. (2021). Multi-objective feature selection method using Newton's law based PSO with GWO. *Applied Soft Computing*, 107:107394.

Azad, C., Bhushan, B., Sharma, R., Shankar, A., Singh, K.K., & Khamparia, A. (2021). Prediction model using SMOTE, genetic algorithm and decision tree (PMSGD) for classification of diabetes mellitus. *Multimedia Systems*. Jun 6, 1-9.

Mishra, A.K., Puthal, D., & Tripathy, A.K. (2021). GraphCrypto: Next generation Data Security Approach Towards Sustainable Smart City Building. *Sustainable Cities and Society*, Volume 72.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Saxena, M., Joshi, A., Dutta, S., Mishra, K. C., Giri, A., & Neogy, S. (2021). Comparison of Different Multi-hop Algorithms to Improve the Efficiency of LEACH Protocol. *Wireless Personal Communications*, 1-14.

Giri, A., Dutta, S., & Neogy, S. (2020). Information-theoretic approach for secure localization against sybil attack in wireless sensor network. *Journal of Ambient Intelligence and Humanized Computing*, 1-7.

Singh, K.K., Kumar, S., Dixit, P. et al. (2020). Kalman filter based short term prediction model for COVID-19 spread. *Applied Intelligence*.

Chandra S., Singh K.K. Kumar, S. (2021). A novel approach to validate online signature using machine learning based on dynamic features. *Neural Computing and Applications*.

Gupta, P., Kumar, S., Suman, R.R., & Kumar, V. (2020). Sentiment Analysis of Lockdown in India During COVID-19: A Case Study on Twitter. *IEEE Transactions on Computational Social Systems*.



Kumar, V., Maurya, A.K., Singh, K.V., Singh, L.K., Singh, P., Hati, A.N., & Singh, V.P. (2021). Safety analysis of safety-critical systems for their applicability on NPP systems: A state-of-the-art review. *Quality and Reliability Engineering International*.

Kumar, V., Singh, L.K., & Tripathi, A.K. (2020). Reliability Prediction Methods for Electronic Devices: A State-of-the-art Review. *IETE Technical Review*, 1-11.

Kalita, D.J., Singh, V.P., & Kumar, V. (2021). A dynamic framework for tuning SVM hyper parameters based on moth-flame optimization and knowledge-based-search. *Expert Systems with Applications*, 168: 114139.

Mamdikar, M.R., Kumar, V., Singh, P., & Singh, L. (2020). Reliability and performance analysis of safety-critical system using transformation of UML into state space models. *Annals of Nuclear Energy* 146: 107628.

Sarkar, A., & Singh, B.K. (2021). A Review of Different Biometric Template Protection Methods. *Recent Patents on Computer Science*, 14(5), 1553 - 1574, ISSN: 2666-2566 (Online), ISSN: 2666-2558.

Sarkar, A., & Singh, B.K. (2020). A Review on Performance, Security Analysis of Biometric Authentication System and Various Biometric Template Protection Schemes. *Multimedia Tools and Applications*, October 2020 *Multimedia Tools and Applications* 79(3).

Sarkar, A., & Singh, B.K. (2021). A Multi-Instance Cancelable Fingerprint Biometric Based Secure Session Key Agreement Protocol Employing Elliptic Curve Cryptography and a Double Hash Function. *Multimedia Tools and Applications*, 80: 799-829.

Sarkar, A., & Singh, B.K. (2021). Design of a Hybrid Approach using a Revocable Technique and Steganographic Text Color Coding Technique for Fingerprint Template protection. *Multimedia Tools and Applications*.

Kumar, S., & Singh, B.K. (2021). An improved watermarking scheme for color image using alpha blending. *Multimedia Tools and Applications*.

Kumar, S., & Singh, B.K. (2021). DWT based color image watermarking using maximum entropy", *Multimedia Tools and Applications*.

Kumar, S., Singh, B.K., Yadav, M. (2021). A Recent Survey on Multimedia and Database Watermarking. *Multimedia Tools and Applications*, 79(27), 20149-20197.

Kumar, S., & Singh, B.K. (2021). Entropy based spatial domain image watermarking and its performance analysis", *Multimedia Tools and Applications*.

Kumar, S., Singh, B.K., Akshita, Pundir, S., Joshi, R., & Batra, S. (2020). Role of Digital Watermarking in Wireless Sensor Network. *Recent Advances in Computer Science and Communications*, 2020, 12, 1-00.

DEPARTMENT OF ELECTRICAL ENGINEERING

Balsubrahmanyam, Ch.S., & Gupta, O.H. (2020). Detailed Study of Solar Energy Conversion System using Boost Converter – A New MPPT Technique. *Journal of The Institution of Engineers (India): Series B*, 101(6), 631–639.

Gupta, S. K., Kumar, L., Kumar, S., & Verma, K. (2020). Mitigation of Transmission Congestion with Series Controller Facts Devices. *Int. J. Future Generation Communication and Networking*, 13 (4), 3632-3643.

Shekhar, H., & Kumar, J. (2021). Fault Section Identification of a Three Terminal Line during Power Swing. *International Transactions on Electrical Energy Systems*.

Shekhar, H., Kumar, J., & Nayak, A. (2020). A Fault Detection Technique during Power Swing in a TCSC-Compensated Line Using Teager Kaiser Energy Operator. *IETE Journal of Research*. 1-21.

Kumar, J., & Jena, P. (2020). Wide-Area Measurement-Based Adaptive Backup Protection for Shunt Compensation Environment. *Arabian Journal for Science and Engineering*, 46(2), 843-855.

Manna, S., & Akella, A. K. (2020). Analysis of anisotropic and isotropic models for estimation of solar radiation on the inclined surface in New Delhi location. *Journal of Indian Chemical Society*, 97(10b), 1929-1935.

Kar, M. K., Kumar, S., Singh, A.K., & Panigrahi, S. (2021). A modified Sine Cosine algorithm with ensemble search agent updating operators for small signal stability analysis. *International Transactions on Electrical Energy Systems*.

Shekhar, H., & Kumar, J. (2021). Fault section identification of a three-terminal line during power swing. *International Transaction on Electrical Engineering-Wiley*.

Sharma, J.P., Reddy, K.V., Bharti, P., Balla, S.S., & Gupta, O.H. (2021). Extracted DC Component-based Pilot Relaying for Series-Compensated Lines. *International Transactions on Electrical Energy Systems*, 31(4), 1-18.

Sharma, J.P., Reddy, K.V., Bharti, P., Balla, S.S., Gupta, O.H., & Khadke, P. (2021). Differential DC Component-based Relaying Scheme for Transmission Lines. accepted in *IETE Journal of Research*, 1-13.

Sharma, J.P., Gupta, O.H., & Tripathy, M. (2021). A New Sequence Current-Based Adaptive Pilot Relaying Scheme for Modern HVAC Transmission Lines. accepted in *Electric Power Components and Systems*, Taylor & Francis Group, 1-16.

Ansari, S., & Gupta, O.H. (2021). Differential Positive Sequence Power Angle-Based Microgrid Feeder Protection. accepted in *International Journal of Emerging Electric Power Systems*, 1-7.

Sharma, J.P., Gupta, O.H., Malik, O.P., Sharma, S., & Tripathy, M. (2021). Voltage-Assisted Sequence Current-Based Pilot Relaying for Lines with/without FACTS. accepted in *IEEE Transactions on Power Delivery*, 1-11.

Roy, D., & Singh, M. (2020). A Single Z-source Network-based 3-level NPC Inverter Using a Novel Region Selection Approach. *International Review of Electrical Engineering (IREE)*, 15(5), 394-403.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Jindal, S.K., De, R., Kumar, A., & Raghuvanshi, S.K. (2020). Novel MEMS Piezoresistive Sensors with Hair-Pin Structure to Enhance Tensile and Compressive Sensitivity and Correct Non-Linearity. *Journal of Electronic Testing: Theory and Applications (Springer)*, 36 (4).

Kumar, D., Sit, S.K., Singh, S.N., & Sahoo, S. (2021). Dielectric relaxation behaviour of amide and phenol mixture in C₆H₆ under microwave field. *J. Solution. Chem*, 50(5), 690-722.

Bachhar, T., Sit, S.K., Laskar, S.H., & Sahoo, S. (2021). Investigation of dielectric relaxation in Tributyl phosphate from susceptibility and conductivity measurement under microwave field. *Bulletin of Materials Science*, 44,120-135.

Pattanayak, S.S., Laskar, S.H., & Sahoo, S. (2021). Progress on Agricultural Residue Based Microwave Absorber: A Review and Prospects. *J. Mater. Sci*, 56, 4097-4119

Pattanayak, S.S., Laskar, S.H., & Sahoo, S. (2021). Microwave absorption performance enhancement of corn husk-based microwave absorber. *J. Mater. Sci: Materials in Electronics*, 32, 1150-1160.

Pattanayak, S.S., Laskar, S.H., & Sahoo, S. (2021). Microwave Absorption Study of Dried Banana Leaves Based Single Layer Microwave Absorber. *Int. J. Microw. Wire. Techn*, 13(2), 154-163.

Behera, B. (2021). Micro Motion of a Piezoelectric Linear Actuator driven by Liquid Interacting with Rayleigh Surface Acoustic Wave. in *Elsevier: Sensors and Actuators: A. Physical*, 112756, ISSN 0924-4247,

Kumar, M., Kumar, A., Jindal, S.K., & Raghuvanshi, S.K. (2021). Comprehensive Study of All-In-One Simultaneous Multiple Optical Logic Devices using Mach-Zehnder Interferometer based on Electro-optic Effect. Accepted in *IETE Technical Review (Taylor & Francis)*.

Jindal, S.K., Sethi, K., Patel, I., Kumar, A., & Raghuvanshi, S.K. (2020). A Semi Analytical and Computationally Efficient Method to Calculate the Touch-Point Pressure and Pull-in Voltage of a MEMS Pressure Sensor with a Circular Diaphragm. *IEEE SENSOR JOURNAL*. Vol. 21, No. 2.

Kumar, K., Saraswat, S., Jindal, S.K., Kumar, A., & Raghuvanshi, S.K. (2020). Experimental Validation of an IOT based Device Selective Power Cut Mechanism using Power Line Carrier Communication for Smart Management of Electricity. *Journal of Electrical Engineering & Technology*, Springer, 16, 67-77.



- Dixit, D., Kumar, N., Sharma, S., Bhatia, V., Panic, S., & Stefanovic, C. (2021). On the ASER performance of UAV-based communication systems for QAM schemes. *IEEE Communication Letters*, 25(6), 1835-1838.
- Singya, P.K., Shaik, P., Kumar, N., Bhatia, V., & Alouini, M.S. (2021). A Survey on Higher-Order QAM Constellations: Technical Challenges, Recent Advances, and Future Trends. *IEEE Open Journal of the Communications Society*, 2, 617-655.
- Stefanovic, C., Panic, S., Bhatia, V., & Kumar, N. (2021). On Second-Order Statistics of the Composite Channel Models for UAV-to-Ground Communications with UAV Selection. *IEEE Open Journal of the Communications Society*, 2, 534-544.
- Singya, P.K., Kumar, N., Bhatia, V., & Alouini, M.S. (2020). On the Performance Analysis of Higher Order QAM Schemes Over Mixed RF/FSO Systems. *IEEE Transactions on Vehicular Technology*, 69(7), 7366-7378.
- Bharadawaj, K., & Srivastava, M. (2021). New Electronically adjustable Memelement Emulator for realizing the behaviour of Fully-floating Meminductor and Memristor. *Microelectronics Journal*, vol. 114.
- Bharadawaj, K., & Srivastava, M. (2020). Floating Memristor and Inverse Memristor Emulation configurations with Electronic/Resistance controllability. *IET Circuits Devices and Systems*, 14(7) 1065-1076.
- Kumar, A., Behera, B., Kumar, M., Jindal, S. K., & Srivastava, M., (2021) Implementation of All-Optical Ripple Down Counter using the Micro-Ring Resonator Structures. *Applied Physics B*, 127(14).
- Bharadawaj, K., & Srivastava, M. (2021). Emulation of Three Pinch-off Memristor emulator based on highly non-linear charge-flux characteristics. *Radioengineering Journal*, 30(1), 164-171.
- Bharadawaj, K., & Srivastava, M. (2020). Development of mathematical model and circuit emulators for four lobe memristive behaviour. *COMPEL-The International Journal For Computation And Mathematics In Electrical And Electronic Engineering*, 40(1), 51-61.
- Chowdhury, N. K., & Bhowmik, B. (2021). Micro/Nano Gas Sensor: Physics behind Nanostructure Growth, Sensing and Selectivity mechanism. *Nanoscale Advances*, 3, 73-93.
- Talukdar, J., Rawat, G., Singh, K., & Mummaneni, K. (2020). Low Frequency Noise Analysis of Single Gate Extended Source Tunnel FET. *Silicon*.
- Priyadarshani, K. N., Singh, S., & Singh, K. (2020). A Novel Self-Aligned Dopingless Symmetric Tunnel Field Effect Transistor (DL-STFET): A Process Variations Tolerant Design. *Silicon*.
- Talukdar, J., Rawat, G., Choudhuri, B., Singh, K., & Mummaneni, K. (2020). Device Physics Based Analytical Modeling for Electrical Characteristics of Single Gate Extended Source Tunnel FET (SG-ESTFET). *Superlattices Microstruct.*, p. 106725.
- Misra, R., Singh, K., Kumar, M., Rastogi, R., Kumar, A., & Dubey, S. (2021). An Ultra-Low Power Black Phosphorus (B-Ph)/Si Heterojunction Dopingless-Tunnel FET (HD-TFET) with Enhanced Electrical Characteristics. *Superlattices Microstruct.*, 149, p. 106752.
- Sannakashappanavar, B.S., Yadav, A.B., Kumar, V., Murty, N.V.L.N. & Singh, K. (2021). Low Resistance Ohmic Contact on ZnO Thin Film Revealed by Schottky Barrier Height. *Silicon*.
- Priyadarshani, K. N., Singh, S., & Singh, K. (2021). Analog/RF Performance Estimation of a Dopingless Symmetric Tunnel Field Effect Transistor. *Journal of Electronic Materials*, pp. 4962-4973.
- Kumar, N., Purwar, V., Awasthi, H., Gupta, R., Singh, K., & Dubey, S. (2021). Modeling the threshold voltage of core-and-outer gates of ultra-thin nanotube Junctionless-double gate-all-around (NJL-DGAA) MOSFETs. *Microelectronics Journal*, 113, 105104.
- Kumar, R., Sinha, R., Choubey, A., & Mahto, S. K. (2021). A compact microstrip feedline printed antenna with perturbed partial ground plane for UWB applications. *International Journal of RF and Microwave Computer-Aided Engineering*, e22764.
- Pal, P., Sinha, R., & Mahto, S. K. (2021). Synthesis Approach to design a Compact Printed Monopole Antenna for 2.4GHz Wi-Fi Application. *International Journal of RF and Microwave Computer-Aided Engineering*.
- Kumar, A., Mahto, S.K., Sinha, R., & Choubey, A. (2020). Dual circular slot ring triple-band MIMO antenna for 5G applications. *Frequenz*, 000010151520200138.
- Kumar, R., Sinha, R., Choubey, A., & Mahto, S.K. (2020). An ultrawide band monopole antenna using hexagonal-square shaped fractal geometry. *Journal of Electromagnetic Waves and Applications*, Taylor & Francis, 233-244.
- Kumar, R., Ismail, M., Zhao, W., Yadav, A.R., & Kumar, J. (2021). Damage detection of wind turbine system based on signal processing approach: a critical review. *Clean Technologies and Environmental Policy*, Springer, 1-20.
- DEPARTMENT OF HUMANITIES, SOCIAL SCIENCES AND MANAGEMENT**
- Chhavi, & Bhushan, R. (2020). Mahesh Dattani's Dance Like a Man: A Depiction of the Trials and Tribulations of an Androgynous Personality. *Rupkatha Journal on Interdisciplinary Studies in Humanities*, 12(5), 1-6.
- Ghosh, S., Bhushan, R. & Kapoor, M. (2020). Decoded Signified and New Consciousness: History, Myth and Culture in Toni Morrison's Beloved. *Psychology and Education Journal on Multidisciplinary Studies*, 57(8), 835-844.
- Shukla, A., Geetika & Shukla, N. (2021). Corporate Social Responsibility Measures: A Brief Review. *Business Perspectives & Research*, 10(1).
- Singh, A., Sudha Shwati. (2020). Re-establishing the correlation of Intrinsic Motivation with its component- A Study of educators in technical education industry. *International Journal of Scientific & Engineering Research*, 11(12), 205-209.
- Kapoor, M. (2021). The God of Small Things Versus the Devil of Big Things: Narrative Technique and Arundhati Roy. *IUP Journal of English Studies*, 16(2).
- DEPARTMENT OF MATHEMATICS**
- Moysis, L., Gupta, M.K., Mishra, V.K., Marwan, M., Volos, C. (2020). Observer design for rectangular descriptor systems with incremental quadratic constraints and nonlinear outputs - Application to secure communications. *Int. J. Robust Nonlinear Control*, Wiley, 30(18), 8139-8158.
- Moysis, L., Giakoumis, A., Gupta, M.K., Volos, C., Mishra, V.K., Pham, V.T. (2020). Observers for Rectangular Descriptor Systems with Output Nonlinearities - Application to Secure Communications and Microcontroller Implementation. *Int. J. Dyn. Control*, Springer.
- Debnath, S. K., Choudhury, T., Kundu, N., & Dey, K. (2021). Post-quantum secure multi-party private set-intersection in star network topology. *Journal of Information Security and Applications*, 58, 102731.
- Kundu, N., Debnath, S. K., & Mishra, D. (2021). A secure and efficient group signature scheme based on multivariate public key cryptography. *Journal of Information Security and Applications*, 58, 102776.
- Debnath, S. K., Dey, K., Kundu, N., & Choudhury, T. (2021). Feasible private set intersection in quantum domain. *Quantum Information Processing*, 20(1), 1-11.
- Mehrez, K., Das, S., & Kumar A. (2021). Geometric properties of the products of modified Bessel functions of the first kind. *Bulletin of the Malaysian Mathematical Sciences Society* 44(5), 2715-2733.
- Das, S. (2020). A complete monotonicity property of the multiple gamma function. *Comptes Rendus. Mathématique*, 358(8), 917-922.
- Das, S. (2020). Inequalities involving q-analogue of multiple psi functions. *Comptes Rendus Mathématique*, 358(3), 327-332.
- Das, S., & Swaminathan A. (2020). A harmonic mean inequality for the poly gamma function, *Mathematical Inequalities and Applications*, 23(1), 71-76.
- Seth, G. S., Kumar, B., Nandkeolyar, R., & Sinha, V. K. (2020). Numerical Simulation of MHD Stagnation Point Flow of Micropolar Heat Generating and Dissipative Nanofluid: SLM Approach. *Proceedings of the National Academy of Sciences, India Section A: Physical Sciences*.



Sinha, V. K., Kumar, B., Seth, G. S., & Nandkeolyar, R. (2020). Features of Jeffrey fluid flow with Hall current: A spectral simulation. *Pramana*, 94 (1), Article number: 64.

Sahoo, A., & Nandkeolyar, R. (2021). Entropy generation and dissipative heat transfer analysis of mixed convective hydromagnetic flow of a Casson nanofluid with thermal radiation and Hall current, *Scientific Reports*, 11, Article number: 3926.

Kundu, S. (2020). Study of unsteady nonequilibrium stratified suspended sediment distribution in open-channel turbulent flows using shifted Chebyshev polynomials, *ISH Journal of Hydraulic Engineering*,

Gayen, S., Smarandache, F., Jha, S., Kumar, R. (2020). Introduction to interval-valued neutrosophic subring. *Neutrosophic Sets and Systems*, 36, 220-245.

Gayen, S., Smarandache, F., Jha, S., Singh, M. K., Broumi, S., Kumar, R. (2020). Soft subring theory under interval-valued neutrosophic environment. *Neutrosophic Sets and Systems*, vol. 36, pp. 193-219.

Mondal, B., & Mandal, T. (2020). A secure image encryption scheme based on genetic operations and a new hybrid pseudo random number generator, *Multimedia Tools and Applications*, 1-24.

Tripathi, R. (2021). Marangoni convection in the transient flow of hybrid nanoliquid thin film over a radially stretching disk, *Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering*

Kumar, A., Tripathi, R., Singh, R. and Chaurasiya, V. K. (2020). Simultaneous effects of nonlinear thermal radiation and Joule heating on the flow of Williamson nanofluid with entropy generation, *Physica A: Statistical Mechanics and its Applications*, 551, Article ID: 123972.

Kumar, A., Tripathi, R., Singh, R. and Sheremet, M. A. (2020). Entropy generation on double diffusive MHD Casson nanofluid flow with convective heat transfer and activation energy. *Indian Journal of Physics*.

Kumar, S., Kumar, A., Samet, B., Gomez-Aguilar, J.F., Osman, M.S., (2020), A chaos study of tumor and ejector cells in fractional tumor-immune model for cancer treatment, *Chaos, Solitons and Fractals*, 141, 110321.

Kumar, S., Kumar, A., Samet, B., Dutta, H., (2021), A study on fractional host-parasitoid population dynamical model to describe insect species, *Numerical Methods for Partial Differential Equations*, 37(2), 1673-1692.

Kumar, S., Ghosh, S., Kumar, R., Jleli M., (2021), A fractional model for population dynamics of two interacting species by using spectral and Hermite wavelets methods, *Numerical Methods for Partial Differential Equations*, 37(2), 1652-1672.

Kumar, S., Kiran M. S., Betageri, V.S., Prakasha, D. G., Veerasha, P., (2021), A mathematical analysis of ongoing outbreak COVID-19 in India through non-singular derivative, *Numerical Methods for Partial Differential Equations*, 37(2), 1282-1298.

Kumar, S., Kumar, R., Osman, M.S., Samet, B., (2021), A wavelet based numerical scheme for fractional order SEIR epidemic of measles by using Genocchi polynomials, *Numerical Methods for Partial Differential Equations*, 37(2), 1250-1268.

Kumar, S., Khader, M.M., Khaled, M. Saad, Dumitru B., (2020), A spectral collocation method for fractional chemical clock reactions, *Computational and Applied Mathematics*, 39, 324.

Kumar, S., H. Mohammadi, Sh. Rezapour, S. Etemad (2021), A theoretical study of the Caputo-Fabrizio fractional modelling for hearing loss due to Mumps virus with optimal control, *Chaos Solitons and Fractals*, 144, 110668.

Sahni, A. K., Pandey, J. T., Mishra R. K. and Sinha, V. K. (2021). Fuzzy projective-injective modules and their evenness over semi-simple rings, *Turkish Journal of Computer and Mathematics Education*, 12(6), 3624-3634.

Pratibha, Mishra R. K. and Mohan R. (2021). Primary decomposition of graded secondary modules graded over finitely generated abelian groups, *Turkish Journal of Computer and Mathematics Education* 12(14), 2059-2065.

DEPARTMENT OF MECHANICAL ENGINEERING

Chordia, J.S. & Sharma, R.V., (2021). Conjugate natural convection in porous medium with a thick square-wave partition. *Journal of Thermal Science and Engineering Applications*, 13, 011006-1-8.

Chordia, J.S. & Sharma, R.V. (2020). Numerical analysis on the effect of wavy partitions on natural convection in porous enclosure, *Journal of Heat Transfer*. 142(9), 092601-1-8.

Akram, W., Sanjay & Hassan, M. A. (2020). Chemical looping combustion with nanosize oxygen carrier: a review, *International Journal of Environmental Science and Technology*.

Pardeep, B., Chithambaram, S.J., Singh, A., Kumar, P., Khatkar, S.K. & Sinha, M.K. (2020). Investigation of drop's instability under different transition stage on axisymmetric flow model. *Computers and Fluids*, 210, 104673.

Prasad, S.K. and Sinha, M.K. (2020). Optimum heat Transfer Performance using Heat Sink- A Review. *IJSER*, 11(12), 171-179.

Singh, H., Kumar, S., and Mohapatra, S. K. (2020). Design and modelling of a self-dispersing twisted pipe to mitigate settling in coal water suspension, *Advanced Powder Technology*, 32, 317-336.

Singh, V., Kumar, S., & Ratha, D. (2020). Optimization of Al₂O₃ and TiO₂ Blends to be used as Erosion Resistant Coating for Mild Steel. *Journal of Tribology*, 142(10).

Singh, G., Kumar, S., Sehgal, S. S., & Gill, H. S. (2020). Investigation on the impact of physical properties of the coal-ash slurries on the erosion wear performance of WC coated steel by using Image processing technique. *International Journal of Coal Preparation and Utilization*, 1-21.

Singh, H., Kumar, S., & Mohapatra, S. K. (2020). Modeling of solid-liquid flow inside conical diverging sections using computational fluid dynamics approach. *International Journal of Mechanical Sciences*, 186, 105909.

Singh, J., Kumar, S., & Mohapatra, S. K. (2020). Erosion Tribo-Performance of HVOF deposited Stellite-6 and Colmonoy-88-micron layers on SS-316L. *Tribology International*, 147, 1-20.

Sharma, H., Singh, K., Tripathi, C.B., Kumar, S., Prasad, S., Kumar, K., & Singh, P. (2020). Enhancement of latent heat energy storage system using nonmaterial's for different applications: A review. *Materials Today: Proceedings*, 26, 883-886.

Kumar, K., Kumar, S., Tripathi, C.B., Sharma, H., & Prasad, S.B. (2020). Parametric optimization of slurry erosion behaviour of brass. *Materials Today: Proceedings*, 26, 1604-1609.

Raj, R., & Prasad, L. (2021). Numerical analysis of Rotary Air Pre-Heater for different operating conditions. *International Journal of Engineering Research & Technology (IJERT)*, 10(04).

Raj, R., & Prasad, L. (2021). Analysis of Rotary Air Pre-Heater for different operating condition (A Review). *International Journal of Engineering Research & Technology (IJERT)*, 10(04).

Khan, N.H., & Hassan, M.A. (2021). Convective heat transport in yield stress nanofluids in a differentially heated square enclosure. *Energy Sources, Part A*.

Akhtar, Z., & Hassan, M.A. (2021). Ballistic and Thermo-mechanical performance of Paraffin-based Hybrid Rocket Fuels Loaded with Light Metal Hydrides. *Acta Astronautica*, 178, 370-381.

Hassan, M.A., Pathak, M., Khan, M.K., & Khan, N.H. (2020). Natural convection of viscoplastic fluids in an enclosure with partially heated bottom wall. *International Journal of Thermal Sciences*, 158, 106527.

Ahmad, I., Khan, N.H., Hassan, M.A., & Paswan, M.K. (2020). Three-Dimensional Thermo-Hydraulic Analysis of Solar Air Heater with Equilateral Prism-Shaped Rib Roughness. *ASME Journal of Solar Energy Engineering*, 142 (5).

Uddin, S., Hassan, M.A., Singh, S.S., & Singh, D.K. (2020). Methanol-Filled Hybrid Photonic Crystal Fiber with High Birefringent and Negative Dispersion. *Brazilian Journal of Physics*, 42, 1-9.

Kumar, A., Hassan, M.A., & Chand, P. (2020). Heat transport in nanofluid coolant car radiator with louvered fins. *Powder Technology*, 376, 631-642.



Uddin, S., Hassan, M.A., Kumar, A., & Singh, D.K. (2020). Structural and Behavioural Analysis of As_2Se_3 , TeO_2 , SiC , SiO_2 and Si_3N_4 for Photonic Application. *Materials Science Forum*, 978, 360-368.

Uddin, S., Hassan, M.A., Singh, M., & Singh, D.K. (2020). Poly Lactic Acid, Poly Acrylic Acid and Ethanol Based Bio-Materials for PCF Design. *Materials Science Forum*, 978, 377-383.

Tabassum, S., Uddin, S., Singh, D.K. & Hassan, M.A., (2020). Low Confinement Loss Solid Core Rectangular Photonic Crystal Fiber. *Optical and Wireless Technologies*, 271-277.

Khan, N.H., Paswan, M.K. & Hassan, M.A., (2020). Convection of Viscoplastic Fluid in U-Tube Bends. *Recent Advances in Mechanical Engineering*, 299-311.

Chaudhary, S., K., Kar, V., R., & Shukla, K. K. (2021). Flexural behavior of perforated functionally graded composite panels under complex loading conditions: higher-order finite-element approach. *Journal of Aerospace Engineering*.

Das, A.K., Hansdah, D., & Panda, A.K. (2021). Thermal balancing and exergetic performance evaluation of a compression ignition engine fuelled with waste plastic pyrolytic oil and different fuel additives. *Energy*, 229, 120629.

Sinha, R., & Sahoo, V. (2020). Effect of Relative Movement between Bearing Races on Load Distribution on Ball Bearings. *SN Applied Sciences*, 2(12), 1-12.

Das, I., Sahoo, V., & Rao, V.V. (2020). Structural Analysis of High Temperature Superconducting Cable. *Physica C: Superconductivity and its Applications*.

Sahoo, V., Mohanto, B., & Maiti, R. (2020). Stresses in flex gear of a novel harmonic drive with and without pay load. *Australian Journal of Mechanical Engineering*.

Sinha R, Sahoo V, Paswan M. (2021): Radial Load Distribution by Balls in a Ball Bearing with Variable Clearance. *Mechanics Based Design of Structures and Machines*.

Routh B, Sahoo V, Sobczyk A.S. (2021): Performance Analysis of Asymmetric Toothed Strain Wave Gear. *Proceedings of IMechE (UK), Journal of Mechanical Engineering Science*, Part C.

Mukherjee, S., & Mandal, A. K. (2021). A generalized strain energy function using fractional power: Application to isotropy, transverse isotropy, orthotropy and residual stress symmetry. *International Journal of Non-Linear Mechanics*, 128, 103617.

Joshi, K. K. & Kar, V. R. (2021). Effect of material heterogeneity on the deformation behaviour of multidirectional (1D/2D/3D) functionally graded composite panels. *Engineering Computations*.

Soni, S.K., Thomas, B., & Kar, V.R. (2020). A Comprehensive Review on CNTs and CNT-Reinforced Composites: Syntheses, Characteristics and Applications. *Materials Today Communications*, 25, 101546.

DEPARTMENT OF METALLURGICAL & MATERIALS ENGINEERING

Sharma, B., Miyakoshi, M., Vajpai, S. K., Dirras, G., & Ameyama, K. (2020). Extra-strengthening in a harmonic structure designed pure titanium due to preferential recrystallization phenomenon through thermomechanical treatment. *Materials Science and Engineering: A*, 797, 127240.

Srivastava, R., & Prasad, R. (2020). Studies on Characterization and Beneficiation of Banded Hematite Jasper of Joda Area, Eastern India. *Trans Indian Inst Met*, 73, 215-221.

DEPARTMENT OF PHYSICS

Behera, A. K., Laha U., & Bhoi J. (2020) Generating Velocity-Dependent Potential in all partial waves, *Turkish J Physics*, 44, 229-238.

Behera, A. K., Laha U., Sahoo P., & Bhoi J. (2020) Hulthén half-off-shell T Matrix-Application to n-p and n-d systems *J. Korean Phys. Soc.* 76, 782-787.

Behera, A. K., Bhoi J., Laha U, Khirali B. (2020) Study of nucleon-nucleon and alpha-nucleon elastic scattering by the Manning-Rosen Potential *Communications in Theoretical Physics*, 72, 075301.

Khirali B., Behera, A. K., Bhoi J., & Laha U. (2020) On- and off-shell Jost functions for the Manning-Rosen potential *Physica Scripta*, 95, 075308.

Behera, A. K., Khirali B., Laha U., & Bhoi J., (2020) Construction of equivalent energy-dependent potential by Taylor series expansion *Theoretical & Math. Phys.* 205, 1353- 1363.

Sahoo P., Laha U. & Behera A. K. (2020) p-12C and p-d Scattering within the Separable model of Interaction *Physics Atom. Nuclei* 83, 818-826.

Laha U., Behera A. K., Majumdar M. and Bhoi J. (2020) The Fredholm determinant for Hulthén distorted nonlocal separable potential – Application to elastic scattering *Pramana- J. Phys.* 94: 144.

Pandey A., Singh A. K., Dan Shovan, Ghosh K., Das I., Tripathi S., Kumar U., Ranganathan R., Johnston D. C., and Mazumdar Chandan (2020). Instability and evolution of the magnetic ground state in metallic perovskites $GdRh_3C1-xBx$. *Physical Review Materials* 4, 084411.

DEPARTMENT OF PRODUCTION AND INDUSTRIAL ENGINEERING

Dwivedi, R., Prasad, K., Mandal, N., Singh, S., Vardhan, M. & Pamucar, D. (2021). Performance evaluation of an insurance company using an integrated Balanced Scorecard (BSC) and Best-Worst Method (BWM). *Decision Making: Applications in Management and Engineering*, 4(1), 33-50.

Das, A., & Shukla, M. (2020). Bioactive multifunctional hopeite coatings on new generation SS254 steel by laser rapid manufacturing for bone implant applications. *Transactions of the IMF (The International Journal of Surface Engineering and Coatings)*, 98(4), 209-216.

Das, A., Shukla, M. (2020). Multifunctional hopeite nanocoating on Ti64 substrates by pulsed laser deposition and radio frequency magnetron sputtering for orthopedic implant applications: A comparative study. *Journal of Central South University (Science & Technology of Mining and Metallurgy)*, 27(8), 2198–2209.

Swarnkar, R., Chaudhary, S., Das, A., Prasad, S.B., Kumar, M., Ballav, R. (2021). Effects of Brass Interlayer on Mechanical Properties of Friction Stir Welded AA 6061-T6 Joint. *Transactions of the Indian Institute of Metals*.

Agarwal, S., Chakraborty, S., Prasad, K. & Chakraborty, S. (2021). A rough multi-attributive border approximation area comparison approach for arc welding robot selection. *Jordan Journal of Mechanical and Industrial Engineering*, 15(2), 169-180.

Sid, S., Mor, R., Panghal, A., Kumar, D., & Gahlawat, V. (2021), Agri-food supply chain and disruptions due to COVID-19: Effects and Strategies. *Brazilian Journal of Operations & Production Management*, 18(2), 1-14.

Rana, R.S., Kumar, D. & Prasad, K. Two warehouse dispatching policies for perishable items with freshness efforts, inflationary conditions and partial backlogging. *Operations Management Research*.

Rana, R.S., Kumar, D., Rahul S. Mor & Kanika Prasad (2021) Modelling the impact of demand disruptions on two warehouse perishable inventory policy amid COVID-19 lockdown, *International Journal of Logistics Research and Applications*.

Mor, Rahul S, Kumar, Dinesh, Yadav, Sarika & Jaiswal, Swatantra Kumar (2021). Achieving cost efficiency through increased inventory leanness: Evidence from manufacturing industry. *Production Engineering Archives*, 27, (1), 42-49.

Sahu, K.K., & Ballav, R. (2021). Fabrication and Characterisation of Novel In-Situ Al6061-SiC-Gr Surface Composite Fabricated by Friction Stir Process. *International Journal of Engineering Trends and Technology*, 69(3), 108-117, ISSN: 2231 – 5381.

4.8.2 CONFERENCES (International/National)

DEPARTMENT OF CIVIL ENGINEERING

Abhiram, Y., Das, A., & Sharma, K. K., (2020). Green Composites for Structural and Non-Structural Applications: A Review. *11th ICMPA 2020, Materials Today: Proceedings*.

Bagri, A. S., & Singh, A. K. (2020). Finite Element Analysis of Soil Reinforced Canal Tunnel. *Proceeding of IGC conference 2020*, at Visakhapatnam, A.P. 17-19 December.

Chandrakant, N., Kumar, P., & Kumar, S. (2020). Behavior of Steel Fibre Reinforced Self Compacting Concrete. *National Conference (ASCM-2020)*.



Choudhury, A., & Choudhary, A. K. (2020). Numerical Analysis on Interaction of Single Pile Tunnel System. *Indian Geotechnical Conference 2020*, Andhra University Vishakhapatnam, India.

Choudhury, A., & Choudhary, A. K. (2020). Response of Pile Foundation Underlain by a Single Tunnel Skysystem. *Second ASCE India Conference on Challenges of Resilient and Sustainable Infrastructure Development in Emerging Economies (CRSIDE2020)*.

Gautam D. N., Azhar Md., & Sinha, A. K. (2020). Experimental Study on Black Cotton Soil Stabilisation Using GGBS, *Proc. of Geo-Science and Geo-Structures (GSGS-2020)*, NIT Jamshedpur, 03-04 September, 2020.

Kumar, V., Pandey, S. R., & Kumar, A. (2020). Study of Compressive Strength of Self Compacting Concrete using Rice Husk Ash and Nand Silica as A Partial Replacement to Cement, A Comparative Study, *National conference on Recent Advance in Structural Engineering NCRASE-2020*.

Madhuri, S., Bera, S. S., & Prasad, B. (2020). Influence of Marine Groth on the Static Response of Jacket Wind Turbine. *National Conference on Structural Engineering NCRASE*, NIT Jamshedpur, India.

Kumar, V., Kumar, A., & Prasad, B. (2019). Influence of High Temperature on Non-Silicate Based Activated Blast Furnace Slag. *5th International Conference on Innovation for Sustainable Infrastructure CIGOS-2019*, University of Transport Technology, Veitnam, October 31-November 1, 2019.

Naskar, S., & Choudhary, A. K. (2020). Behavior of Buried Pipelines in Geosynthetics Reinforced Soil Slopes. *Indian Geotechnical Conference 2020*, Andhra University Vishakhapatnam, India.

Panigrahi, B. P., Azhar, Md., & Sinha, A. K. (2020). Behaviour of Jute Geotextile Reinforced Sand under Triaxial Compression. *Proc. of Geo-Science and Geo-Structures (GSGS-2020)*, NIT Jamshedpur, 03-04 September, 2020.

Prasad, P., Gopinath, C., & Srivastava, A. K. L. (2020). Fragility Curves for Energy Absorption Capacity of Structures under Earthquake Loading, *17th World Conference on Earthquake Engineering*, Sendai, Japan-Spetember 13th to 18th 2020.

Pratap, U., Choudhary, A. K., & Sinha, A. K. (2020). Lateral Load Carrying Capacity of Vertical Micropiles. *Proc. of Indian Geotechnical Conference (IGC-2020)*, Visakhapatnam, Andhra Pradesh, 17-19 December, 2020.

Rajasekhar, P., & Mondal, S. (2020). Decontamination of Heavy Metal Contaminated Soils by Phytoremediation, Pot Experimentation. *Indian Geotechnical Conference 2020*, 1-11.

Choudhary, R., Kumar, A., & Choudhary, A. K. (2020). Numerical Analysis of Buried Pipelines Located in Slopes. *Proc. Indian Geotechnical Conference, IGC-2020*, Andhra University Vishakhapatnam, Dec.17-19, 2020.

Reddy V. P., Sharma, K. K., & Prasad, B. K. (2020). Dynamic Analysis of Telecommunication Tower Subjected To Wind Load with Different Configurations of Bracings. *National Conference on Structural Engineering NCRASE – 2020*, 21-22 August 2020, National Institute of Technology Jamshedpur, Jharkhand, India.

Rout, M. K. D., Biswas, S., & Sinha, A. K. (2020). Mechanical and Durability Properties of Alccofine Used in Reclaimed Asphalt Concrete Pavements (RACP). *Proc. of National Conference (Online) on Advances in sustainable construction materials (ASCM-2020)*, NIT Jamshedpur, 03 - 04th Aug., 2020.

Roy, S., & Sinha, A. K. (2020). Parametric Study of Stone Column using PLAXIS 2D. *Proc. of Indian Geotechnical Conference (IGC-2020)*, Visakhapatnam, Andhra Pradesh, 17-19 December, 2020.

Satyannarayan, R., Pratap, U., & Sinha A. K. (2020). Stabilization of Black Cotton Soil Using Groundnut Shell Ash. *Proc. of Geo-Science and Geo-Structures (GSGS-2020)*, NIT Jamshedpur, 03-04 September, 2020.

Shende, R., & Singh, A. K. (2020). Numerical Analysis of Ring Foundation Fixed with Geogrid. *Proceeding of IGC conference 2020*, at Visakhapatnam, A.P. 17-19 December.

Shubham, K., Metya, S., & Bhattacharya, G. (2020). Reliability Analysis of Settlement of a Foundation Resting Over a Circular Void. *E-Proceedings of the Indian Geotechnical Conference (IGC 2020)*, at

Andhra University, Visakhapatnam, December 17-19, 2020, Paper ID – TH09-36.

Singh, C. K., Biswas, S., & Sinha, A. K. (2020). Determination Of Lateral Load Carrying Capacity Of Pile Group Located Near Contaminated Sand Slope Using Plaxis 3d. *Proc. of National Conference (Online) on Advances in sustainable construction materials (ASCM-2020)*, NIT Jamshedpur, 03 - 04th Aug., 2020.

Singh, D. K., & Sharma, K. K. (2020). Effect of Stiffeners on the Natural Frequencies of Stiffened Plate. *Online National Conference on Structural Engineering NCRASE – 2020*, 21-22 August 2020, National Institute of Technology Jamshedpur, Jharkhand India.

Singh, M., Duggal, S. K., Singh, V. P., & Sharma, K. K. (2020). Synthetic Ground Motion Simulation for Varanasi City. *7th International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics (7ICRAGEE)*, 13-16th July, 2020, at IISc Bengaluru.

Singh, N., Shandilya, A., Tripathi, K. R., & Sharma, K. K. (2020). Temporal landcover dynamics and environmental impact in coal mine area of Korba district (Chhattisgarh). *International Conference on Futuristic and Sustainable Aspects in Engineering and Technology (FSAET-2020)*.

Singhdeo, S., Mondal, S., & Choudhary, A. K. (2020). Efficacy of Red Mud and GGBS in Improving the Engineering Properties of Black Cotton Soil. *Indian Geotechnical Conference 2020*, Andhra University Vishakhapatnam, 1-11.

DEPARTMENT OF COMPUTER APPLICATIONS

Kumari, A. and Mehta, A. K., "A Hybrid Intrusion Detection System Based on Decision Tree and Support Vector Machine." *2020 IEEE 5th International Conference on Computing Communication and Automation (ICCCA)*, Greater Noida, India, 2020, pp. 396-400, doi: 10.1109/ICCCA49541.2020.9250753

Kumar P., Saroj S., Kumar S., Azad C. (Sept 2020) Automated Monitoring and Regulation of User-Friendly Greenhouse Using Arduino. In: Nath V., Mandal J.K. (eds) *Proceedings of the Fourth International Conference on Microelectronics, Computing and Communication Systems*. Lecture Notes in Electrical Engineering, vol 673. Springer, Singapore.

Adhikary D.R.D., Tripathy S., Mallick D.K., Azad C. (2020) A Clustering Mechanism for Energy Efficiency in the Bottleneck Zone of Wireless Sensor Networks. In: Mishra D., Buyya R., Mohapatra P., Patnaik S. (eds) *Intelligent and Cloud Computing*. Smart Innovation, Systems and Technologies, vol 194. Springer, Singapore.

Dharmveer Y., Azad C., Bala K., Sharma P.K., Kumar S., Genetic Algorithm and Naïve Bayes (GANB) based Diabetes Mellitus prediction System, *Proceedings of the 5th International Conference on Microelectronics Computing & Communication Systems (MCCS-2020)*, ARTTC BSNL Ranchi, 2020

Bhat K., Mahto D., Yadav D. K. and Azad C., (NOV 2020) Image Security using Hyperchaos and Multidimensional Playfair Cipher. In: *International Conference On Security & Privacy (ICSP 2020)*, November, 2020, National Institute of Technology Jamshedpur.

Yadav D.K., Dutta S., Azad C. (NOV 2020) Study and Analysis of Test Case Prioritization Technique. In: Nath V., Mandal J. (eds) *Nanoelectronics, Circuits and Communication Systems*. Lecture Notes in Electrical Engineering, vol 692. Springer, Singapore.

Yadav D.K., Azad C., Bala K., Sharma P. K. (JAN 2021). Genetic Algorithm and Gaussian Radial Basis Function Network (GAGRBFN) Based Diabetes Mellitus Prediction System. *The 2nd International Conference on Advances in Distributed Computing and Machine Learning (ICADCML-2021)*.

Mandal, S., Khan, D. A., A Study of Security Threats in Cloud: Passive Impact of COVID-19 Pandemic, *2020 International Conference on Smart Electronics and Communication (ICOSEC)*, September 2020.

Bhat, K., Mahto, D., Yadav, D.K., Azad, C., Image Security using Hyperchaos and Multidimensional Playfair Cipher, *Proceedings of International Conference on Security & Privacy (ICSP-2020)*, 5th -6th November, NIT Jamshedpur, India, 2020.

Yadav, G., Yadav, D.K., Chandra Mouli P.V.S.S.R., Enhancement of Region of Interest from a Single Backlit Image with Multiple Features, in the proceedings of 5th IAPR International Conference on



Computer Vision & Image Processing (CVIP) 2020, 4th -6 th December, IIT Allahabad, India, 2020.

Barnwal, S.K., Prakash, A., Yadav, D.K., LEACH Network Routing Protocols in Wireless Sensor Network: A Comparative Analysis, in the proceedings of 6 th International Conference on Nanoelectronics Circuits & Communication Systems (NCCS-2020), 19th -20th December, IETE Ranchi, India, 2020.

Basumatary, B., Kumar, C., Yadav, D.K., Security Risk Assessment of Information Systems in an Indeterminate Environment, in the proceedings of 11th International Conference on Cloud Computing, Data Science & Engineering (Confluence-2021), 28th-29th January, Amity University, Noida, India, 2021.

A. Kumari, A. K. Mehta "Effective Prediction of COVID-19 using Supervised Machine Learning with Ensemble Modeling", International Conference on Paradigms of Communication, Computing and Data Sciences(PCCDS 2021) May 07 – 09, 2021.

D. Paikaray, A. K. Mehta An Extensive Approach towards Heart Stroke using Machine Learning with Ensemble Classifier, International Conference on Paradigms of Communication, Computing and Data Sciences(PCCDS 2021) May 07 – 09, 2021.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Shaw, A. K., Chakraborty, A., Mohapatra, D., &Dutta, S. (2020, October). Scalable IoT Solution using Cloud Services–An Automobile Industry Use Case. In 2020 Fourth International Conference on I-SMAC (IoT in Social, Mobile, Analytics and Cloud)(I-SMAC) (pp. 326-331). IEEE.

Basu, A., Mistry, S., Maity, S., &Dutta, S. (2020, May). A Novel Energy Aware Resource Allocation Algorithm into a P2P Based Fog Computing Environment. In International Conference on Information, Communication and Computing Technology (pp. 88-97). Springer, Singapore.

Saxena, M., &Dutta, S. (2020, February). Improved the efficiency of IoT in agriculture by introduction optimum energy harvesting in WSN. In 2020 International Conference on Innovative Trends in Information Technology (ICITIT) (pp. 1-5). IEEE.

AsthaVerma, Vijay BhaskarSemwal and Koushendra Kumar Singh, Walking motion simulation of human walk by solving inverse kinematics, International Conference on Machine Vision and Augmented Intelligence (MAI2021), 11-14 Feb 2021, at IIITDM Jabalpur

UjjayantaBhaumik, Siddharth, Chatterjee and Koushendra Kumar Singh, Surya-namaskar pose identification and estimation using no code Computer Vision, International Conference on Machine Vision and Augmented Intelligence (MAI2021), 11-14 Feb 2021, at IIITDM Jabalpur

UjjayantaBhaumik, Koushendra Kumar Singh, Anand Sai, K Arun, An Approach for Denoising of Contaminated Signal using Fractional Order Differentiator, International Conference on Machine Vision and Augmented Intelligence(MAI2021),11-14 Feb 2021, at IIITDM Jabalpur

Suraj Kumar, Suraj Shukla, K. K. Sharma, Koushendra Kumar Singh and Akber Sheikh Akbari, Classification of Land Cover and Land Use using Deep Learning, International Conference on Machine Vision and Augmented Intelligence(MAI2021),11-14 Feb 2021, at IIITDM Jabalpur

A. Rastogi, Ujjayanta Bhoumik, C Choudhary, Akber Sheikh Akbari and Koushendra Kumar Singh, Candidate Set based Method for Ear Localization and Validation, International Conference on Machine Vision and Augmented Intelligence(MAI2021),11-14 Feb 2021, at IIITDM Jabalpur

Sanjay Kumar, Binod Kumar Singh, Akshita, Sonika Pundir, Simran Batra and Rashi Joshi , "A survey on Symmetric and Asymmetric Key based Image Encryption", In 2nd International Conference on Data, Engineering and Applications (IDEA) , 2020 Feb 28 (pp. 1-5). IEEE

Sanjay Kumar and Binod Kumar Singh, "A Review on Digital Watermarking based Image Forensic Technique", International Conference on Machine Vision & Augmented Intelligence (MAI - 2021), 2020. (Presented)

Sunil Kumar and Dilip. Kumar, "Comparative Analysis and Performance Evaluation of Medical Image Compression Method for

Telemedicine," 2nd International Conference on Data, Engineering and Applications (IDEA), Bhopal, India, 2020, pp. 1-5, doi: 10.1109/IDEA49133.2020.9170724.

G. Patidar, Sunil Kumar and Dilip Kumar, "A Review on Medical Image Data Compression Techniques," 2nd International Conference on Data, Engineering and Applications (IDEA), Bhopal, India, 2020, pp. 1-6, doi: 10.1109/IDEA49133.2020.9170679.

Bhagat, Monu, Dilip Kumar, IsharulHaque, Hemant Singh Munda, and Ravi Bhagat. "Plant Leaf Disease Classification Using Grid Search Based SVM." In 2nd International Conference on Data, Engineering and Applications (IDEA), pp. 1-6. IEEE, 2020.

Bhagat, Monu, Dilip Kumar, Rehan Mahmood, BibhuhendraPati, and Monu Kumar, "Bell Pepper Leaf Disease Classification Using CNN." In 2nd International Conference on Data, Engineering and Applications (IDEA), pp. 1-5. IEEE, 2020.

Rajiv Ranjan Suman, Bhaskar Mondal, Sunil Kumar Singh and Tarni Mandal "A Secure Color Image Encryption Scheme based on Chaos" presented at International conference on Machine Vision and Augmented Intelligence (MAI 2021) held IIITDM Jabalpur from FEBRUARY 11 - 14, 2021.

DEPARTMENT OF ELECTRICAL ENGINEERING

Singh, D. K., Manna, S.,&Akella, A. K.(2021). Grid Connected PV System Using Multilevel Inverter. 7th International Conference on Electrical Energy Systems (ICEES).

Yadav,K.B., Kumari,M., Priyadarshi, A., & Rathore, V. (2020). Advanced Metering Infrastructure In Smart Grid Based on Smart Meter: A Review. 6th international conference on Nano-electronics, circuits & communication systems (NCCS-2020), 19th-20th Dec.2020, ARTTC BSNL Ranchi.

Shankar,S.,Rathore, V., Yadav,K.B.,&Priyadarshi,A. (2021). Observability of System Using Optimal PMUs Location. 7th International conference on Electrical Energy Systems (ICEES-2021), 11th-13th Feb.2021, IEEE, SSN College of Engineering, Chennai.

Manna, S., &Akella, A. K. (2021). Comparative analysis of various P & O MPPT algorithm for PV system under varying radiation condition. 2021 1st International Conference on Power Electronics and Energy (ICPEE), Bhubaneswar, India, 1-6, doi: 10.1109/ICPEE50452.2021.9358690.

Namrata, K., Samadhiya, A., Satla, A., Guntupally, K.P.,&Yelamarthy, N.S. (2020). Control Analysis of Current Controller in Stationary Reference Frame for a Grid tied Inverter based Distributed Generation. 2020 IEEE International Women in Engineering (WIE) Conference on Electrical and Computer Engineering (WIECON-ECE), Dec 26th-27th,Bhubneshwar,India.

Samadhiya, A., Namrata, K.,& Gupta, D. (2020). Photovoltaic modeling using single diode model in MATLAB. International Conference on Computing, Power and Communication Technologies (GUCON) 2020.

Das, S., Samadhiya, A.,&Namrata, K. (2020). Mathematical modelling based Solar PV module and its simulation in comparison with datasheet of JAPG-72-320/4BB solar module. National Conference on Research and Developments in Material processing, modelling and characterization (RDMPMC), 2020.

Das, S.,&Namrata, K. (2020). Improving the performance analysis of MPPT Controller unit of a PV generation system using optimization technique based on Spider Monkey Principle. National Conference on Research and Developments in Material processing, modelling and characterization (RDMPMC) , 2020.

Das, S.,&Namrata, K. (2020). Comparative study for the stimation of the rays of sun incident on inclined plane and flat plane by isotropic and anisotropic sky models for Vadodara, Gujarat.",National conference on Materials, Mechanics and Modelling (NCMMM), 2020.

Das S. &Namrata, K.(2020). Detailed schemes and comparison of Islanding in microgrid. International Conference on Renewable Energy System, 2020.

Kumar, D.,Samadhiya, A.,Namrata, K.,&Das, S. (2020). Optimal design and technical analysis of a Standalone photovoltaic system with battery storage for a residential site in Jamshedpur, India. 2020 IEEE Students' Conference on Engineering & Systems (SCES),July 10-12, 2020,Prayagraj, India



- Ray, N. K., Das, A., & Bhattacharya, A. (2021). Inductively Coupled WPT system using LCC and LCL Compensation. International Conference on Electric Power and Renewable Energy Conference-2021 (EPREC-2021).
- Narayan, J. P., Das, A., & Bhattacharya, A. (2021). Class-E Power Amplifier based wireless power transfer system. International Conference on Electric Power and Renewable Energy Conference-2021 (EPREC-2021).
- Gautam, T. P. K., Bhattacharya, A., & Das, A. (2021). High Frequency Soft Switching one stage Conversion using PWM and PDM Control Technique for Induction Heating Application", International Conference on Women in Multifaceted Research, IETE KOLKATA, India, March 8-9, 2021
- Jawad, M., Basu, A., & Singh, M. (2021). Fault ride through of Grid integrated DFIG Wind energy system under symmetrical voltage dip. 1st International Conference for Women in Multifaceted Research 2021, March 2021.
- Basu, A., Singh, M., & Jawad, M. (2021). Intelligent Battery Energy Management of Solar Energy System using Bi-directional DC/DC Converter. 1st International Conference for Women in Multifaceted Research 2021, 8 March 2021.
- Sahu, A. K., Kumar, S., & Singh, M. (2021). Simulation and Comparison of Five-Level and Seven-Level Cascaded H-Bridge Multilevel Inverter Fed BLDC Drive. 1st International Conference for Women in Multifaceted Research (ICWMR). March 2021
- Kumar, S., Sahu, A. K., & Singh, M. (2021). Design and Implementation of Improved Power Quality Converter Fed BLDC Motor Drive. 1st International Conference for Women in Multifaceted Research (ICWMR). March 2021
- Singh, D. K., Manna, S., & Akella, A. K. (2021). Control of Three Phase Grid Connected Inverter using d-q Axis Theory. 2nd Electric Power and Renewable Energy Conference (EPREC-2021), NIT Jamshedpur, 28-30 May 2021.
- Kumar, L., Kar, M. K., & Kumar, S. (2021). Reactive Power Management by Optimal Positioning of FACTS Controllers using MFO Algorithm. 1st IEEE International Conference on Emerging Trends in Industry 4.0 (2021 ETI 4.0), 19th - 21st May 2021, O.P. Jindal University, Raigarh, Chhattisgarh, India
- Kumari, S., Kar, M. K., Kumar, L., & Kumar, S. (2021). Optimal Siting of FACTS Controller Using Moth Flame Optimization Technique. 2nd Electric Power and Renewable Energy Conference (EPREC-2021), 28th - 30th May 2021.
- Akash, A., Kumar, L., & Kumar, S. (2021). Voltage Stability Analysis Using SVC in Modern Power System. 2nd Electric Power and Renewable Energy Conference (EPREC-2021), 28th - 30th May 2021, NIT Jamshedpur.
- Kumar, S., Kumar, L., & Kumar, S. (2021). Voltage Profile Enhancement using STATCOM in power system network. 2nd Electric Power and Renewable Energy Conference (EPREC-2021), 28th - 30th May 2021, NIT Jamshedpur
- Kar, M. K., Kumar, S. & Singh, A. K., (2021). Power quality improvement of an interconnected grid system using PWM technique of D-STATCOM. 2nd Electric Power and Renewable Energy Conference (EPREC-2021), 28-30 May 2021.
- Yadav, R., Kar, M. K., & Singh, A. K. (2021). Speed Control of a Three Phase IM with Closed-Loop Control Scheme. 2nd Electric Power and Renewable Energy Conference (EPREC-2021), 28-30 May 2021.
- Tripathi, S. S., Kar, M. K., & Singh, A. K., (2021). Comparative THD Analysis of Multilevel Inverter using different Multicarrier PWM schemes. 2nd Electric Power and Renewable Energy Conference (EPREC-2021), 28-30 May 2021.
- Gupta, N. K., Kasireddy, I., & Singh, A. K. (2021). Design of PID controller using strawberry algorithm for load frequency control of multi-area interconnected power system with and without non-linearity. 2nd Electric Power and Renewable Energy Conference (EPREC-2021), 28-30 May 2021.
- Sinha, A.R., Gupta, N. K., Sekhar, Ch, Singh, A. K., (2021). Load Frequency Control for Multi Area Interconnected Power System with 3 DOF-PID controller using Salp Swarm Algorithm technique for Optimization. 2nd Electric Power and Renewable Energy Conference (EPREC-2021), 28-30 May 2021.
- Tripathi, S. S., Kar, M. K., & Singh, A. K., (2021). Comparative THD Analysis of Multi-level Inverter using SPWM Scheme. First International Conference on Renewable Technologies in Engineering (ICRTE-21) organized by Manav Rachna International Institute of Research and Studies on 15th -16th April 2021.
- Yadav, R., Kar, M. K., & Singh, A. K., (2021). Controlling Speed of a Permanent Magnet Synchronous Machine using Closed Loop Control Scheme. 2021 IEEE Sponsored International Conference on Emerging Trends in Industry 4.0 (ETI 4.0) held at OP Jindal University, Raigarh, Chhattisgarh, India during 19 - 21, May 2021.
- Kumar, S., Kumar, M., & Kumar, J. (2021). Change in negative sequence current based Islanding event detection. 2nd Electric Power and Renewable Energy Conference (EPREC-2021), 28th - 30th May 2021, NIT Jamshedpur.
- Shubham, K., Kumar, M., & Kumar, J., (2021). Islanding detection scheme based on change in negative sequence voltage in Microgrid environment. 2nd Electric Power and Renewable Energy Conference (EPREC-2021), 28th - 30th May 2021, NIT Jamshedpur.
- Tadikonda, N. K., Kumar, K., & Mahanty, R. N., (2021). Autonomous mode of operation of a microgrid by using the Under/ Over Voltage Relay. 2nd Electric Power and Renewable Energy Conference (EPREC-2021), 28th - 30th May 2021, NIT Jamshedpur.
- Kumar, R., Tadikonda, N. K., Kumar, K., & Mahanty, R. N., (2021). An ANN Based Mppf Technique for Partial Shading Photo Voltaic Distribution Generation. 2nd Electric Power and Renewable Energy Conference (EPREC-2021), 28th - 30th May 2021, NIT Jamshedpur.
- Ansari, S., Sharma, J.P., & Gupta, O.H. (2021). Fault detection Scheme for AC Microgrids based on Sum of Squared Relay Current and TKEO." IEEE International Conference on Emerging Trends on Industry 4.0 (ETI 4.0), Raigarh, India, 1-5, 19-21 May 2021.
- Sharma, J.P., Ansari, S., & Gupta, O.H. (2021). DC Component-based Differential Pilot Relaying Scheme for Half-wave Transmission Lines. IEEE International Conference on Emerging Trends on Industry 4.0 (ETI 4.0), Raigarh, India, 1-4, 19-21 May 2021.
- Singh, G.K., Chaturvedi, S., & Gupta, O.H. (2021). Solar PV System for DC Microgrid in Vessels. 2nd Electric Power and Renewable Energy Conference (EPREC-2021), Jamshedpur, India, pp. 1-14, 28-30 May 2021.
- Das, S., & Namrata, K. (2021). Improving the Performance Analysis of MPPT Controller Unit of a PV Generation System Using Optimization Technique Based on Spider Monkey Principle (SMO). Next Generation Materials and Processing Technologies. Springer Proceedings in Materials, 9, 553-564 https://doi.org/10.1007/978-981-16-0182-8_41
- Das, S., & Namrata, K. (2021). Detailed schemes and comparison of islanding in microgrid. AIP Conference Proceedings 2341, 030034 (2021); <https://doi.org/10.1063/5.0049900>
- Das, S., & Namrata, K. (2021). Mathematical Modelling -Based Solar PV Module and Its Simulation in Comparison with Datasheet of JAPG-72-320/4BB Solar Module Next Generation Materials and Processing Technologies, Springer Proceedings in Materials, 9, 431-440 https://doi.org/10.1007/978-981-16-0182-8_33
- Sahay, S., Upputuri, R., & Kumar, N. (2021). Execution Analysis of Particle Swarm Optimization Technique by Using Different Inertia Weight Factors to resolve Combined Economic and Emission Dispatch Problems. 2nd Electric Power and Renewable Energy Conference (EPREC-2021), May 28-30, 2021, NIT Jamshedpur.
- Gaurav, R., Upputuri, R., Sahay, S., & Kumar, N. (2021). Electricity Transmission Pricing: Marginal Pricing of Transmission Services Using Point of Connection Tariff. 2nd Electric Power and Renewable Energy Conference (EPREC-2021), May 28-30, 2021, NIT Jamshedpur.
- Sahithya, P., & Kumar, N. (2021). Enhancement of Transient Stability of a SMIB System using Fuzzy Logic Based Power System Stabilizer. 2nd Electric Power and Renewable Energy Conference (EPREC-2021), May 28-30, 2021, NIT Jamshedpur.



Composite for Performance Improvement of Chemical Sensor: Study for Various Analytes, 1st National Conference on Materials, Mechanics & Modelling (NCMMM), NIT Jamshedpur, India, pp. 1-9, 29-30th August 2020.

Kumar Singh, N K Chowdhury and B Bhowmik, Efficiency Improvement in Metal Oxide Gas Sensor, National Conference on Electronics, Communication and Computation (NCECC), NIT Jamshedpur, India, pp. 1-4, 5-6th September 2020

Halder, S. G. Bhokare and B. Bhowmik, "Design of (2,1,4) Convolutional Encoder and Viterbi Decoder using Verilog" National Conference on Electronics, Communication and Computation (NCECC), NIT Jamshedpur, India, pp. 1-5, 5-6th September 2020.

Sah, Y Vahini, B Bhowmik, Study and Design of Opamp based Bandgap Reference Circuit, National Conference on Electronics, Communication and Computation (NCECC), NIT Jamshedpur, India, pp. 1-4, 5-6th September 2020.

B. Behera, R. Mehta, P. Fulzele, R. Sinha, "Regular Self-Health Monitoring and Medicine Reminder System with Emergency Alert Messaging using IoT," ICIA-NITJSR-2020 (International Conference on IoT and its Application-2020), 26th – 27th Dec 2020.

B. Behera, S. Kumari, A. Kumari, A. Kumar, "Application of IoT and Weather Prediction for Enhancement of Agricultural Productivity", 3rd International Conference on Computational Intelligence, Security & IoT (ICCIoT) 2020, 29th – 30th Dec 2020. Springer Nature Switzerland, ISSN 1865-0929, ISSN 1865-0937 (electronic), ISBN 978-3-030-66762-7, ISBN 978-3-030-66763-4

S. Saha, S. Mukhopadhyay, S. Bhokare, B. Behera, "Functional Verification of DMA Controller of an Image Processing SoC," NCECC-2020 (National Conference on Electronics, Communication and Computation), 6th Sep 2020.

B. Turuk, G. Sahoo, A. Nagmani, B. Behera, "Different Parametric Analysis of One Port SAW Resonator using COMSOL", NCECC-2020 (National Conference on Electronics, Communication and Computation), 5th Sep 2020.

S. Mahanty, R. Choudhary, A. Kumar, R. Kumar, B. Behera, "Implementation of all optical even parity checker using the micro-ring resonator structure," NCECC-2020 (National Conference on Electronics, Communication and Computation), 5th Sep 2020.

R. Choudhary, S. Mahanty, A. Kumar, R. Kumar, B. Behera, "Design of Micro-Ring Resonator Based All Optical Signal Routers," NCECC-2020 (National Conference on Electronics, Communication and Computation), Sep 2020.

B. Behera, N. Kumar, M. Mahato, B. Prasad, V. B. Semwal, "Weather Forecasting and Monitoring using Machine learning and Deep Neural Network Models", NCECC-2020 (National Conference on Electronics, Communication and Computation), 5th Sep 2020.

G. Sahoo, B. Turuk, B. Behera "Investigation to the deflections of micro-cantilever actuator with different piezoelectric materials and structures for the application of micro lenses movement", 1st National Conference on "Materials, Mechanics & Modelling" NCMMM-2020, NIT Jamshedpur, Jharkhand, India, on 29th & 30th August, 2020.

Nagmani, B. Turuk, B. Behera "Simulation and Optimization of Geometrical Structure of One-port SAW Resonator using FEM", 1st National Conference on "Materials, Mechanics & Modelling" NCMMM-2020, NIT Jamshedpur, Jharkhand, India, on 29th & 30th August, 2020.

Raushan Kumar, Kumar Saurabh and Akhilesh Kumar "Numerical optimization of ZnMgO/CIGS based heterojunction solar cells via change of Buffer and BSF layer" International Conference on Industrial and Manufacturing Systems (CIMS-2020) organized by NIT Jalandhar, Punjab, India.

Pratyancha Prasad, Akhilesh Kumar and Shiva Nand Singh "Design of an Asymmetric Fed Super Wideband Antenna for Sub-millimeter and Millimeter Wave Applications" 13th International conference of Antenna Test and Measurement Society, ATMS - 2021 18th and 20th Jun 2021 On Virtual Platform

Pratyancha Prasad, Akhilesh Kumar and Shiva Nand Singh "A Wheel Shaped Compact UWB Antenna for GPR Applications." 6th IEEE International Conference for Convergence in Technology - 6th ICT 2021.

Caslav Stefanovic, Stefan Panic, Vimal Bhatia, Nagendra Kumar, Sanjeev Sharma, "On Higher-Order Statistics of the Channel Model for UAV-to-Ground Communications," IEEE 93rd Vehicular Technology Conference (VTC2021-Spring), 25-28 April 2021, DOI: 10.1109/VTC2021-Spring51267.2021.9448754

DEPARTMENT OF HUMANITIES, SOCIAL SCIENCES AND MANAGEMENT

Mahato, S.R., Bhushan, R., and Kapoor, M. (2020). Gender Discrimination and Quest of Female Identity in Kavita Kane's The Fisher Queen's Dynasty, National Conference on Role of Women in Nation Development (Virtual) organized by National Institute of Technology Jamshedpur & Women's Institute of Technology, Dehradun, September 5-6, NIT Jamshedpur.

Mahato, S.R., Bhushan, R., and Kapoor, M. (2020). Sita: A Story of Sita's Resistance to Patriarchy, International Conference on Gender Equity: Challenges and Opportunities (Virtual) Organized by Sardar Vallabhbhai National Institute of Technology, November 25-27, Surat Gujarat.

Kumari, P., and Kapoor, M. (2020). Upsurge in Atrocities against Dalit and Adivasi Women in the wake of Covid 19 Epidemic, National Conference on Role of Women in Nation Development (Virtual) organized by National Institute of Technology Jamshedpur and Women's Institute of Technology Dehra dun, September 5-6, NIT Jamshedpur.

Kumari, P., and Kapoor, M. (2021). Dalit Aesthetics: An Alternate way of Understanding Literature. National Conference on Contemporary Perspectives in English Language, Literature & Cultural Studies, June 11-12, Chandigarh University.

Mahto, S., Bhushan, R., and Kapoor, M. (2021). Urvi's Resistance to Patriarchy in Kavita Kane's *Karna's Wife: The Outcast's Queen*. International Conference (Online) on Contemporary Issues in South Asian Literature & Culture Studies (Dept. of Languages), March 30-31, Manipal University, Jaipur.

Chhavi and Bhushan, R. (2021). Mahesh Dattani's *on a Muggy Night in Mumbai*: The Historicity and the Dynamics of Being a Gay in India. International Conference (Online) on Contemporary Issues in South Asian Literature & Culture Studies (Dept. of Languages), March 30-31, Manipal University, Jaipur.

DEPARTMENT OF MATHEMATICS

M.K. Gupta, N.K. Tomar, Dipa Sharma, Juhi Jaiswal, PD (2020) Observer Design for Descriptor Systems with Unknown Inputs: Application to Infinite Bus System 5th IEEE Int. Conf. Recent Advances and Innovations in Engineering 1-3 December, Jaipur pp. 1-4.

Debnath, S. K., Sakurai, K., Dey, K., & Kundu, N. (2021) Secure Outsourced Private Set Intersection with Linear Complexity. In IEEE Conference on Dependable and Secure Computing (DSC) (pp. 1-8).

Sinha, V. K., Kumar, B., Seth, G. S., & Nandkeolyar, R. (2020). Outlining the impact of thermal radiation on micropolar nanofluid viscous dissipative flow: A spectral method based numerical simulation with regression analysis. AIP Conference Proceedings, 2253 (1), 020024 1-10.

Mahato, G. K., Mahatha, B. K., Nandkeolyar, R., & Patra, B. (2020). The effects of chemical reaction on magnetohydrodynamic flow and heat transfer of a nanofluid past a stretchable surface with melting. AIP Conference Proceedings, 2253 (1), 020011 1-13.

DEPARTMENT OF MECHANICAL ENGINEERING

Pardeep, B., Srivastava, M., Singh, A., Sahu, M. K., and Sinha, M. K. (2021). Computational study on the dynamics of drop generation under different ambient conditions. AIP Conference Proceedings 2341 030021- 8.

Kumar, G., and Sinha, M. K. (2021). Review on Numerical and Experimental Investigation of Turbulence flow in Bend. AIP Conference Proceedings 2341 030017 - 19.

Srivastava, M., Dessai, G. P., Srivastava, D., Pardeeo, B., Singh, P., and Sinha, M. K. (2021). Thermal analysis of Solar air heater by using Pebbles as an absorber materials. AIP Conference Proceedings 2341 030018 -7.

Kumar, A., Uddin, S., Hassan, M.A., and Singh, D.K. (2020). Two Sides Rhombus Shaped Cladding Hexagonal PCF with Low Confinement Loss and Negative Dispersion, SSRN 3573506, 2020.



Karakoti, A., Pandey, S., & Kar, V. R. (2021). Transient analyses of FGM sandwich cylindrical shell panels under air-blast load, AIP Conference Proceedings 2341:020014.

Chaudhary, S., Kar, V., R., & Shukla, K. K. (2021). Free vibration behavior of laminated composite panel with center circular cutout, AIP Conference Proceedings 2341:020050.

Kar, V. R., B. Chandra Mouli & Kumar, S. (2021), Eigenfrequencies of functionally graded (Ti-6Al-4V/Si3N4) conical panel under thermal environment, AIP Conference Proceedings 2341, 020049

Pandey, A., and Hansdah, D. (2020). Heat Exchangers for Automotive Exhaust Thermoelectric Generators: A Review. National conference on Materials, Mechanics and Modelling, August 29-30, National Institute of Technology Jamshedpur.

Khaturia, Y., and Hansdah, D. (2020). Performance Evaluation of Thermoelectric Materials Considering the Temperature Dependence Properties. National conference on Research and Developments in Material Processing, Modelling and Characterization (RDMPMC 2020), August 26-27, National Institute of Technology Jamshedpur.

Kumar, B., Brar, S., Kumar, D., & Singh, K. M. (2021). Numerical investigation of Al-foam shock absorber for transportation cask. In AIP Conference Proceedings (Vol. 2341, No. 1, p. 020036).

Gurusiddaiah, S. S., & Kumar, D. (2021). Corrugated edge margin effect on edge failure stresses in solid riveted metallic lap joints. In AIP Conference Proceedings (Vol. 2341, No. 1, p. 020025)

Sahoo, V. (2020). Effect of Cavitation on Leakages through Active Contact of Involute Toothed External Gear Pump, 1st National Conference on Materials, Mechanics & Modelling, August 29 -30, Jamshedpur, India.

Mandal, A. K. (2020). Stability of a Dynamic Vibration Absorber Controlled Self-excited Rayleigh Oscillator, National Conference on Materials, Mechanics & Modelling, August 29 -30, Jamshedpur, India. Kumar, B., and Srivastava, V.C. (2021). Strength and conductivity of Cu-Ni-Si based alloy. AIP Conf. Proc. 2341, 040005-1-040005-4.

DEPARTMENT OF METALLURGICAL & MATERIALS ENGINEERING

Bharat Bhushan Jha, (2020) "Asset Integrity Management of High Temperature Tubing's in Service" in National Webinar on Oilfield Chemistry & Chemical Engineering Organised by Eventagious ConEx, New Delhi Date: 17th August 2020,

Bharat Bhushan Jha (2020), " Asset Integrity Management towards enhancing the service worthiness of components and pipelines ". In International online webinar on Asset integrity management and Inspection technologies, New Delhi, September 29, 2020.

Bharat Bhushan Jha, (2020) "Structural Health Monitoring and Residual Life Assessment of Pipelines" in National Conference on Integrity Management of "Oil & Gas Pipelines, New Delhi. Date: 8-9th OCTOBER 2020.

Bharat Bhushan Jha (2020), "Integrity Assessment and Residual Useful life of Mining Components" in National webinar on India Corrosion Technology Forum, New Delhi on November 6, 2020 (Keynote Lecture)

Bharat Bhushan Jha (2021), "Advanced NDE methods for Integrity Assessment of Pipelines in a National Virtual conference of pipeline technology forum on 18-19th Jan. 2021 Organised by IONEX, New Delhi

Bharat Bhushan Jha (2021), "RECENT ADVANCEMENT IN INSPECTION TECHNIQUES TOWARDS PIPELINES RISK MANAGEMENT" in a 2nd Pipeline Technology Forum(2nd PTF 2021)" organized by Conex India, New Delhi Date: 26th April 2021,

Bharat Bhushan Jha, (2021), " Recent Advancement in Inspection Technologies towards pipeline risk management" in International Virtual conference on City gas and Natural Gas Forum, New Delhi, May 7-8, 2021.

Bharat Bhushan Jha, (2021)" Structural Integrity Assessment by Latest NDT and Inspection Techniques " in 2nd International Virtual conference and exhibition on Asset Integrity Management and Technology Forum, New Delhi, June 22-23, 2021

Prasad, D., Kumari, R., Chatterjee, B. K., Ali, M., Singh, A. K., & Sinha, S. (2020). Innovation in optimization of mixing and nodulizing drum for reducing energy consumption at sinter plant, Tata steel. National

Online Conference on "Research and Developments in Material Processing, Modelling and Characterization 2020" 26th -27th August, 2020, National Institute of Technology Jamshedpur, India

Kumari, R. (2020). Study of the effect of heat treatment on Microstructure and corrosion resistance of 0.6% C steel. National Online Conference on "Research and Developments in Material Processing, Modelling and Characterization 2020" 26th -27th August, 2020, National Institute of Technology Jamshedpur, India

Kumari, R. (2020). Development of Hydroxyapatite coating on Titanium and its alloy by EPD: An overview, National Online Conference on "Research and Developments in Material Processing, Modelling and Characterization 2020" 26th -27th August, 2020, National Institute of Technology Jamshedpur, India

Yadav, K. B., & Kumari, R. (2020). Development of Bioactive glass coating on Ti and its alloy by Thermal spraying: An overview, National Online Conference on "Research and Developments in Material Processing, Modelling and Characterization 2020" 26th -27th August, 2020, National Institute of Technology Jamshedpur, India

Kumari, R., Behra, A., Bharti, P., Sethi, D. K. (2020). Tribological Performance of Heat Treated 0.6% C steel, National Online Conference on "Research and Developments in Material Processing, Modelling and Characterization 2020" 26th -27th August, 2020, National Institute of Technology Jamshedpur, India

DEPARTMENT OF PHYSICS

Sweta Sharma, Rajeev Ranjan, "Perovskite thin solar cell: a promising nanomaterial for alternative energy sources," Indo-Korea Virtual Conference on Development of Advanced Materials for Future Technologies (DAMFT-2020), pp53, 9th-10th July, 2020.

DEPARTMENT OF PRODUCTION AND INDUSTRIAL ENGINEERING

Gupta, M., Kumar, D. and Prasad, K. (2020) Prioritization for barriers for implementation of block chain technology in industries of India, In proceedings of the International Conference on Industrial and Manufacturing Systems (CIMS-2020), October 09 - 11, NIT Jalandhar, Punjab, India

Prasad, K., Kumar, A., Yadav, J., Akhtar, P. and Ballav, R. (2020) Application of green quality function deployment for designing an air purifier, In proceedings of the International Conference on Industrial and Manufacturing Systems (CIMS-2020), October 09 - 11, NIT Jalandhar, Punjab, India.

Sethi, S. R., Das, A., Baruah, M. (2021). A review on friction stir welding: A sustainable way of manufacturing, Materials Today: Proceedings,

Ladder, S. Baruah, M., Ballav, R., (2021). Underwater Friction Stir Welding of Aluminum Alloy, AIJR Abstracts, 13.

Baruah, M., Ansari, K., Prasad, S. B., Kore, S. Comparative Study of Micro Plasma Arc Welding Parameters Effect on 0.5 mm Thick Sheets of Steel, Titanium and Inconel Alloys, AIJR Abstracts, 17.

Tudu, N., Baruah, M., Prasad, S. B., (2021) Influence of Wedm Parameters for Estimating the Surface Integrity of Laser Additive Manufactured Hybrid Material. *International Conference on Industrial and Manufacturing Systems (CIMS-2020)*, 11-12 Oct, 2020, NIT Jalandhar (2020).

Kumar, K., Das, A., Prasad, S.B. (2021). Recent developments in biodegradable magnesium matrix composites for orthopaedic applications: A review based on biodegradability, mechanical and biocompatibility perspective. Materials Today: Proceedings,

Abhiram, Y., Das, A., Sharma, KK. (2021). Green composites for structural and non-structural applications: A review. Materials Today: Proceedings,

Prasad, S.V.S., Singh, S., and Prasad, S.B. (2021). A review on the corrosion process in magnesium. AIP Conference Proceedings, Volume 2341, Issue 1, 4008 1-10.

Jangre, J., Prasad, K. and Patel, D. (2021). An analysis of barriers affecting the implementation of e-waste management in India under fuzzy environment: Issues and strategies. In proceedings of the International Conference on Recent Development on Materials, Reliability, Safety and Environmental Issues (IMRSE-2021), June 25-27, NIT Jalandhar, Punjab.



Dev, M., and Kumar, D. (2020). Hospitals' selection under Ayushman Bharat Scheme with heuristic search method using A** algorithm - International Conference on Industrial and Manufacturing Systems (CIMS-2020), 11-12 Oct, 2020, NIT Jalandhar.

Kumar, D., Kumar, D., and Tigga, A.M. (2020). Processing of Aluminium/Boron Carbide Composites and Functionally Graded Materials: A Literature Review - International Conference on Industrial and Manufacturing Systems (CIMS-2020), 11-12 Oct, 2020, NIT Jalandhar.

4.8.3 BOOK(S)/CHAPTER(S) AUTHORED/EDITED

DEPARTMENT OF CIVIL ENGINEERING

Mohanty, M., Choudhary A. K., & Kumari, S. A Study on the Behaviour of Multilayered Geocell-Reinforced Bottom Ash. Geotechnical Characterization and Modelling, ISBN 978-981-15-6085-9 ISBN 978-981-15-6086-6 (eBook) published by Springer Nature Singapore Pvt Ltd. 2020, pp. 639-654.

Metya, S., & Chaudhary, N. (2020). Stability analysis of rock slope against planar failure with irregular discontinuity. Modeling in Geotechnical Engineering, Chapter 6, Edited by P. Samui, S. Kumari, V. Makarov and P. Kurup, Elsevier, Pages 119-132.

Pradeep, M., Choudhary A. K., Choudhary A. K., & Shukla S.K. (2021). An Experimental Study on Improving the Performance of Silty Soil by Encased Granular Column Using Shredded Tire Chip. Lecture Notes in Civil Engineering, Vol. 136, Satyajit Patel et al. (Eds), ISBN: 978-981-33-6443-1, 488894_1_En, (Chapter 46) (e-Book) published by Springer Nature Singapore Pte Ltd. 2021.

Sangeeta Kumari (2020). Chapter 6. Application of a Standard Fuzzy Arithmetic Method. An Introduction to Fuzzy Sets, Series: Mathematics Research Developments, ISBN: 978-1-53618-012-1, Nova Science Publishers, INC. Publication Date: July 2020

DEPARTMENT OF COMPUTER APPLICATIONS

Alekha Kumar Mishra, Asis Kumar Tripathy, Sowmya Saraswathi, and Meenakshi Das, "Prevention of Phishing Attack in Internet-of-Things based Cyber-Physical Human System", High Performance Vision Intelligence, Springer, September 2020.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

MadhviSaxena, Subrata Dutta : An Overview of Internet of Things in Healthcare - Interoperability in IoT for Smart Systems(CRC Press) ISSN : 9781003055976 vol:1 issue:1 pp:15-44 (2020)

Sandeep Mahato, Kailash Chandra Mishra, Subrata Dutta, Sujoy Mistry : Security Issues and Challenges in IoT - Interoperability in IoT for Smart Systems(CRC Press) ISSN : 9781003055976 vol:1 issue:1 pp:115-136 (2020).

ArindamGiri, Subrata Dutta, Kailash Chandra Mishra, SarmisthaNeogy : IoT Middleware Technology: Review and Challenges - Interoperability in IoT for Smart Systems(CRC Press) ISSN : 9781003055976 vol:1 issue:1 pp:71-90 (2020).

Bhagat M., Kumar D., Balgi S.M. (2021) Application of Internet of Things in Digital Pedagogy. In: Deyasi A., Mukherjee S., Mukherjee A., Bhattacharjee A.K., Mondal A. (eds) Computational Intelligence in Digital Pedagogy. Intelligent Systems Reference Library, vol 197. Springer, Singapore. https://doi.org/10.1007/978-981-15-8744-3_11.

Pateria, Nikhil, Dilip Kumar, and Sunil Kumar. "Magnetic Resonance Imaging Classification Methods: A Review." Nanoelectronics, Circuits and Communication Systems (2021): 417-427. DOI :https://doi.org/10.1007/978-981-15-7486-3_38.

DEPARTMENT OF ELECTRICAL ENGINEERING

Gupta, O.H.&Sood,V.K. (2021). Recent Advances in Power Systems – SelectProceedings of EPREC 2020. Lecture Notes in Electrical Engineering, Springer, Singapore, 1-542. DOI: 10.1007/978-981-15-7994-3, Hardcover ISBN: 978-981-15-7993-6, eBook ISBN: 978-981-15-7994-3

Gupta, O.H., Tripathy,M.,&Sood,V.K. (2021). Protection Challenges in Meeting Increasing Electric Power Demand. Springer International Publishing, Switzerland, pp. 1-197. DOI: 10.1007/978-3-030-60500-1, Hardcover ISBN: 978-3-030-60499-8, eBook ISBN: 978-3-030-60500-1

Kumar, J.,& Jena, P. (2021). Recent Advances in Power Electronics and Drives – Select Proceedings of EPREC 2020. Lecture Notes in Electrical Engineering, Springer, Singapore, 1-524. DOI: 10.1007/978-981-15-8586-9, Hardcover ISBN: 978-981-15-8585-2, eBook ISBN: 978-981-15-8586-9

Singh, A. K.,& Tripathy,M. (2021). Control Applications in Modern Power System – Select Proceedings of EPREC 2020. Lecture Notes in Electrical Engineering, Springer, Singapore, 1-535. DOI: 10.1007/978-981-15-8815-0, Hardcover ISBN: 978-981-15-8814-3, eBook ISBN: 978-981-15-8815-0

Verma, K., Gupta, S. K., Kumar, S., & Singh, G. (2021) Transmission Congestion Management with FACTS Devices Using SOS Algorithm. Advances in Smart Grid Automation and Industry 4.0, Lecture Notes in

Electrical Engineering, Springer Singapore https://doi.org/10.1007/978-981-15-7675-1_51

Varma, P. V. R., Kar, M. K., & Singh, A. K. (2021). Transient analysis of a standard IEEE 9 bus power system using power world simulator, Advances in Smart Grid Automation and Industry 4.0, pp 233-243, ISBN: 978-981-15-7675-4

Balasubrahmanyam, Ch.S., Gupta, O.H., & Sood, V.K. (2021). Power Quality Enhancement and Grid Support Using Solar Energy Conversion System. In: C. Shameela, et. al. (eds.) Micro grid technologies (ISBN: 978-1-119-71079-0), 307–326, SCRIVENER PUBLISHING, Wiley, March 2021. DOI: 10.1002/9781119710905.ch12

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

B. Behera, N. Kumar, M. Ranjan, A. Kumar, "COVID-19 DETECTION USING ADVANCED CNN & X-RAYS" in Book titled "Emerging Technologies during the Era of COVID-19 Pandemic". to be published in Springer Nature.

B. Behera, "Development of Dual-friction Drive based Piezoelectric Surface Acoustic Wave Actuator," in Book titled "Smart Sensors, Measurement and Instrumentation", Springer Nature (Scopus Indexed).

B. Behera, A. Prakash, U. Gupta, V. Semwal, A. Chauhan, "Statistical Prediction of Facial Emotions using MINI XCEPTION CNN and Time Series Analysis." in Book titled "Data Science: Theory, Algorithms and Applications", Springer Nature (Scopus Indexed).

B. Behera, N. Kumar, M. Ranjan, A. Kumar, "COVID-19 DETECTION USING ADVANCED CNN & X-RAYS" in Book titled "Emerging Technologies during the Era of COVID-19 Pandemic".

B Bhowmik "Epidemiology, Pathogenesis, and Healing Strategies of COVID-19" in the book Biotechnology to Combat COVID-19, IntechOpen, DOI: 10.5772/intechopen.96200.

Arvind R. Yadav, Jayendra Kumar, Roshan Kumar, Shivam Kumar, "Real Time Electric Vehicle Collision Avoidance System under Foggy Environment using Raspberry Pi Controller and Image Processing Algorithm" in Control Applications in Modern Power System by Springer.

Jayendra Kumar, Arvind R. Yadav, Anumeha, Shivam and Anukul Gaurav "Detection of Covid-19 and its Symptoms using Chest X-Rays" Blockchain for 5G Healthcare Applications: Security and Privacy Solutions by IET.

Arvind R. Yadav, Jayendra Kumar, Anumeha, Roshan Kumar, Pratik Ranjan and Aditya Prakash, "Contactless Attendance System: A Healthcare Approach to prevent Spreading of Covid-19" Blockchain for 5G Healthcare Applications: Security and Privacy Solutions by IET

Kishore Kumar Pedapenki, Jayendra Kumar and Dr.Anumeha, "Speed Control of BLDC Motor using Fuzzy Logic Controller" in Recent Advances in Power Electronics and Drives by Springer.

Dr Anumeha, Kaushik Paul, Praful Arvind, K B Yadav and Jayendra Kumar, "Economic Power Wheeling using MW-MILE Method through Gravitational Search Algorithm" in Recent Advances in Power Systems by Springer.

DEPARTMENT OF HUMANITIES, SOCIAL SCIENCES AND MANAGEMENT

Ghosh, S., and Bhushan, R. (2020). Theorizing William Blake: Vision and Imagination: A Comparative Study of William Blake's The Lamb and The Tyger in Discovering India Through Language, Literature and Culture, Academic Publishing Network, Mandawali, New Delhi, India, Pp. 73-79, ISBN: 978-81-945451-4-9.

Sudha, S., and Singh, A. (2021). Competency framework for managing manpower post pandemic. Published in Book-Sustaining SMEs and Entrepreneurial Innovation in the Post COVID-19 Era, IGI Global Publication, ISBN 13 9781799866329. DOI 10.4018/978-1-7998-6632-9.

Sudha, S., and Singh, A. (2021). Psychological Resilience to Mitigate Mental Distress Due to COVID-19 Pandemic Among the Employees of SMEs. Handbook of Research on Strategies and Interventions to Mitigate COVID-19 Impact on SMEs (2 Volumes), IGI Global Publication, ISBN13:9781799874362, DOI: 10.4018/978-1-7998-7436-2.

DEPARTMENT OF MATHEMATICS

Maiti, Mandal, T., Pramanik, S. (2020). FGP Approach Based on Stanojevic's Normalization Technique for Multi-level Multi-objective Linear Fractional Programming Problem with Fuzzy Parameters, Studies in Computational Intelligence series, Volume 863.

DEPARTMENT OF MECHANICAL ENGINEERING

Pardeep, B., Sahu, M.K., and Sinha, M. K. (2021). Computational Investigation on Dynamics of Drop Formation: Effect of Viscosity. Advances in Materials and Mechanical Engineering, pp 221-232. Lecture Notes in Mechanical Engineering. Springer, Singapore. ISBN: 978-981-16-0673-1.

Uddin, S., Parveen, T., Hassan, M.A., and Singh, D.K. (2020). Analysis of Optical Parameters of Hexagonal Solid Core PCF with Methanol filled inner Cladding ring, River Publishers Series in Information Science and Technology, Proceeding: International Symposium on 5G & Beyond for Rural Upliftment 2020, ISBN: 9788770222181, (Book Chapter 42).



Uddin, S., Kant, K., Kumar, V., Singh, D.K., and Hassan, M.A. (2020). Monitoring air pollution Based on Internet of Things (IoT) and Interfacing of Microcontroller with VGA display by, River Publishers Series in Information Science and Technology, Proceeding: International Symposium on 5G & Beyond for Rural Upliftment 2020, ISBN: 9788770222181, (Book Chapter 26).

Gupt, A. K., Kumar, D., and Paswan, M. K. (2021). Thermal Separation in 2D Vortex Tube for a Different Tube Length and Cold Mass Flow Ratio. In *Advances in Renewable Energy and Sustainable Environment*, 367-383 Springer, Singapore.

Hansdah, D., and Murugan, S. (2020). Experimental Investigation of Long Run Viability of Engine Oil Properties in DI Diesel Engine Fuelled with Diesel, Bioethanol and Biodiesel Blend. *Book-Liquid biofuels (Fundamentals, Characterization, and Applications)*, published by Wiley-Scrivener, Scrivener Publishing LLC, Beverly, USA.

Joshi, K. K., Behera, R. K., Kar, V.R., and Chakra, A. (2020). Influence of Point Mass Over FGM Plate for Vibration Signature in Different Boundary Conditions Using FEA. *Advances in Materials and Manufacturing Engineering*, 7, 85-91.

Kar, V. R., Karakoti, A., Jena S., Tripathy, P., Jayakrishna, K., Rajesh, M., Reddy, D. M., and Sultan, M.T.H. (2020). Modeling and Analysis of Functionally Graded Biocomposite Plate Structure using Higher-Order Kinematics, *Structural Health Monitoring System for Synthetic, Hybrid and Natural Fiber Composites*, *Composites Science and Technology* (Springer), 9-21.

Sai, I., Reddy, D.M., Jayakrishna, K., Rajesh, M., Kar, V.R., Damage Characterization of Composite Stiffened Panel Subjected to Low Velocity Impact, *Structural Health Monitoring System for Synthetic, Hybrid and Natural Fiber Composites*, *Composites Science and Technology* (Springer), 37-50.

Rajesh, M., Jayakrishna, K., Reddy, D.M., Mugesh, K., and Kar, V.R. Experimental Characterization for Natural Fiber and Hybrid Composites, *Structural Health Monitoring System for Synthetic, Hybrid and Natural Fiber Composites*, *Composites Science and Technology* (Springer), 71-83.

Jayakrishna, K., Soundhar, A., Rajesh, M., Reddy, D. M., and Kar, V.R. Natural fiber composite for structural applications, *Structural Health Monitoring System for Synthetic, Hybrid and Natural Fiber Composites*, *Composites Science and Technology* (Springer), 23-35.

DEPARTMENT OF METALLURGICAL & MATERIALS ENGINEERING

Bharat Bhushan Jha, Assessment of Service Worthiness of High Temperature Components in Thermal Power Plants, Proc. Of Abstracts of National Conference on Research and Developments in Material Processing, Modelling and Characterization 2020 DOI: <https://doi.org/10.21467/abstracts.108> ISBN: 978-81-947843-2-6 Editors: Dr. Mayuri Baruah, Dr. Renu Kumari, Dr. Poulami Maji, ALJR publisher.

DEPARTMENT OF PHYSICS

Nitesh Kumar, Jagriti Mishra, Rajeev Ranjan, "Modern advancements and application of GaN based materials". *Advances in Power Systems and Energy Management, Lecture Notes in Electrical Engineering*, pp.311-317, Jan 2021.

DEPARTMENT OF PRODUCTION AND INDUSTRIAL ENGINEERING

Dwivedi, R., Prasad, K., Jha, P. K. and Singh, S. (2021). An integrated CRITC-MARCOS technique for analysing the performance of steel industry, *Data-Driven Optimization of Manufacturing Processes*, IGI Global, Hershey, Pennsylvania. 115-127. DOI: 10.4018/978-1-7998-7206-1.ch008

Singh, L., Maurya, SK., Das, A., and Jayakrishna, K. (2020). Software Development for Industry 4.0. *Sustainable Manufacturing for Industry 4.0 An Augmented Approach*, CRC Press Taylor & Francis, <https://doi.org/10.1201/9780429466298>.

Manjhi, S., Das, A., Prasad, SB., Singh, L., Tripathy P., and Jayakrishna, K. (2020). Role of Machine Learning in Industry 4.0. *Sustainable Manufacturing for Industry 4.0 An Augmented Approach*, CRC Press Taylor & Francis, <https://doi.org/10.1201/9780429466298>.

Kumar, N., Das, A., Singh, L., Tripathy, P., and Jayakrishna, K. (2020). Artificial Intelligence (A.I.) and Industry 4.0. *Sustainable Manufacturing for Industry 4.0 An Augmented Approach*, CRC Press Taylor & Francis, <https://doi.org/10.1201/9780429466298>.

Singh, L., Dewangan, SK., Das, A., and Jayakrishna, K. (2020). Networking for Industry 4.0. *Sustainable Manufacturing for Industry 4.0 An Augmented Approach*, CRC Press Taylor & Francis, <https://doi.org/10.1201/9780429466298>.

Singh, L., Dewangan, SK., Das, A., Jayakrishna, K. (2020). Role of Industrial Internet of Things Manufacturing. *Sustainable Manufacturing for Industry 4.0 An Augmented Approach*, CRC Press Taylor & Francis, <https://doi.org/10.1201/9780429466298>.

Bag, S., Paul, C. P., Baruah, M. (Eds.) (2021). *Next Generation Materials and Processing Technologies*. DOI 10.1007/978-981-16-0182-8.

Prasad, K., Kumar, A., Yadav, J., Akhtar, P. and Ballav, R. (2021). Designing an Air Purifier using Green Quality Function Deployment Methodology. *Recent Advances in Operations Management Applications*, Springer Nature, Singapore.

Dev, M., and Kumar, D. (2021). Hospitals' selection under Ayushman Bharat Scheme with heuristic search method using A** algorithm. *Recent Advances in Operations Management Applications - Select Proceedings of CIMS 2020*, Springer Nature, Singapore.

Kumar, K., Das, A., & Prasad, S. B. (2021). Biodegradable Metal Matrix Composites for Orthopedic Implant Applications: A Review. *Advances in Engineering Materials*, 557-565, https://link.springer.com/chapter/10.1007/978-981-33-6029-7_52

Singh, P. K., Prasad, S. B., & Patel, D. (2021). Effect of Vibrations on Solidification Behavior and Mechanical Properties of Shielded Metal Arc Weld. In *Next Generation Materials and Processing Technologies* (pp. 209-219). Springer, Singapore. https://doi.org/10.1007/978-981-16-0182-8_16

Tudu, N., Baruah, M., Prasad, S. B., and Paul, C. P. (2021). Influence of WEDM Parameters for Estimating the Surface Integrity of Laser Additive Manufactured Hybrid Material. In *Next Generation Materials and Processing Technologies* (pp. 185-207). Springer, Singapore. https://doi.org/10.1007/978-981-16-0182-8_15



4.9 INVITED TALK (EXTERNAL)

S. N.	RESOURCE PERSON	TITLE OF THE TALK	DESCRIPTION
1.	Prof. Frede Blaabjerg, Aalborg University, Denmark	Power Electronics and Developments in the Renewables	2nd Electric Power and Renewable Energy Conference (EPREC-2021), 28th - 30th May 2021
2.	Prof. Ahmed Al-Durra, Khalifa University, Abu Dhabi	Renewable Energy Systems, Control, and Optimization	
3.	Prof. S. N. Singh, IIT Kanpur	Integration of Renewable Sources and Effect of Switching and its Resolution	
4.	Dr. Anuj Shukla, NIT Raipur	Role of Make in India: Industry Academia Collaboration	Virtual Seminar on Applied Mechanics VSAM-4, Jointly Organised with Indian Society for Applied Mechanics, 29-30 July, 2021
5.	Abhishek Kumar Tiwai MNNIT Prayagraj	Bio-Fluid Dynamics in Skeletal Mechanobiology	ATAL Programme on Optimization Technique in Engineering Application, 18th - 22th, January, 2021.
6.	Prof. R. Venkata Rao, SVNIT Surat	Jaya algorithm and its engineering applications	
7.	Dr. Vijay Chahar, NIT Hamirpur	Introduction to optimization technique, latest trends in meta heuristic technique	
8.	Prof. D.K. Pratihari, IIT Kharagpur	Neural network based and fuzzy based optimization	
9.	Prof. Geetika, MNNIT Allahabad	Social Enterprise Management: An Introduction	ATAL FDP on Social Enterprise Management organized from 11-15 June, 2021
10.	Prof. Saji Gopinath, VC, Kerala Digital University (IIM Kozhikode)	Social Enterprises and Technology	
11.	Prof. Amit Shankar, IIM, Vishakhapatnam	Social Enterprise Business Model	
12.	Prof. Madhukar Shukla, XLRI Jamshedpur	Social Enterprise and Sustainable Management	
13.	Dr. Tanuj Nandan, Professor, MNNIT Allahabad	Risk Management in Social enterprises	Characterization Techniques and Applications (AMCTA-2021), 6-10th January, 2021
14.	Prof. Rahul Mitra, IIT Kharagpur	Introduction to advanced characterization techniques for revealing finer details of structure and composition	
15.	Dr. Soumya Gangopadhyay, IIT Bhilai	Development of PVD Coating: From Conceptualization to Application	
16.	Dr. Muvvala Gopinath, IIT Hyderabad	Laser Surface Engineering and its Real-time Monitoring,	
17.	Dr. Ujjwal Chakraborty, NIT Silchar	MIMO antenna design and application with different conventional and non-conventional substrates,	
18.	Prof. Rajib Bandyopadhyay, Jadavpur University	Application of chemical and allied sensing systems	5-Days Short Term Course on Advanced Materials Characterization Techniques and Applications (AMCTA-2021), 6-10th January, 2021
19.	Dr. Santanu Paria, NIT Rourkela	Advanced material characterization for real life application	
20.	Dr. K. Muraleedharan, Director CSIR-CGCRI Kolkata	Chief Guest and delivered talk on R & D for Atmanirbhar Bharat	
21.	Prof. Rajiv K. Mandal, IIT BHU Varanasi	The Idea of Higher Education and Way Forward	Two days National Webinar on " Innovation of Research Culture in Academic Institutions (IRCAI-2020) , 05-06 September, 2020
22.	Dr. Kishore Srinivassan, Head CSIR-URDIP, Pune	The Emerging Science- patinformatics: Inculcating an IP Culture in Academic	

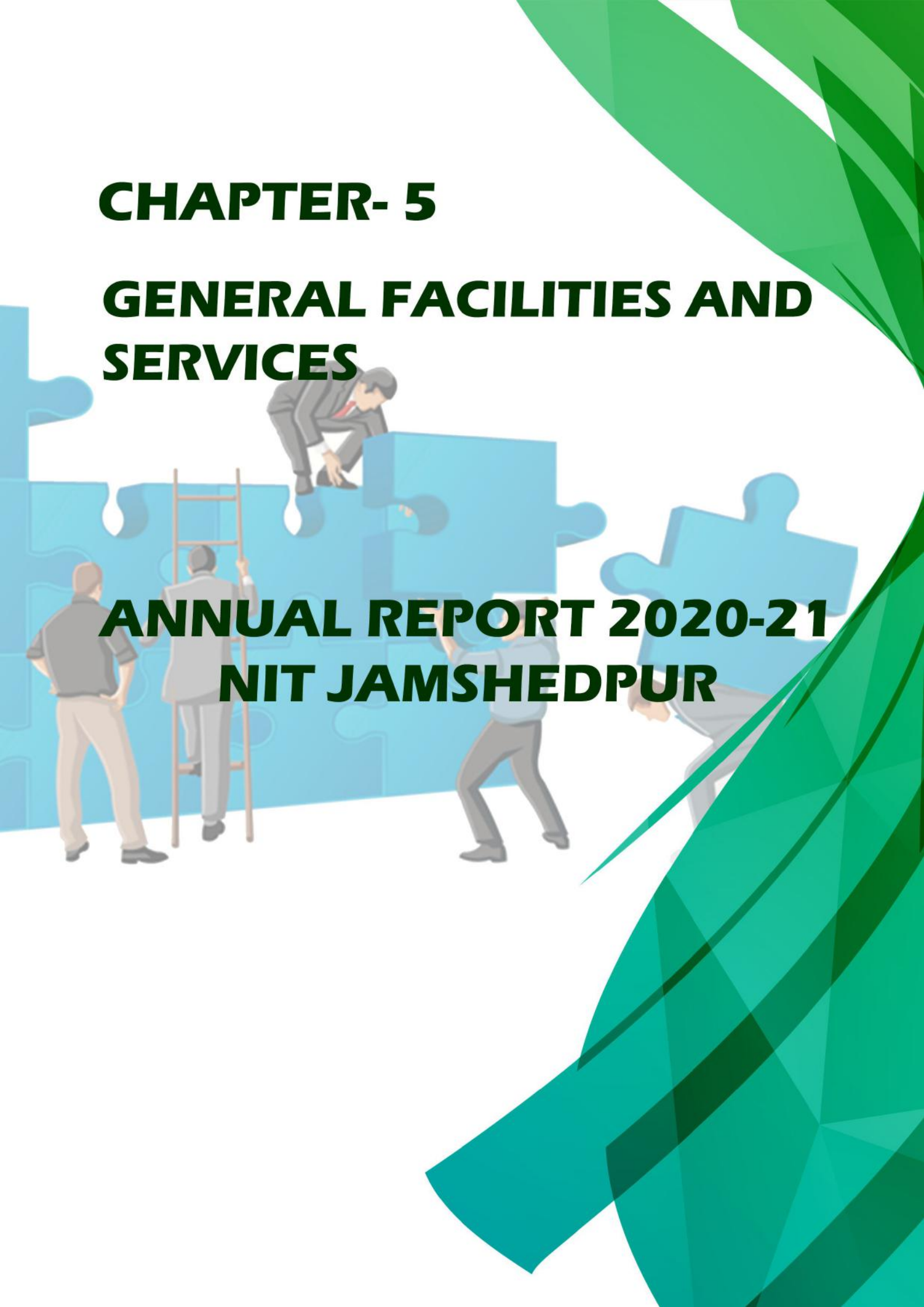


		Institutions	
23.	Shri J. P. Sinha, Executive Director Pipeline Division, IOCL Kolkata	Solutions of Industrial problems through quality Research	
24.	Prof. Rajesh Prasad, Professor, IIT Delhi	Planes of isotropic poissins, s ratio in Anisotropic Crystals	Research Conclave 2021 at NIT Jamshedpur, February 25-27, 2021
25.	Prof. Tarun Kant, Professor Emeritus, IIT Mumbai	A History of Higher order theories for Beams , Plates and Shells	
26.	Prof. J. ramkumar, Professor, IIT Kanpur	Challenges in Pedagogy for Higher Education in India	
27.	Dr. B.B. Kale, Director, C-Met Pune	Technological Innovation at C- Met Pune: A step towards Self Relience	
28.	Prof. S.N. Singh, Professor, IIT Kanpur	Research and Innovation in Engineering and Technology	
29.	Dr. Manoj Patel, Scientist, CSIR-CSIO Chandigarh	Technological Innovation and Socioeconomic Impact	
30.	Prof. Ashwini Kumar Tiwari, Professor, IISER Kolkata	Dynamical Insights into Metal Surface molecule and Laser Molecule Interaction	
31.	Prof. Animesh Ojha, Professor, MNNIT, Allhabad	Designing of Matrials for Solar Energy Harvesting and Energy Storage	
32.	Shri Vitrang Somepura, GM (Operation), Magicrete, Surat, Gujrat	Construction Technologies through Building Blocks	
33.	Dr Shiv Datt Kumar, Professor, MNNIT Allahabad, India	Algebraic and Differential Models in Engineering and Cryptography	
34.	Dr Ashish Srivastava, Professor, Department of Mathematics and Statistics, St. Louis University, St. Louis, MO-63103, USA	An Introduction to Super symmetric Cluster Algebras	
35.	Dr. Lazaros Moysis, Laboratory of Nonlinear Systems - Circuits; Complexity, Physics Department, Aristotle University of Thessaloniki, Greece	Control Theory	
36.	Prof Vinay Kumar, Ex Scientist E & Technical Director, National Informatics Centre, Govt. of India Former Dean, VSIT, Guru Gobind Singh Indraprastha (GGSIIP) University, Delhi	Evolution of Digital Electronics from Basic concepts of Sets	

CHAPTER- 5

GENERAL FACILITIES AND SERVICES

ANNUAL REPORT 2020-21 NIT JAMSHEDPUR





CHAPTER-5: GENERAL FACILITIES AND SERVICES

5.1 COMPUTER CENTRE

One of the attractions of NIT Jamshedpur is the OVAL structure - the Computer Centre, which accommodates central computing facilities. The centre is equipped with IBM Blade H Series Server and IBM Rack Server X3620M2, Desktop PCs (Dell and HP) 165 nos., Link Load Balancer and Router and application software like Window Server 2003/2008/2012, Desktop Windows 7/8.1. In addition, the Centre is fully air conditioned and has a surveillance system.

There are three PC Laboratories used for UG/PG classes and one for Internet services. In addition, 1GB Internet connectivity has been obtained from BSNL. Internet connection is available in all the academic as well as administrative blocks and student hostels through wired and wireless LAN. The computer centre is open from 08:00 AM to 10:00 PM on all weekdays except Sunday.

Name of Laboratories and Research Facilities

- Computational Labs. -3 Nos.
- Server Room
- MIS Room

Internet Facility

1GBPS (NKN bandwidth from BSNL)

National Knowledge Network (NKN) : NIT Jamshedpur is a member of NKN.

Procurements

S. N.	PARTICULARS OF ASSET	QTY (NOS.)	TOTAL COST (INR)
1.	L-3 SWITCH	2	21,30,450
2.	Projector (Multimedia projector)	1	2,25,042
3.	EPSON Multimedia projector (MMP)	3	3,74,956.32
4.	Xerox machine (digital multi-function printer)	1	98,000
5.	Printer (HP Laser jet pro M-1136 Multifunction)	115	1,34,2,625
6.	Server (DEL)	2	18,98,000
7.	Computer (ACER)	188	1,01,31,320
8.	DDR3 RAM 4 Gb	150	2,22,616. 50
9.	DDR3 RAM 2 Gb	150	12,05,958
10.	quick heal total security antivirus 300 user	300	5,51,400
11.	Video conferencing system	1	4,86,712

5.2 CENTRAL LIBRARY

5.2.1 GENERAL INFORMATION

The NIT Jamshedpur library supports Teaching, Research and other related programmes of the institute. The Library has a good collection of documents that comprises Books, Journals, Thesis, Video cassettes, Learning Resources (LRs) & Compact discs in Engineering, Science, Management, Literature, and Humanities. The library has computerized data of the whole of its collection using LIBSYS 7.0 software and is computerizing all its activities. The Central Library is using Storage media as D –Space. The library has a separate section for SC/ST & OBC Students



5.2.2 PHYSICAL BOOKS/JOURNAL COLLECTION

TYPE	SIZE (NUMBER)
Books	11990 Nos.
Bound volumes of journals	90 Nos.
Video cassettes	514 Nos.
Learning resources	e-books, 836 Nos. (McGraw Hill) + 1381 Nos. (Pearson)
Compact discs	84 Nos.
Books in stacks section	81091 Nos.
Books in SC, ST section	41522 Nos.
Books in TEQIP Section	6856 Nos.

5.2.3 E- RESOURCES

E-Books

Central library procured various e-books, online books for students and faculty via IP range in the campus. The different departments can also access various types of e-books such as text books and reference books in the electronic form.

PUBLISHER	SUBJECTS COVERED	URL	TOTAL COST (IN RUPEES)
McGraw- Hill	Core Engineering, Basic Science, Social Sciences Management & Humanities	http://mcgrawhilleducation.pdn.ipublishcentral.com/	54,86,360.31
Pearson Education	Core Engineering, Basic Science, Social Sciences Management & Humanities	https://ebookcentral.proquest.com/lib/nitjamshedpur/reader.action?d ocID=5136689	63,27,780.90

E-Journals

- E-Resources are accessible to our Institute through eShodhSindhu (eSS)
- E-resources Subscription Period
- ACM Digital Library
- ASCE Journals
- ASME Journals Online
- Economic & Political Weekly
- Institute for Studies in Industrial Development
- J-GatePlus (JCCC)
- J- Stor
- Elsevier (Science Direct, 08 Bundle Collections)
- IEEE (IEL Level-2)

NDL e-Resources

1. World E-Book Library
2. South Asia Archives (SAA) National Licensing

Elsevier (Science Direct, 08 Bundle Collection) on the following subjects are now available



SUBJECTS COVERED	URL	TOTAL COST \$ 170,678.88
Engineering	https://www.sciencedirect.com/	\$ 21,334.86
Energy	Do-	\$ 21,334.86
Chemistry	Do-	\$ 21,334.86
Computer Science	Do-	\$ 21,334.86
Environmental Science	Do-	\$ 21,334.86
Material Science	Do-	\$ 21,334.86
Mathematics	Do-	\$ 21,334.86
Physics & Astronomy	Do-	\$ 21,334.86

Search

- OPAC (Online public access catalogue is in Progress)
- Science Direct (Through LAN (Intranet), IP range provided by the Institute)
- E-Resources (Through LAN (Intranet), IP range provided by the Institute)
- Electronics Library (Study, e-Learning through Internet provided by the Institute)

5.3 TEQIP-III ACTIVITIES

TEQIP-III is instrumental in promoting various R&D, consultancy activities, modernizing and strengthening of laboratories for P.G, Research, enhancement of Teaching & learning, faculty & staff development through subject area /pedagogy training (In-house as well as at various IITs), participation in Management Capacity Enhancement programs being conducted by IIMs and academic support for weak students and training activities.

➤ Academic Processes (Sponsored by TEQIP-III)

A. Improve Students Learning (Outstation Seminars/Conferences/Workshops/Short Term Courses/Training Programme, etc. attended by Students):

2020-2021					
S. N.	NME OF THE STUDENT	PROGRAMME	ORGANIZED AT	DURATION	AMOUNT REIMBURSED (INR)
1.	Gaurav Yadav (Reg no-2018RSCA005)	5th IAPR International Conference on Computer Vision & Image Processing (CVIP-2020)	IIT Allahabad	4th – 6th Dec 2020	7,080.00
2.	Bipin Kumar Chaurasia (Reg no- 2018RSME005)	Investigation of failure in L-shape Woven Carbon fiber Re-enforced Polymer composite under pull-out and 4-point bending (ICoFT 2020 MADE@NITPY)	NIT Puducherry	28th-30th Dec 2020	3,000.00
3.	Sidharth Srivastava (Reg no- 2019UGME105)	NPTEL online certification on Strength of Materials and Concepts of Thermodynamics	IIT Kharagpur	Sep-Dec 2021	2,000.00
4.	Dhruv Mittal (Reg no- 201UGEC095)	NPTEL online certification on Digital Circuits	IIT Kharagpur	Sep-Dec 2021	1,000.00

B. Improve Students Learning (In-house Seminars/Conferences/Workshops/Short Term Courses/Training Program, etc.):

S. N.	ORGANIZED BY (DEPT./ COORDINATORS)	PARTICULARS	DURATION	NO. OF PARTICIPANTS	AMOUNT REIMBURSED (INR)
1.	Dr. Tushar Banerjee TAP Coordinator	Online Training Program on “ Awareness and Preparedness for Placement in Context of COVI-19”	23 rd -25 th July 2020	215	15,000.00



2.	Dr. Dinesh Kumar Assistant Professor Dept. of Prod. & Ind	Online Guest Lecture on "Emerging Technologies Driven Manufacturing System for India"	15 th July 2020	105	6,000.00
3.	Dr. Tarani Mondal Dean (SW)	Psychological counselling for NIT Students	31 st March 2021	780	64,000.00
4.	Dr. Madhu Singh Elec & Elect Engg Dept.	Online workshop on "Virtual Labs for Electrical Engineering & Electronics & Communication Engineering"	29 th -30 th August 2020	182	10,000.00
5.	Dr. Vijay Kumar Dalla P/I Institute Sports & Athletics Activities Assistant Professor DME	A National Workshop on "Machine Learning with Python"	1 st -6 th Sept 2020	90	51,000.00
6.	Prof. R.V. Sharma Dean (R & C) Prof B B Jha, Visiting Professor Dr. V.R. Kar, Asso Dean (R&C) Dr. S. Vajpai, Asstt. Professor, MME	Two Days National Webinar / Video Workshop on "Inculcation of Research Culture in Academic Institutions (IRCAI)"	5 th & 6 th Sept 2020	135	13000.00
7.	Dr. R V Sharma Dean (R&C)	SELP "Art of living Productivity Enhancement"	2 nd Feb 2021	751	3,00,000.00
8.	Dr. Vijay Kumar Dalla Assistant Professor, DME	Online Future Skills Training on Robotics and Automation under NASSCOM	15 th July 2020 to 31 st March 2021	750	1,24,806.00

C. Faculty/Staff Development and motivation (Outstation Seminars/Conferences/Workshops/Short Term Courses/Training Programme, etc. attended by Faculty Members):

S. N.	NAME & DESIGNATION OF THE FACULTY R	PROGRAMME	ORGANIZED AT	DURATION	AMOUNT REIMBURSED (INR)
1.	Dr. Akanksha Shukla Assistant Professor Dept. of HSSM	Online Faculty Development Programme on Advanced Multivariate Data Analytics: Moderation and Mediation Analysis Using AMOS & Process Marco	IIM Visakhapatnam	07 th -11 th Sept 2020	5,000.00

D. Faculty/Staff Development and motivation (In-house Seminars/Conferences/Workshops/Short Term Courses/Training Program organized by the Faculty Members):

S. N.	ORGANIZED BY (DEPT./ COORDINATORS)	PARTICULARS	DURATION	NO. OF PARTICIPANTS	AMOUNT REIMBURSED (INR)
1.	DCE, Convener: Dr. C. M. Rao	National Webinar on "Transforming Pedagogy and National Education Policy 2020"	1 st -3 rd Aug 2020	960	65,000.00

E. Research and Development (In-house National Conferences organized by the Faculty Members):

S. N.	ORGANIZED BY (DEPT./ COORDINATORS)	PARTICULARS	DURATION OF THE PROGRAMME	SANCTIONED AMOUNT (INR)
1.	Department of Civil Engineering Convener: DR. S. R. Pandey Dr. S. Madhuri Dr. K. K. Sharma	National Conference on Recent Advances in Structural Engineering (NCRASE-2020)	23-24 July 2020	33,000.00
2.	Department of Electronics & Communication Engineering Coordinators: Dr. Prashant Kumar Dr. Jayendra Kumar Dr. Mrutyunjay Rout	National Conference on Electronics, Communication and Computation	18-19 July 2020	61,900.00
3.	Department of Dean (FW) Convener: Dr. Prabha Chand Dr. Alkananda Ashok	National Workshop on Role of Women in National Development TYERS5PCRS CA008	5-6 Sept 2020	41,900.00



	Dr. Kumari Namrata Dr. Dulari Hansdah Dr. Swafi Sudha			
4.	Department of Civil Engineering Convener: Dr. Awadhesh Kumar Choudhary Dr. Somenath Mondal Dr. Subhadeep Metya	National Conference on GEO-SCIENCE AND GEO-STRUCTURES	03-04 Sept 2020	37,941.00
5.	Department of Mechanical Engineering Convener: Dr. Satish Kumar Dr. Vishesh Ranjan Kar	1 st National Conference on "Materials, Mechanics & Modeling"	29 th & 30 th Aug 2020	62,517.00
6.	Department of Met & Mat Engg. Dr. Poulami Maji Dr. Renu Kumari Dr. Mayuri Baruah	Two days National Conference on "Research and Developments In Materials Processing, Modeling and Characterization."	26 th & 27 th Aug 2020	51,700.00
7.	Department of Civil Engg Dr. C.M. Rao Dr. Sangeeta Kumari	National Conference on "Advanced Modeling's and Innovations in water resources engineering	20 th -21 st Feb 2021	81,010.00
8.	Prof. R.V. Sharma Dean (R & C) Prof B B Jha, Visiting Professor Dr. V.R. Kar, Asso Dean (R&C)	Research Conclave 2021	25 th -27 th Feb 2021	67,125.00
9.	Department of Computer Sci. & Engg, Dr. Subrata Dutta	National Conference on IoT and its Application-2020"	26 th -27 th Dec 2020	30,000.00

Patent Filing Fee:

1. Alekha Kumar Mishra Rs. 23482/- Patent Application No:- 202041032284
2. Seeram Madhuri Rs. 36,200/- 1st Examination Fee
3. Dr. Swagatdeb Sahoo Rs. 35000/- Patent filling Fee

➤ GATE/ Employability Skill Training:

1. Reimbursement of GATE Examination fee to **181 final year students** who have appeared for **GATE 2020** amounting to **Rs. 2,19,750.00 (Rs. Two lacs Fifty-seven Thousand and Nine Hundred)** only.
 2. **Rs. 67,147** has been paid towards attending NPIU meeting by the faculty **under** sub-component: - 1.3.2.4
- As per NPIU guidelines vide their E-mail, dated 30/07/2018, **20 (Twenty)** temporary faculty members engaged under NPIU/TEQIP III in various TEQIP Institutions in the state of **Jharkhand and Bihar** were admitted to the Sponsored Part-Time Ph.D enrolment Programme in 05 (five) Departments of the Institute for the Academic Session 2018-19 vide **O/O No. NITJSR/ACAD/Ph.D/(TEQIP-III)/2018-19/344 Dt. 13.07.2018.**
- **Rs. 1,94,12,245/-** paid As Assistantship to 43 nos students from TEQIP-III a/c and Rs. 29,92,040/- has been paid from Dean (R&C)a/c out of Minor Seed grant fund. Further Rs. 24,23,566/- paid for minor research project.
- **Rs. 45,15,000/-** has been paid to Retired professors (below 70 years of age) from IITs/NITs as "Research Advisor" on an honorarium basis for Rs. 70000.00 per month

5.4 PLANNING AND DEVELOPMENT DIVISION

Planning and Development Division is one of the administrative units of NIT Jamshedpur that is responsible for planning, design, construction, renovation, maintenance, and development of all infrastructural facilities in the institute campus. The buildings, roads, walkways, sports grounds, water supply, and distribution networks, power supply and transmission systems, internet and Wi-Fi services, sewerage systems, cleaning and waste disposal systems, transport systems, engineering services, horticulture, and green campus, are to be maintained within the institute premises.



5.4.1 Major Construction/Renovation projects completed:

- Construction of (G+3) Lecture Hall Complex consisting of 36 Nos. , 120 Seated Classroom and 160 Nos Faculty chambers.
- Renovation of Guest House
- Renovation of Academic Block. No. 4
- Renovation of Dispensary
- Renovation of 82 Nos of institute Quarters (out of 158 Nos)

5.4.2 Major Construction/Renovation projects ongoing:

- Renovation of TSG Building (Gymkhana) including Internal Electrical Installation at NIT Jamshedpur
- Renovation of Foundry and Forge Workshop (Block-9) at NIT Jamshedpur
- Boundary wall Between A,B and C, D Hostels
- Repair and maintenance of existing fencing/boundary wall in the institute premises.
- Construction of RCC Boundary Wall with Gate and Watch tower (8 nos.) along with External Driveway and storm water drain
- Civil Renovation Works of Administrative Building
- Construction of 33/11 KV Indoor Type Substation with 2 x 6MVA transformers
- Electrical renovation works including fire alarms, lift and CCTV of Administrative Building, South Block and North Block
- Air conditioning of Administrative Building and North Block
- Renovation of Academic Block. No. 1,2,3,5,6,7 & 8
- Renovation of institute Quarters(158 Nos)
- Renovation of the Park near Guest House
- Laying of Water supply pipeline in NIT Jamshedpur Campus under the Scheme-Augmentation and Strengthening of Adityapur water supply project under Adityapur Municipal Corporation and executed by M/s JUIDCO Ltd., Govt. of Jharkhand.
- Construction of Intermediate Sewage Pumping Station in NIT Campus for full Coverage of NIT Campus under AMRUT Sewage Scheme funded by Government of India and executed by JUIDCO Ltd., Govt. of Jharkhand.
- Laying of Piped Natural Gas (PNG) network and setting up of District Regulatory Station (DRS) inside the NIT Jamshedpur Campus by GAIL (India) Limited under the Project name Pradhan Mantri "Urja Ganga" Natural Gas pipeline Project.

5.4.3 Major Proposed Construction/Renovation/Infrastructure Development works:

- Construction of (G+5) Boys' hostels for 1000 students consisting of 350 rooms as double bedded and 300 rooms single bedded.
- Construction of (G+5) Girls' hostels single bedded for 300 students.
- Construction of Faculty (112 Nos) and Staff Quarters (56 Nos).
- Construction of Hostel for Married Research Scholar-100 Nos
- Proposal of central research facility

5.5 INSTITUTE HEALTH CENTRE & HOSPITAL FACILITY

NIT Jamshedpur has an institute dispensary for primary medical treatment. In recent notification vide office order no. NITJSR/REG/CD/2019-20/687, dated 30/08/2019 the name of the Institute dispensary has been changed to Institute Health Centre (IHC). At IHC, first aid will be given for immediate relief, and also some medicine will be given in OPD for common diseases. Institute employees or their dependents suffering from serious illness/ requiring emergency treatment are referred to the institute empanelled CGHS recognized hospitals and pathological centre for medical treatment. In its 36th meeting held on 22nd January, 2019 has recently approved the following CGHS recognized hospitals and pathological centre in Jamshedpur. The institute has also signed MoU with these hospitals and Pathological centre to provide medical facilities to employees and their dependents on CGHS rates on a cashless basis





CGHS recognized hospitals:

1. Brahmananda Narayan Hrudaylaya Hospital, Pardih, Jamshedpur
2. A.S.G Eye Hospital, Sakchi, Jamshedpur
3. Rajasthan SewaSadon, Jugsalai, Jamshedpur
4. Medtrina Hospital Adityapur, Jamshedpur

CGHS recognized Pathological centre:

Aarogyamm, Adityapur, Jamshedpur (Except for Ultrasonography and X-ray).

Empanelment of medicine shop for supply of medicines to the institute employees and their dependents:

As per the letter no.: NITJSR/MED/08/2020, dated 08.09.2020, the following medicine shop in Jamshedpur has been approved for supply of medicine to the institute employees and their dependents.

1. M/s. Mani Medicals, Adityapur-2
2. M/s. REMEDI PHARMA, Bistupur
3. M/s. Sri Balaji Medicals, Gamaharia

The supply of medicine is cashless basis after the submission of printed and pre-numbered requisition receipt duly filled in and signed by the authorized Institute Medical Officer.

Ambulance facility:

Ambulance facility is available 24x7 for emergency needs of both the staff and students.

Timing of Health Centre

All working days of the Institute: From 7.30 a.m. to 12.00 p.m. and 4:00 p.m. to 08:00 p.m. All Saturdays: From 9.00 a.m. to 1.00 p.m.

Medical attendants cum technician help in Blood testing, and miscellaneous work of health-centre during working hours.

5.6 VEHICLE SECTION

Vehicle section has following vehicles to facilitate the students, staff and faculty members of the Institute.

ITEM	MANUFACTURER	QUANTITY	REMARKS
Bus	TATA	02	Used for student's transport.
Car	1. SX4 Maruti, 2. Bolero Mahindra	01 01	Used for Director/ Used for Office works
Bike	Hero Honda	02	Used for security patrolling
Gypsy	Maruti	01	Used for security patrolling
Ambulance	TATA	01	Used for medical emergency
Tractor with tanker and trolley	New Holland	01	Used for water supply, carrying goods & waste material
Car	Maruti Ciaz Hybrid Sigma	01	Used for Director

Facilities Provided

- Bus facility is available to students for going from Institute to Bistupur market on all days. These are also provided for educational tours.
- Bus facility is also provided to wards of staff and faculty members to some select schools on select routes on subsidized rates.
- Vehicles are provided for any official visit provided approval is accorded by the competent authority.
- The vehicle is also provided to staff and faculty members for picking and dropping from/to Railway Station, Bus Stand and Airport on payment basis when they are not for official work. The guidelines for availing this facility and requisition slip are provided on the website of the Institute.
- The ambulance facility is free of cost to students.



5.7 DIAMOND JUBILEE LECTURE HALL COMPLEX

The diamond Jubilee Lecture Hall Complex was inaugurated by the Honourable Education Minister, Dr. Ramesh Pokhriyal Nishank on 20th October, 2020. This Lecture Hall Complex houses 36 Lecture Halls, 3 Virtual Classrooms (with a seating capacity of 120 each) and 160 Faculty Chambers. In consonance with the motto of clean energy and green environment, fly ash bricks have been used in its construction and it has been planned to generate 100kw electricity through rooftop solar panels in order to cater its electric consumption.



Photographs showing on-line inauguration of Diamond Jubilee Hall Complex

5.8 STUDENTS WELFARE AND NATIONAL SERVICE SCHEME (NSS)

5.8.1 CULTURAL EVENTS

A five days' workshop (Virtual Mode) / Webinar Series was organised on "Placement challenges during prevailing economic crisis, gender bias and stress management in a post COVID world" under the umbrella of Dean, Students' Welfare Cell, NIT Jamshedpur and sponsored by TEQIP-III (Technical Education Quality Improvement Program) from 27th June to 1st July 2020

GUEST LECTURE BY NEEL BISWAS

DATE: 9th AUGUST, 2020

ORGANIZED BY: STUDENT WELFARE SECTION

To counter the COVID-19 scenario the student welfare section organized a guest lecture by Neel Biswas.

ART OF LIVING WEBINAR (STUDENTS' EXCELLENCE LEARNING PROGRAMME)

DATE: 6th – 11th AUGUST, 2020

ORGANIZED BY: STUDENT WELFARE SECTION

A webinar was organized on the topic of dealing with stress during the COVID-19 pandemic and role of yoga in daily life. The webinar witnessed a very large virtual gathering.

MACHINE LEARNING WEBINAR

DATE: 1st- 6th SEPTEMBER 2020

ORGANIZED BY: STUDENT WELFARE SECTION



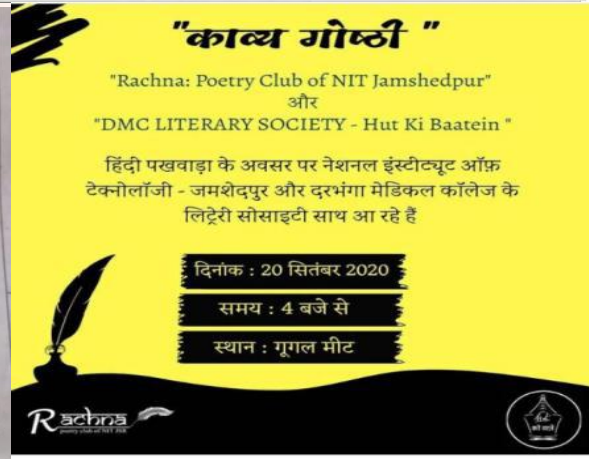
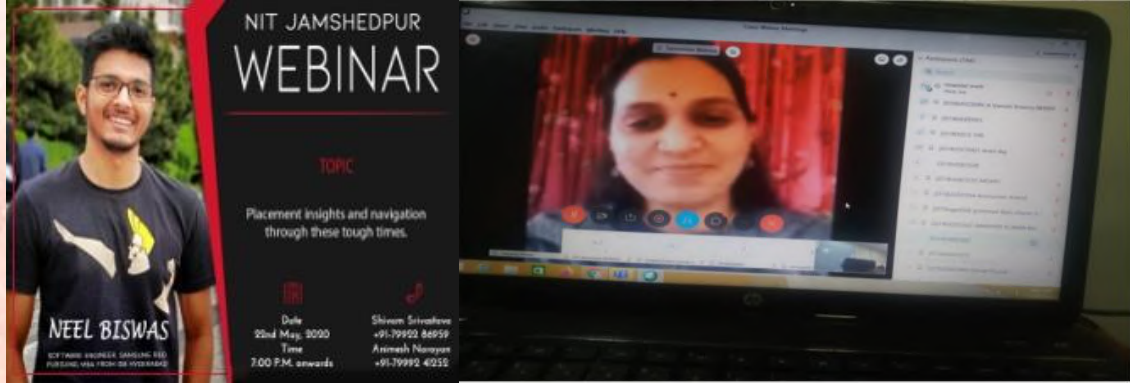
हिन्दी पखवाड़ा-

DATE: 19th -27th SEPTEMBER 2020

ORGANIZED BY: DR. SANJAY KUMAR AND STUDENT WELFARE SECTION

एनआईटी जमशेदपुर ने सितंबर 2020 में हिंदी पखवाड़ा का आयोजन किया। निम्नलिखित प्रतियोगिताएं आयोजित की गईं-

1. हिंदी वाद-विवाद प्रतियोगिता
2. हिंदी व्याकरण परीक्षण
3. हिंदी कविता पाठ
4. ड्राइंग प्रतियोगिता



DATE: 20th SEPTEMBER, 2020

RACHNA organized Kavya Goshthi in association with DMC Literary Society, Darbhanga. It was a blissful evening full of poetry, stories and life lessons.

GANDHI JAYANTI AND LAL BAHADUR SHASTRI JAYANTI CELEBRATION

DATE: 2nd OCTOBER, 2020

ORGANIZED BY: STUDENT WELFARE SECTION

DR. A.P.J ABDUL KALAM BIRTH ANNIVERSARY CELEBRATION

DATE: 15th OCTOBER, 2020

VIGILANCE WEEK CELEBRATION (27th OCTOBER -4th NOVEMBER)

DATE: 27th OCTOBER – 4th NOVEMBER 2020

NATIONAL UNITY DAY

DATE: 31st OCTOBER, 2020

RASHTRIYA EKTA DIWAS pledge ceremony was organized on 31st October 2020. Most of the students and faculties took part in the event.

CONSTITUTION DAY CELEBRATION

DATE: 26th NOVEMBER, 2020



DEEKSHARAMBH (FIRST YEAR ORIENTATION CEREMONY)

DATE: 9th DECEMBER, 2020

FIVE DAY SELF SOPNSORED WORKSHOP

DATE: 23rd – 27th DECEMBER 2020

A five day self-sponsored workshop on, “Adapting to changing scenario in Technology and Leadership” was organized from 23rd-27th December, 2020.

WEBINAR ON “STRESS MANAGEMENT”

DATE: 10th JANUARY 2021

The aim of this webinar was to bring forth the tabooed and untouched issue of stress amidst youth. Stress is a modern problem and needs to be dealt with comprehensively.

WEBINAR ON “EDUCATIONAL CHALLENGES IN THE COVID ERA”

DATE: 24th JANUARY 2021

A webinar on, “Educational challenges in the COIVD-19 era” was organized under the umbrella of the Student Welfare Section of NIT Jamshedpur on 24th January 2020.

WEBINAR ON “DRUG ADDICTION”

DATE: 10th FEBRUARY 2021

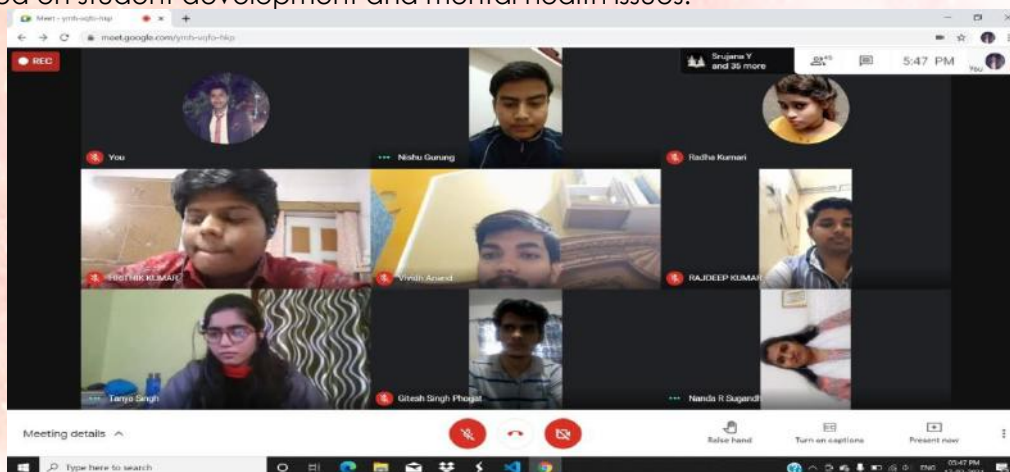
A webinar on, “Drug Addiction” was organized under the umbrella of the Student Welfare Section of NIT Jamshedpur on 10th February 2020.

This webinar aimed to bring forth the tabooed and untouched issue of drug addiction amidst youth. Drug addiction is one of the most dangerous evils in the modern world. It is engulfing our youth in its vicious, treacherous claws. Degrading and destroying our future citizens every day.

6- DAY STUDENT EXCELLENCE LEARNING PROGRAMME

DATE: 17th– 22nd FEBRUARY 2021

A six-day workshop was organised under the banner of Student Excellence Learning Program (SELP) by the Student Welfare Section in association with Art of Living and VVKI. The program focussed on student development and mental health issues.



5.8.2 NSS ACTIVITES

National Service Scheme, under the Ministry of Youth Affairs & Sports, Govt. of India, popularly known as NSS was launched during Gandhi’s birth Centenary Year 1969, in 37 Universities involving 40,000 students with primary focus on the development of personality of students through community service. The NSS Chapter of NIT Jamshedpur comprises several groups divided according to UG and PG branches and led by their group leaders.



NATIONAL YOUTH DAY CELEBRATIONS (3 JAN 21-12 JAN 21)

The event started on 3rd January and continued till 12th January where the students have done social work, such as plantation, food distribution, clothes distribution, garbage picking, etc.



Parivartan Social Summit (21 JAN 21- 24 JAN 21)

"It is not enough to be compassionate. You must act." -Dalai Lama Taking inspiration from the above-mentioned line, NSS NIT Jamshedpur in association with Team OJASS'21 is implementing this in a Brand-New event named "PARIVARTAN".



WORLD HEALTH DAY (7-8 APRIL 2021)

"Physical fitness is the first requisite of happiness." On the occasion of "World Health Day-7th -April, 2021" NSS NIT Jamshedpur celebrated this day to aware the people about their health in a different way which connects health with their happiness. NSS NIT JSR organized a two- day online event from 7 to 8 April. "CAPTURE_YOUR_HAPPINESS". In this event people have to capture their moments of happiness in one shot and we shared it on NSS fb page. Entries were crossed no. 80.



International Day of Yoga June 21, 2021

NSS NIT JAMSHEDPUR organised an exclusive Yoga session from 6.30AM to 8.30Am virtually for both students and professors of the institute. Prof. In charge of NSS lead the session, starting with a prayer, followed by the demonstration of Yogic asanas and their simultaneous explanation. Joints and Glands exercises were also taken up by all the participants in sitting and standing asanas. The celebration concluded with an address by the honourable Director of the institute. He encouraged students to practice regular yoga to remain healthy and improve concentration.





FIT INDIA: YOGA AT HOME



FIT INDIA: PLOG RUN



CONSTITUTION DAY CELEBRATION



NATIONAL UNITY DAY CELEBRATION



FIT INDIA PROGRAM: CRICKET MATCHES & SHOT PUT AT NIT JAMSHEDPUR

5.9 Annual Alumni Meet Alumni Activities



Mr. Udaya Bhaskar Rao Mellampudi
2002 batch, Software Engineer at
Facebook,
Topic: Software industry, Day: 06 March
2021



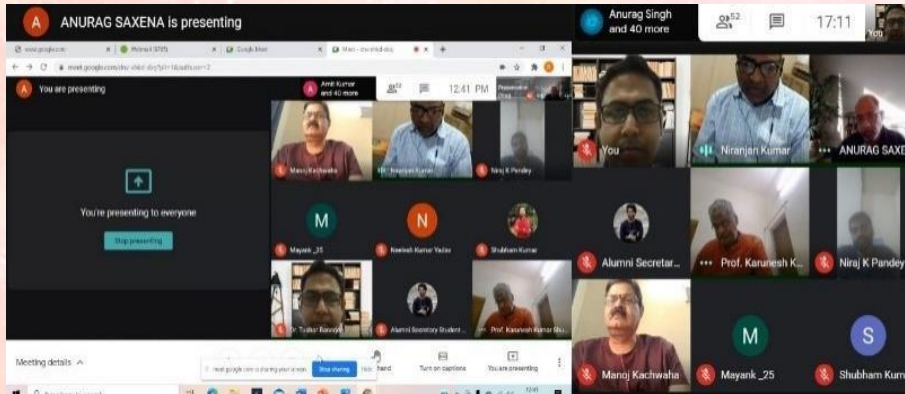
Mr. Sandilya Janga, 2001 batch,
VicePresident at Citi Bank
Topic: Financial sector, Day: 07
March 2021



Mrs. Megha Yethadka , 2002 batch,
Senior Director at UBER,
Topic: Technology and management
field, Day: 13 March 2021






Mr Sanket Saurav , 2010 batch,
Founder of Deep source,
Topic: Journey of a successful
entrepreneur, Day: 4 April 2021



Mr. Anurag Saxena, 1983 batch, MD and CEO of LINKCOZ Ltd.,
Topic: Promotion of start-up culture

ALUMNI GUEST LECTURES

	<p>Topic: How RIT Jamshedpur led Foundation for a Successful Global Career Speaker: Anurag Saxena (Batch of 1983, EE) Managing Director, Linkcoz</p>
	<p>Topic: Creating the life of your choice Speaker: Jyoti Gulati (Batch of 1991, EE), Former Vice-President, CitiGroup</p>
	<p>Topic: Vision, Mission and Passion for SPG and Turning Crisis in Learning' Speaker: Prof. Chandreshwar Khan, (Batch of 1969, MME), Ex-General Manager (Training), Tata Motors</p>

Top 2% scientists from India listed by Stanford University

	<p>Professor Dipak Mazumdar, IIT Kanpur 1975 Batch, Metallurgical & Materials Engineering</p>
	<p>Professor Tripurari Sharma (Batch of 1974, MME), IITISM Dhanbad Global rank- 341 National Rank- 17 Among the top 1.23% of scientists in the Mining and Metallurgy field</p> <p>Professor A.K Lahiri (Batch of 1960, Metallurgical & Materials Engineering), IISc, Bengaluru Global rank- 347 National Rank- 19 Among the top 1.25% of scientists in the Mining and Metallurgy field</p>



Global rank- 67
National rank- 05
Top 0.24% of scientists in the Mining and Metallurgy field.

Dr. S.K. Choudhury (Batch of 1980, Metallurgical & Materials Engineering), Tata Iron and Steel Company Limited
Global rank- 629 National Rank- 32
Among the top 2.28% of scientists in the Mining and Metallurgy field.

CSIR Young Scientist Award 2020 in Engineering Science



Dr. Manoj K. Patel (Batch of 2006, ECE), Senior Scientist, Department of Agrionics CSIR-Central Scientific Instruments Organization (CSIR-CSIO)

film, 'The Tailing Pond' has been nominated in The Oscars under the best short film category for 2021



Mr. Saurav Vishnu's (Batch of 1999, CSE) film, 'The Tailing Pond' has been nominated in The Oscars under the best short film category for 2021.

Forbes 30 under 30 list for 2021, under the category 'Enterprise-Technology', chronicling the entrepreneurs below the age of thirty across the globe



Mr. Sanket Saurav (Batch 2010-2014, CSE) is cofounder of the start-up Deep Source

5.10 10th CONVOCATION, 2020

The 10th Convocation of NIT Jamshedpur was held in online mode on 20th Dec., 2020 conferring degrees to all the graduating and post-graduating students. **Dr. K. Sivan, Chairman ISRO** blessed the occasion as the **Chief Guest** of the ceremony. In the convocation address, **Chief Guest Dr. K. Sivan** complimented the Director of NIT Jamshedpur as well as the esteemed faculty members for transforming the young minds into vibrant engineers, scientists and managers. He addressed the engineers as problem solvers and shared his notion on global employability and the universal values of sincerity, hard work, time management, integrity and teamwork.



It was followed by the award of degrees to a total of 883 passed out students in the year 2020. Out of these, 555 are UG students, 310 are PG students, and 18 are Ph.D. students. A sum of **32 medals** (including **02 Gold** and **30 Silver** medals) were presented to the meritorious students.



GOLD MEDAL RECIPIENTS



Siddhant Gupta
B.Tech.
Metallurgical and Materials Engineering



Ratnesh Kumar
M.Tech (Structural Engineering)
Civil Engineering



GRADUATED STUDENTS

B.TECH. (HONS.) PROGRAMS:

S. N.	B.TECH. (HONS.) PROGRAMS	GRADUATED 2020-2021
1.	Civil Engineering	83
2.	Computer Science and Engineering	92
3.	Electronics and Communication Engineering	85
4.	Electrical Engineering	87
5.	Mechanical Engineering	90
6.	Metallurgical and Materials Engineering	83
7.	Production and Industrial Engineering	35

MCA PROGRAM:

S.N.	PROGRAM	DEPARTMENT	GRADUATED 2020-2021
1.	Master of Computer Application	Computer Applications	74

M.SC. PROGRAMS:

S.N	M.Sc. programs	Graduated 2020-2021
1.	Chemistry	19
2.	Mathematics	17
3.	Physics	14

M.TECH. PROGRAMS:

S.N.	M.TECH. PROGRAM	DEPARTMENT	GRADUATED 2019-2020
1.	Information System and Security Engineering	Computer Application	09
2.	Structural Engineering	Civil Engineering	13
3.	Geotechnical Engineering	Civil Engineering	14
4.	Water Resource Engineering	Civil Engineering	13
5.	Computer Science and Engineering	Computer Science and Engineering	14
6.	Power Electronics and Drive	Electrical Engineering	12
7.	Power Systems Engineering	Electrical Engineering	11
8.	Communication System Engineering	Electronics and Communication Engineering	11
9.	Embedded System Engineering	Electronics and Communication Engineering	11
10.	Computer Integrated design and Manufacturing	Mechanical Engineering	13
11.	Thermal Engineering	Mechanical Engineering	11
12.	Energy Systems Engineering	Mechanical Engineering	12
13.	Foundry Technology	Metallurgical and Materials Engineering	10
14.	Materials Technology	Metallurgical and Materials Engineering	12
15.	Manufacturing System Engineering	Production and Industrial Engineering	11
16.	Surface Science Engineering	Chemistry	9

Ph.D. AWARDED DURING 10th CONVOCATION 2020

S.N.	DEPARTMENT	NUMBER OF STUDENTS
1.	Computer Application	2
2.	Electronics and Communication Engineering	2



3.	Electrical Engineering	3
4.	Mathematics	1
5.	Mechanical Engineering	8
6.	Metallurgical and Materials Engineering	1
7.	Production and Industrial Engineering	1

5.11 NATIONAL INITIATIVE FOR DESIGN INNOVATION (NID)

5.11.1 NID PROJECTS

S N.	INVESTIGATOR NAME	TITLE OF PROJECT	SANCTIONED BUDGET (RS.) LAKH
1.	Prof. R. V. Sharma	Design and development of a passive cooling and heating system for a rural house	2.50
2.	Dr. S. Pandey Dr. Koushlendra K. Singh	Development of smart E-Rickshaw based public transport system	5.00
3.	Dr. Balram Ambade	Design and development of Eco-friendly absorbent and comfortable sanitary napkin	2.7
4.	Dr. Deepak Kumar	Design of a Food Waste Recycle Machine	4.40
5.	Dr. Dulari Hansdah	Development and Installation of Biogas Digester	3.00
6.	Dr. Moumita Mondal	Field Detection of Arsenic, Lead and Mercury in Water by Visible Colour Change with Single Surface Modified Gold Nanoparticle Sensor	8.00
7.	Dr. Renu Kumari	Development of corrosion resistance coating by thermal spraying for steel grades used in Agriculture Equipment	5.00
8.	Dr. Tushar Banerjee Dr. Shashi Bhushan Prasad	Development of wear-resistant and corrosion-resistant electroless coating for different metallic instruments/tools used in rural areas	2.74
9.	Prof. M. K. Sinha	Butter Churning Machine	0.75

SOME OF THE PRODUCTS DEVELOPED THROUGH NID PROJECTS

Biogas digester was installed and tested in the institute campus. Rice husk and cow dung were used to produce the biogas. It is planned to instal and test the digester in the nearby village for its sustainable development with the Unnat Bharat Abhiyan.



Wear and corrosion-resistant electroless coating setup



Eco-friendly absorbent sanitary napkin



Biogas digester



Biogas digester prototype



Butter churning machine with reverse rotating blades



Food waste recycle machine

Equipment/SW procured under NID projects

Solid Modelling Software: **SolidWorks (V2020)**

Equipment: **3D printer** to print polymer materials with large printing space

5.12 NATIONAL WORKSHOP ON TRANSFORMING PEDAGOGY IN INDIA

The workshop on "Transforming Pedagogy in India" inaugurated through online mode at NIT Jamshedpur on 1st August 2020 at 10:00 am. More than 1500 registrations were received from various premier Institutions, Universities and Colleges from different parts of the country. Prof. Karunesh Kumar Shukla, Director NIT Jamshedpur has given the presidential remarks in the inauguration session and explained various activities that are going on at NIT Jamshedpur. Prof. Inder Krishen Bhat, Vice-Chancellor, Manav Rachna University, has given inaugural speech online as Chief-guest of the function and explained necessity of change in classroom teaching to online teaching by teachers of academic institutions in India as per the present situation prevailing in the country. The other panel members namely, Prof. (Dr.) Phalguni Gupta, Vice-Chancellor, GLA University, Mathura; Prof. (Dr.) Jagadanand Jha, Principal, MIT Muzaffarpur, Bihar; Dr. S. P. Mathur, Registrar, IIT BHU; Prof. N. C. Shiva Prakash, Department of Physics, IISC, Bangalore; Shri. Yogesh Srivastava, Central Coordinator, TEQIP-III was also present in the inaugural session and delivered their valuable messages to the attendees from various institutes across the country. Comprehensive resolution came out that COVID-19 Pandemic opened the new era in academic system of teaching and learning process in the Institutions, where the teachers have to apt themselves to update their knowledge in emerging cloud systems. Prof. Karunesh Kumar Shukla delivered the talk on "Teaching Theories: Educational Psychology." He explained the key theories of educational psychology and defined the positive and negative behavioral change in teachers that occurs according to the environmental stimuli. Prof. Palguni Gupta, Vice-Chancellor of GLA University delivered an interactive lecture on "Challenges in Effective Teaching in online mode" in the first session of the second day. He highlighted issues on infrastructure facilities and challenges in online teaching facing teachers and students, particularly in private academic Institutes. Prof. Manoj Kumar Tiwari, Director, NITIE, Mumbai delivered a lecture on different criteria of ranking of academic institutes/universities in India and abroad. These sessions were very beneficial to all the participants. A thought-provoking, panel discussion on the topic "National Educational Policy, 2020" (NEP 2020) was the centre attraction of second day events, which was conducted for more than an hour, chaired by Prof. Inder Krishen Bhat, Vice Chancellor, Manav Rachna University, and the Director NIT Jamshedpur Prof. K. K. Shukla acted as moderator. The other panelist namely, Prof. (Dr.) Phalguni Gupta, Vice-Chancellor, GLA University, Mathura; Prof. (Dr.) Jagadanand Jha, Principal, MIT Muzaffarpur, Bihar; Prof. Shiva Prakash, Department of Physics, IISC, Bangalore; Prof. Rajiev Tripathi, Director, MNNIT, Allahabad acted as panelist speakers. The panel discussed many issues on NEP, 2020 and concluded with draft resolutions which was communicated to Ministry of Education, New Delhi for their consideration in making action plan for its implementation. The



panel also expressed their concern in changing the mindset of the people as a great challenge to the Government of India.



5.13 RESEARCH CONCLAVE 2021

The first Research Conclave has been organized at NIT Jamshedpur during 25-27 February 2021 with the financial support of TEQIP III. The main objective of this event to bring young minds in a common platform to showcase their innovative ideas and skills through the poster presentations. This event witnessed the acclaimed personalities from academia, industries and research organizations who delivered motivational talks to research scholars and faculty members in their expertise area of R & D.

During the event, almost 150 posters were presented by the research scholars on their respective research areas. The poster presentations were classified in to three groups, namely Group 1 for the PhD students of Mechanical, Civil, Metallurgy and Materials, and Production and Industrial Engineering; Group 2 for Electrical, Electronics & Telecommunication, Computer Science and Applications; and Group 3 for Basic Science, Humanities and Social Science and Management scholars.

The event began with the inaugural address of Dr. Shekhar C Mande, Director General- CSIR and Secretary DSIR, Govt. of India, who was the chief guest of the function. He spoke on the Research culture and eco system of research funding in India from History to Present and also expressed the future direction of the same. In the Inaugural session, respected Special Guest Prof. R P S Gangwar, Director, WIT, Dehradun graced the occasion with his presence. During this session, the Patron of this event, Prof. K K Shukla, Director, NIT Jamshedpur addressed the gathering by appealing our Research scholar and faculty members to engage in research activities for the growth of our society and country. The Research Conclave 2021 Souvenir has been unveiled in the presence of distinguished guests and scholars



A view of the dais during Research Conclave 2021



During these three day event, first sessions were dedicated to the experts talks by the distinguished speakers, for say, Prof. Rajesh Prasad, from IIT Delhi; Prof. Tarun Kant from IIT Bombay; Prof. J. Ramkumar from IIT Kanpur, Dr. B. B. Kale, Director, CMET, Pune; Prof. S. N. Singh from IIT Kappur, Dr. Manoj Patel, Sr. Scientist, CSIR-CSIO, Chandigarh; Prof. Ashwani Kumar Tiwari, IISER, Kolkata; Dr. Animesh Kumar Ojha, MNNIT, Allahabad; Dr. Nirmalendu Deb, Director of Next Gen Technology, USA; Shri Vitrang Sompura, General Manager, Magicrete, Surat and Col. Dr. Nisheet Kuma Rai, Registrar, NIT Jamshedpur. And all the sessions were chaired and co-chaired by department heads and senior professors.



Unveiling the souvenir of the Research Conclave 2021

In the afternoon sessions, poster presentation by the Research Scholars of respective groups was done and the same was evaluated by the dedicated evaluation committee.

The valedictory session of the event session was blessed by the honorable Chief Guest Dr. Suman Kumari Mishra, Director, CGCRI, Kolkata and the Guest of Honor Shri Anand Dayal, MD, IDTR, Jamshedpur.

The best poster presentation awards were given to the scholars from each category. The Chairperson, Prof. R. V. Sharma, Dean (R&C) and Technical Advisor Prof. B. B. Jha, Visiting Professor addressed the participants with their valuable inputs. Lastly, Dr. V. R. Kar, Convener of this event, presented the proceedings and proposed vote of thanks

5.14 INCULCATION OF RESEARCH CULTURE IN ACADEMIC INSTITUTIONS (IRCAI-2020)

National Education Policy (NEP) 2020 mandates the Research component in Teaching pedagogy for higher education institutes. Therefore, to strengthen the research component at NIT Jamshedpur, a seminar on the topic “**Inculcation of Research Culture in Academic Institutions (IRCAI-2020)**” during September 5-6, 2020, was organised. During the Covid-19 Pandemic, the institute encouraged multidisciplinary collaborative research in infectious disease management therefore the seminar was focused on the following areas:

- Catalysing Quality Research through implementation of NEP 2020
- Preparing proposal of high scientific quality to garner sufficient funding from National Research Foundation (NRF), Govt. Of India.
- Developing entrepreneurship through incubation centre and emphasis for multidisciplinary research across various disciplines.
- Strengthening Industry-R&D Labs-Academia interaction.
- Using Patinformatics, Toxinformatics and Phytoinformatics for carrying globally competitive research.

Following experts delivered the invited talks on the topics as mentioned against their names.



S. N.	NAME	TOPICS	PHOTO
1.	Dr. K. Muraliedharan Director, CSIR-CGCRl Kolkata	R&D for 'ATMANIRBHAR' Bharat	
2.	Prof. (Dr.) K. K. Shukla Director, NIT Jamshedpur	NEP 2020: New Dimensions for Quality Research in HEIs	
3.	Prof. (Dr.) Rajiv K Mandal Professor, IIT BHU, Varanasi	The idea of Higher Education and Way Forward	
4.	Dr. Kishore Sreenivasan Head, CSIR- URDIP, Pune	The Emerging Science of Patinformatics - Inculcating an IP Culture in Academic Research".	
5.	Dr. B B Jha Visiting Faculty, DMME, NIT Jamshedpur	Catalysing Quality Academic Research through implementation of NEP 2020	
6.	Dr. J.P. Sinha Executive Director, Pipelines Division, IOCL, Kolkata	Solution of Industry's Problem through Quality Research	

5.15 ATAL FDP ON ENGINEERING MODELLING AND SIMULATION USING CFD

The Mechanical Engineering Department of the National Institute of Technology, Jamshedpur was organized a one-week AICTE Training and Learning (ATAL) Academics Programme on "Engineering Modelling and Simulation using CFD" during {21st June - 25th June 2021} through online mode. This 5 DAYS faculty development programme was attended by about 200 faculties and Research Scholars of the different disciplines from all over India.



Prof K.K. Shukla, Director of the institute speaking on the occasion of the event

5.16 MEMORANDUM OF UNDERSTANDING





NIT Jamshedpur and MSME Technology Centre (Indo-Danish Tool Room), Jamshedpur signed a Memorandum of Understanding on 29th January, 2021 for strengthening academic and research collaboration.

5.17 OBSERVATION OF SPECIAL EVENTS

REPUBLIC DAY CELEBRATION

The Republic day was celebrated with great enthusiasm in the circular park of the institute and the national flag was hoisted by honourable director, NIT Jamshedpur on this occasion.





Women's Day Celebration

Women's day was celebrated on 9 March, 2021 at NIT Jamshedpur. The chief guest of the event was Dr. Mita Tarafdar, Chief Scientist and Head, BDG, CSIR, NML Jamshedpur. She delivered a lecture on Gender Equality. The Director and faculty of the institute were present on the occasion



Dignitaries on the dais during the event on women's day celebration

TREE PLANTATION

A tree plantation drive has been conducted on 19th June, 2021 in the institute campus in association with CISF. Around 350 saplings have been planted in that drive.



COVID-19 VACCINATION

With the help of Sarikela-Kharsawan district administration, Institute has organised couple of Covid-19 vaccination drives within the campus.



बीफ न्यूज



एनआइटी में शुरू हुआ टीकाकरण

आदित्यपुर. एनआइटी जमशेदपुर में जिला प्रशासन की ओर से कोरोनारोगी टीका लगवाने की सुविधा उपलब्ध करायी गयी. संस्थान के डिस्पेंसरी में बुधवार को करीब 100 लोगों का टीकाकरण हुआ. जिनमें संस्थान के शिक्षक व शिक्षकेतर कर्मचारी तथा उनके परिवार के लोग शामिल थे. यहां टीकाकरण शिविर फिर लगाया जायेगा.



Photographs during COVID-19 Vaccination

www.newspatmail.com **3**
न्यू इस्पॉसिट मेल

अनुसंधान को उद्योग में जगह मिलनी चाहिए : डॉ शेखर

एनआइटी कॉलेज में तीन दिवसीय रिसर्च कॉन्फ्रेंस का उद्घाटन

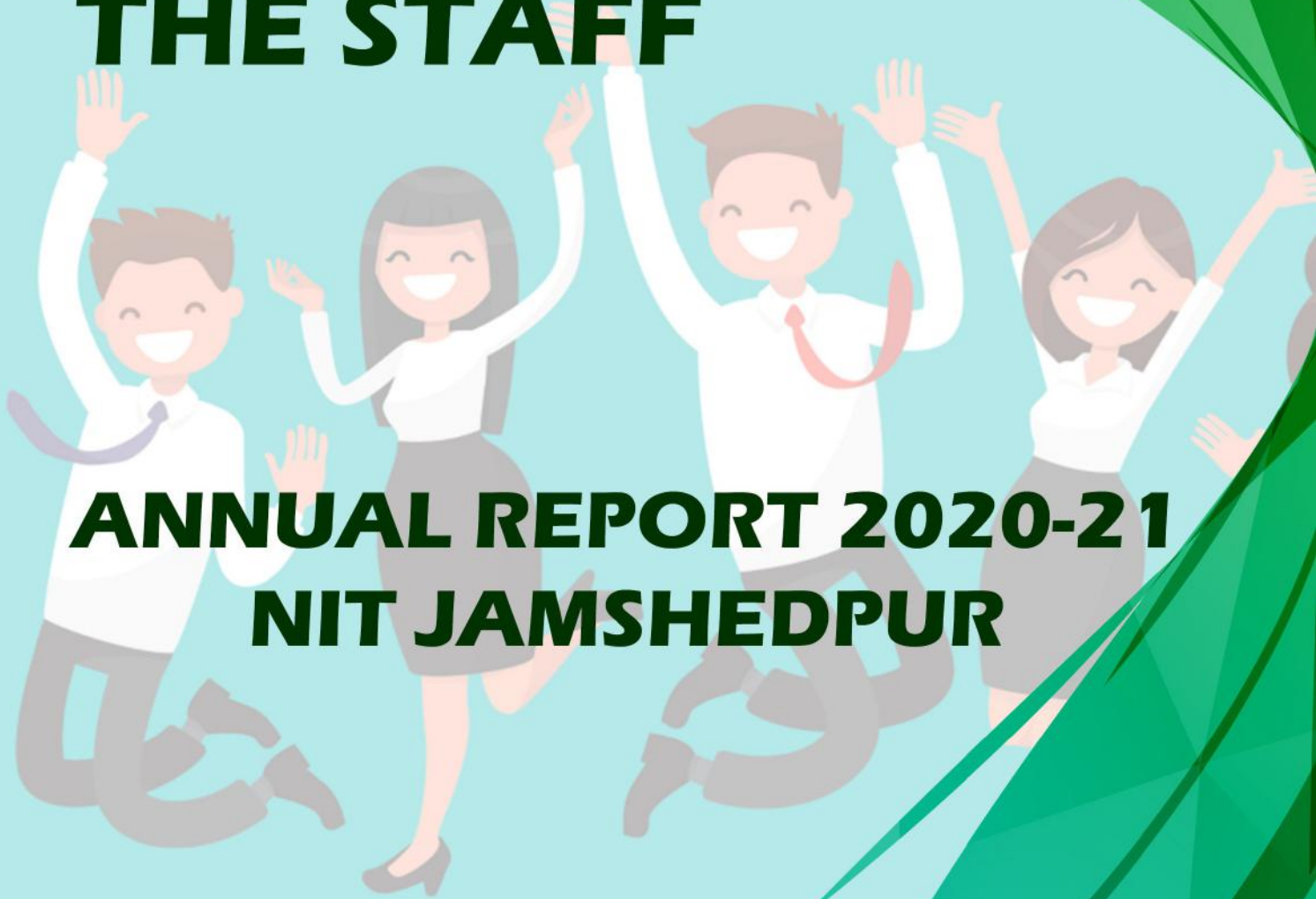
आदित्यपुर, 25 फरवरी (विशेष) : एनआइटी कॉलेज में तीन दिवसीय रिसर्च कॉन्फ्रेंस का उद्घाटन आज के दिन हुआ, जो 27 फरवरी तक चलेगा. संस्थान परिसर में आयोजित कॉन्फ्रेंस के पहले दिन लगभग 150 इन-स्टाफ रिसर्च स्कॉलर और युवा शोधकर्ता ने भाग लिया. उद्घाटन में एनआइटी के जवनी सेवीय का प्रोफेसर (विद्यार्थी सलाह) उपस्थित करके कॉन्फ्रेंस में हिस्सा लिया. कार्यक्रम का उद्घाटन डॉ. शशिदेवका, सीएचआरडीआ और डॉ.कॉल टैंगलगाईकर, फलर वाइस चैंसलर ने किया. डॉ. शेखर ने उद्घाटन में कहा कि एनआइटी में उद्योग में जगह मिलनी चाहिए. डॉ. शेखर ने कहा कि एनआइटी में उद्योग में जगह मिलनी चाहिए. डॉ. शेखर ने कहा कि एनआइटी में उद्योग में जगह मिलनी चाहिए.



डॉ. शेखर ने कहा कि एनआइटी में उद्योग में जगह मिलनी चाहिए. डॉ. शेखर ने कहा कि एनआइटी में उद्योग में जगह मिलनी चाहिए. डॉ. शेखर ने कहा कि एनआइटी में उद्योग में जगह मिलनी चाहिए.

CHAPTER- 6

THE STAFF



ANNUAL REPORT 2020-21

NIT JAMSHEDPUR



CHAPTER-6: THE STAFF

6.1 LIST OF OFFICERS

S. N.	NAME OF THE EMPLOYEES	DESIGNATION	DEPARTMENT
1.	Col. (Dr.) Nisheeth Kumar Rai (Ret.)	Registrar	Admin.
2.	Sri Rupak Kumar	Senior Technical Officer	Department of Production & Industrial Engineering
3.	Dr. S. A. Hussain	Dy. Registrar	Academic section
4.	Sri R. P. Prasad	Assistant Registrar	Establishment Section
5.	Sri Sunil Kumar Bhagat	Assistant Registrar	Store & Procurement Section
6.	Sri Deepak Kumar	Engineer	Planning & Development
7.	Sri N. K. Sethy	Assistant Librarian	Central Library
8.	Dr. (Ms.) Neeta Bharti	Assistant Librarian	Central Library
9.	Sri Umesh Kumar	Assistant Librarian	Central Library
10.	Sri A. C. Topno	Technical Officer	Department of Production & Industrial Engineering
11.	Sri Nishant Sinha	Assistant Registrar	Finance & Accounts Division

6.2 LIST OF GROUP – B STAFF

MINISTERIAL:

S. N.	NAME OF THE EMPLOYEES	DESIGNATION	DEPARTMENT
1.	Mr. Banshi Lal Sardar	Assistant SG-I	DPIE
2.	Mr. Mahesh Rajak	Assistant SG-I	Establishment Section
3.	Mr. Gopaljee Ram	Assistant SG-I	Director's Secretariat
4.	Mr. Khageshwar Mahato	Assistant SG-I	Finance & Account Division
5.	Mr. Nand Lal Rajak	Assistant SG-I	Academic Section & E-governance Division
6.	Mr. Chaman Lal	Assistant SG-I	Hostel – I & J
7.	Mr. Manoj Kr. Prasad	Assistant SG-I	Dean (P & D)
8.	Mr. Ramjee Pd. Sinha	Assistant SG-I	Mechanical Engg. Deptt.
9.	Mr. Shailesh Kumar	Assistant SG-I	Establishment Section
10.	Mr. Nand Kishore Jha	Assistant SG-I	Academic Section & E-governance Division
11.	Mr. Tarun Kumar Kar	Assistant SG-I	Academic Section & E-governance Division
12.	Mr. Sanjay Chatterjee	Assistant SG-I	DMM
13.	Mr. Tarkeshwar Kumar	Assistant SG-I	Computer Centre
14.	Mr. Murali Dhar Behra	Assistant SG-I	Finance & Accounts Section
15.	Mr. Naresh Kr. Pathak	Assistant SG-I	DPIE
16.	Mr. Suman Kumar	Assistant SG-I	Finance & Accounts Section
MINISTRIAL STAFF (HIGHER GADRE)			
17.	Mr. Saikat Mridha	Accountant	Finance & Accounts Section
TECHNICAL STAFF (TECHNICAL HIGHER GADRE)			
1.	Sri Jagdish Singh	Sr. S.A.S Assistant	BH-E, BH-F, BH-G, BH-H
2.	Sri Sudhir Kr. Sinha	Sr. Technical Assistant	Central Library



6.3 LIST OF GROUP – C STAFF

MINISTERIAL LOWER:

S. N.	NAME OF THE EMPLOYEES	DESIGNATION	DEPARTMENT
1.	Mr. Anirudh Sanyal	Sr. Stenographer	Director's Secretariat
2.	Mr. Nabo Kishore Mahato	Assistant SG-II	Department of Civil Engineering
3.	Mr. Urmilesh Jha	Assistant SG-II	Hostel – K
4.	Mr. Arun Kr. Pandit	Assistant SG-II	Finance & Accounts Section
5.	Mr. Surya Narayan Yadav	Assistant SG-II	Hostel - C & D
6.	Mr. Dashrath Singh	Assistant SG-II	Establishment Section
7.	Mr. Arjun Kr. Singh	Assistant SG-II	Establishment Section
8.	Mr. Raj Kumar Baitha	Assistant SG-II	Chief Warden Office
9.	Mr. Bipin Kumar Sinha	Assistant SG-II	Dean(S/W)'s Office
10.	Mr. Sushil Kr. Gupta	Assistant SG-II	Stores & Procurement Section
11.	Mr. Anil Kumar	Assistant SG-II	Training & Placement Cell & Computer Centre
12.	Mr. Ashutosh Ranjan	Assistant SG-II	Registrar's Office
13.	Mr. Raj kumar Pramanik	Assistant SG-II	Establishment Section
14.	Mrs. Boby Banerjee	Assistant SG-II	Hostel – A & B (Girls)
15.	Mr. Sudhanshu Shekhar	Assistant SG-II	Electrical Engg. Deptt.
16.	Mrs. Kanak Kumari	Jr. Assistant	Establishment Section
TECHNICAL STAFF (LOWER CADRE)			
1.	Mr. Ashok Kumar Sahu	Technician SG-I	Transportation Section
2.	Mr. Baliram Kumar	Technician SG-I	House Keeping, Sanitation & Green Campus Unit (P & D)
3.	Mr. Nawal Kishore	Technician SG-I	Deptt. of Civil Engg.
4.	Mr. Satydeo Singh	Technician SG-II	Department of Production & Industrial Engineering
5.	Mr. Ravindra Prasad	Technician SG-II	Mechanical Engineering Dept.
6.	Mr. Gupteshwar Prasad	Technician SG-II	Department of Production & Industrial Engineering
7.	Mr. Sanjay Kumar Sinha	Technician SG-II	Transportation Section
8.	Mr. Kamesh Pd. Singh	Technician SG-II	Transportation Section
9.	Mr. Sanjeev Kumar	Technician SG-II	Department of Electrical Engineering
10.	Mr. Prasant Kumar Mal	Technician SG-II	Electrical Maintenance Unit
11.	Mr. Sanjay Kumar	Technician SG-II	Department of Mechanical Engineering

6.4 LIST OF EMPLOYEE ON CONTRACT

S. N.	NAME OF THE EMPLOYEES	DESIGNATION	DEPARTMENT
1.	Dr. Rishi Mishra	Medical Officer	Institute Health Centre
2.	Sri Kamal Prasad Dubey	Medical Assistant	Institute Health Centre
3.	Sri Pawan Kumar Pandey	Assistant Engineer SG-II (Civil Works)	Planning & Development Division
4.	Mr. Rahul Kumar	Technical Assistant	Deptt. of Computer Application
5.	Mrs. Ichha Rani Hansda	Technical Assistant	Electronics & Communication Engg.
6.	Mr. Arnab Sasmal	Technical Assistant	Department of Met & Mat. Engg.
7.	Mr. Suraj Kumar Mahato	Junior Engineer (Elect.)	Planning & Development Division
8.	Mr. Meeravali Shaik	Junior Engineer (Elect.)	Planning & Development Division



9.	Mr. Rajesh Kumar	Junior Engineer (Civil)	Planning & Development Division
10.	Mr. Vijay Kumar Mahto	Technical Assistant	Mechanical Engineering
11.	Mr. Heman Singh Hansda	Technical Assistant	Mechanical Engineering
12.	Mr. Subhendu Mahata	Technical Assistant	Computer Science & Engineering
13.	Mr. Amrit Kumar	Technical Assistant	Computer Centre
14.	Mohd. Iqbal Ansari	Technical Assistant	Production & Industrial Engineering
15.	Mr. Ravi Ranjan	Technical Assistant	Academic section
16.	Mr. Ratish Kumar Paswan	MIS Trainee	Establishment Section
17.	Mr. Rajesh Kumar Jetty	MIS Trainee	Academic section
18.	Mr. Rakesh Kumar	MIS Trainee	Central Store
19.	Mr. Saurabh Saini	MIS Trainee	Central Store

6.5 LIST OF MTS

S. N.	NAME OF THE EMPLOYEES	DESIGNATION	DEPARTMENT
1.	Sri Dina Nath Prasad	Attendant SG-I	Department of Metallurgical & Materials Engineering
2.	Sri Bholu Prasad	Attendant SG-I	Electrical Maintenance Unit
3.	Sri Krishna Rajak	Attendant SG-I	Department of Electrical Engineering
4.	Sri Binod Kumar Satpathy	Attendant SG-I	Computer Centre
5.	Sri Mani Lal Yadav	Attendant SG-I	Planning & Development
6.	Sri Mohan Ram Mahato	Attendant SG-II	Finance & Accounts Division
7.	Sri Madhu Sudan Pati	Attendant SG-II	Computer Centre
8.	Sri Bucchu Jha	Attendant SG-II	Dept of Chemistry
9.	Sri Ravi Mahato	Attendant SG-II	Central Library
10.	Sri Bidya Sagar Gupta	Attendant SG-II	Establishment Section
11.	Sri Shyam Sundar Mandal	Attendant	Electrical Engineering
12.	Smt. Chanchala Pradhan	Attendant	Finance & Accounts Division
13.	Sri Harkhu Machua	Attendant	Dept. of Mechanical Engg.
14.	Smt. Sumitra Pradhan	Attendant	Hostel Management (Girls Hostel - AHR & RLB) in addition of ESS
15.	Sri Sandeep Kumar	Attendant	Computer Centre
16.	Sri Bahadur Mahato	Attendant	Finance & Accounts Division
17.	Sri Vijay Pratap Mahato	Attendant	Planning & Development Division
18.	Sri Santosh Sardar	Attendant	House Keeping, Sanitation & Green Campus Unit
19.	Sri Pulin Kumar Dutta	Attendant	Department of Production Engineering
20.	Sri Gopal Chand Das	Attendant	Central Store
21.	Sri Anup Kumar Mahato	Attendant	Finance & Accounts Division
22.	Sri Ruhi Manjhi	Attendant	Academic & E-governance
23.	Sri Kameshwar Roy	Attendant	Department of Metallurgical & Materials Engineering
24.	Sri Fantu	Attendant	Students Welfare Division: Students Activity & Sports
25.	Smt. Sugga Devi	Attendant	Dept of Comp. Sc. & Engg.
26.	Sri Bankey Mishra	Attendant	Electrical Maintenance Unit
27.	Sri Damu Tiu	Attendant	Department of Civil 28Engineering
28.	Sri Ram Awadh Ram	Attendant	Planning & Development
29.	Sri Chhote Lal Soren	Attendant	Establishment Section
30.	Sri Makhan Lal	Attendant	Dept ECE
31.	Sri Dilip Mahali	Attendant	Department of Production Engineering
32.	Sri Jyotilal Singh	Attendant	Establishment Section
33.	Sri Manoj Kumar Jha	Attendant	Academic & E-governance
34.	Sri Awadhesh Rajak	Attendant	Security Control Unit



35.	Sri Suresh Pradhan	Attendant	Department of Mechanical Engineering
36.	Sri Charan Gorai	Attendant	Director's Secretariat
37.	Sri Giri Pradhan	Attendant	Finance &Accounts Division
38.	Sri Suresh Prasad	Attendant	Electrical Maintenance Unit
39.	Sri Aditya Sathpathy	Attendant	Planning & Development Division
40.	Sri Babloo Sardar	Attendant	Registrar Office
41.	Sri Bhaskar Pradhan	Attendant	Director Secretariat
42.	Sri Prabhat Kumar	Attendant	Students Welfare Division
43.	Sri Bharat Singh	Attendant	Establishment Section
44.	Sri Chandra Mohan Mukhi	Attendant	Registrar's Office
45.	Sri Sarbeshwar Mukhi	Attendant	Security Control Unit
46.	Sri Basu Gour	Attendant	Department of Civil Engineering
47.	Sri Gurwa Mukhi	Attendant	House Keeping, Sanitation & Green Campus Unit
48.	Sri Aditya Mahali	Attendant	Computer Centre
49.	Sri Raghu Nath Mukhi	Attendant	Training & Placement Cell
50.	Sri Sunil Gour	Attendant	Academic & E governance
51.	Sri Anand Pradhan	Attendant	Department of Computer Applications
52.	Sri Sita Ram Mukhi	Care Taker SG-I	House Keeping, Sanitation & Green Campus Unit
53.	Sri Krishna Mukhi	Care Taker SG-II	Security Control Unit
54.	Sri Bir Prasad Mukhi	Care Taker SG-II	Department of Mathematics
55.	Sri Hagru Mukhi	Care Taker SG-II	House Keeping, Sanitation & Green Campus Unit
56.	Sri Ramesh Mukhi	Care Taker SG-II	Computer Sc. & Engg. Dept.
57.	Smt. Raimani Devi	Care Taker	House Keeping, Sanitation & Green Campus Unit
58.	Smt. Sunaina Devi	Care Taker	Central Library
59.	Sri Lakshman Kumar Singh	Care Taker	Transportation Section
60.	Sri Bihari Mukhi	Care Taker	House Keeping, Sanitation & Green Campus Unit
61.	Sri Ravi Mukhi-1	Care Taker	House Keeping, Sanitation & Green Campus Unit
62.	Sri Ravi Mukhi-2	Care Taker	ECE Department
63.	Sri Bideshi Mukhi-1	Care Taker	Security Control Unit
64.	Sri Arjun Mukhi	Care Taker	Mechanical Engg.
65.	Sri Ganesh Shrestha	Care Taker	Central Library
66.	Smt. Devi Mukhi	Care Taker	House Keeping, Sanitation & Green Campus Unit
67.	Sri Mahesh Mukhi	Care Taker	House Keeping, Sanitation & Green Campus Unit
68.	Smt. Shanti Mukhi	Care Taker	House Keeping, Sanitation & Green Campus Unit
69.	Sri Bideshi Mukhi-2	Care Taker	House Keeping, Sanitation & Green Campus Unit
70.	Sri Mangal Mukhi	Care Taker	Computer Sc. & Engg.
71.	Sri Khoka Ram Mahto	Care Taker	House Keeping, Sanitation & Green Campus Unit
72.	Smt Kanchan Devi	Care Taker	Institute Health Centre
73.	Sri Haldhar Sardar	Care Taker	House Keeping, Sanitation & Green Campus Unit
74.	Smt. Sachini Devi	Care Taker	Department of Chemistry
75.	Sri Dharmendra Mardi	Care Taker	Dean (A & FW)' Office
76.	Sri Basant Mukhi	Care Taker	House Keeping, Sanitation & Green Campus Unit
77.	Smt. Saraswati Mukhi	Care Taker	House Keeping, Sanitation & Green Campus Unit



78.	Sri Hem Sagar Gope	Security Guard SG-II	Security Control Unit
79.	Sri Lal Mohar Singh	Security Guard	Security Control Units
80.	Sri Mihir Chand Pradhan	Security Guard	Department of Physics
81.	Sri Jauhari Sahani	Security Guard	Director's Secretariat
82.	Sri Akhil Pradhan	Security Guard	Security Control Unit
83.	Sri Ramesh Ram	Security Guard	Central Library
84.	Sri Kisto Manjhi	Security Guard	Security Control Unit
85.	Sri Kamal Kant Das	Security Guard	Dept of Met & Mat Engg
86.	Sri Shyam Sunder Sahu	Security Guard	Office of Dean (R&C) &CVO
87.	Sri Janmajay Sardar	Security Guard	Dept of Comp. Sc. &Engg.
88.	Sri Murlil Mahato	Security Guard	Security Control Unit
89.	Sri Suraj Kumar	Security Guard	Security Control Unit
90.	Sri Nitish Das	Security Guard	Director Secretariat
91.	Sri Dayamay Prajapati	Security Guard	Security Control Unit
92.	Sri Bholi Prasad Yadav	Security Guard	Security Control Unit
93.	Sri Matbar Sardar	Security Guard	Security Control Unit
94.	Sri Moti Lal Gaur	Security Guard	Institute Health Centre
95.	Sri Mathura Sardar	Security Guard	Security Control Unit
96.	Sri Tapan Mahato	Security Guard	Security Control Unit



PUBLICATION CELL COMMITTEE



**NATIONAL INSTITUTE OF TECHNOLOGY
JAMSHEDPUR – 831014**



**ANNUAL ACCOUNT
FOR THE
FINANCIAL YEAR 2020-21**



[ANNUAL REPORT 2020-21]
[NIT JAMSHEDPUR]

NATIONAL INSTITUTE OF TECHNOLOGY
JAMSHEDPUR
BALANCE SHEET as on 31st March 2021

SOURCES OF FUNDS	Schedule	Amount in Rupees	
		Current Year 2020-21	Previous Year 2019-20
CORPUS / CAPITAL FUND	01	5,30,25,84,785.49	5,52,72,47,064.28
DESIGNATED/EARMARKED/ ENDOWMENT FUNDS	02	14,70,55,529.58	14,26,84,338.49
CAPITAL GRANTS/LOANS	02(i)	66,87,48,965.30	75,63,84,325.91
CURRENT LIABILITIES & PROVISIONS	03	82,09,69,207.49	76,95,57,210.59
TOTAL		6,93,93,58,487.86	7,19,58,72,939.27

APPLICATION OF FUNDS	Schedule	Amount in Rupees	
		Current Year 2020-21	Previous Year 2019-20
FIXED ASSETS	04		
a. Fixed Assets acquired upto 31.03.2014		14,14,07,868.26	54,42,79,743.69
b. Fixed Assets acquired after 31.03.2014			
Tangible Assets		2,46,08,85,540.19	2,42,21,25,038.25
Intangible Assets		62,11,967.80	33,71,525.00
Capital Works-In-Progress		1,75,77,93,142.00	1,34,50,61,127.00
INVESTMENTS FROM EARMARKED/ENDOWMENT FUNDS	05	7,85,15,187.00	17,59,58,787.00
INVESTMENTS - OTHERS	06	-	-
CURRENT ASSETS	07	2,28,61,26,716.35	2,20,40,10,019.42
LOANS ADVANCES & DEPOSITS	08	20,84,18,066.26	50,10,66,698.91
TOTAL		6,93,93,58,487.86	7,19,58,72,939.27

SIGNIFICANT ACCOUNTING POLICIES 23
CONTINGENT LIABILITIES AND NOTES TO ACCOUNTS 24

S. Mondal
10/07/21
Accountant

Asst. Registrar (F/A)
10/07/21

Registrar
15/07/21

Director
15/07/21

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31st MARCH 2021

PARTICULARS	Schedule	Amount in Rupees	
		Current Year 2020-21	Previous Year 2019-20
INCOME			
Academic Receipts	09	26,29,38,601.27	26,42,62,505.39
Grants / Subsidies	10	86,07,39,148.83	85,90,64,824.62
Income from Investments	11	10,85,70,402.95	8,30,42,411.22
Interest Earned	12	68,30,931.00	90,02,470.00
Other Income	13	3,69,82,984.64	8,41,18,434.89
Prior Period Income	14	8,831.00	3,64,71,007.04
TOTAL (A)		1,27,60,70,899.69	1,33,59,61,653.16
EXPENDITURE			
Staff Payments & Benefits (Establishment Expenses)	15	59,57,68,046.00	59,01,26,533.00
Academic Expenses	16	11,75,51,286.75	10,78,11,019.89
Administrative and General Expenses	17	5,94,13,719.08	6,87,14,959.73
Transportation Expenses	18	9,10,299.00	13,53,427.00
Repair and Maintenance	19	2,34,55,403.34	2,41,13,214.00
Finance Cost	20	4,74,81,014.66	3,66,82,197.00
Other Expenses	21	-	-
Prior Period Expenses	22	1,08,775.00	3,63,067.00
Depreciation	04(i)	7,68,46,416.26	7,35,52,388.68
Expenses from IRG	15 & 17	37,63,21,447.00	2,25,36,158.00
Expenses from Advance out of CPWD	17	2,00,74,346.00	-
TOTAL (B)		1,31,79,30,753.09	92,52,52,964.30
Balance being Surplus / (Deficit) carried to Capital Fund		-4,18,59,853.40	41,07,08,688.86

S. Mondal
10/07/21
Accountant

Asst. Registrar (F/A)
14/07/21

Registrar
10/07/21

Director
15/07/21



SCHEDULES FORMING PART OF BALANCE SHEET

SCHEDULE 1 - CORPUS / CAPITAL FUND

			Amount in Rupees	
	Particulars		Current Year 2020-21	Previous Year 2019-20
(A)	Corpus Fund			
	Balance at the beginning of the year	11,51,86,162.69		10,90,68,827.69
Add:	Interest earned on Corpus Fund	40,71,784.42		61,17,335.00
			11,92,57,947.11	11,51,86,162.69
(B)	Capital Fund			
	Balance at the beginning of the year	5,41,20,60,901.59		4,99,74,16,684.76
Add:	Cap-Grant to the extent utilized for Cap. Exp.	12,27,89,738.00		2,05,25,290.00
Add:	Assets Purchased out of TEQIP-III & Others fund	1,33,24,550.00		2,49,66,772.00
Less:	Op Balance of unutilised grant trf to Schedule 3C (b)	-		-4,15,56,534.00
Less:	Project payment made fro IRG	-4,47,550.00		
Less:	Depreciation of Old Assets (Assets upto 31.03.2014)	-40,28,71,875.43		
Add:	Assets Purchased out of various scheme grant which were not trasfered to captal A/c earlier now trf	7,43,28,655.62		
Add:	Understated the Assets last year now assetized and thrf to capital A/c	60,02,272.00		
			5,22,51,86,691.78	
Add:	Excess of Income over Expenditure		-	41,07,08,688.87
	TOTAL B		5,22,51,86,691.78	5,41,20,60,901.59
	GRAND TOTAL (A+B)		5,34,44,44,638.89	5,52,72,47,064.28
Less:	Deficit trf from the Income & Expenditure A/c		-4,18,59,853.40	-
	Balance at the year end		5,30,25,84,785.49	5,52,72,47,064.28

S. Mishra
10/05/21
Accountant

Asst. Registrar (F/A)
10/05/21



[ANNUAL REPORT 2020-21]
[NIT JAMSHEDPUR]

SCHEDULE 2 - DESIGNATED / EARMARKED / ENDOWMENT FUNDS

Particulars	Amount in Rupees			
	Current Year 2020-21		Previous Year 2019-20	
A. Staff Development Fund				
(i). Balance at the beginning of the year	45,35,246.00		43,96,364.00	
(ii). Add: Addition during the year	-		1,38,882.00	
(iii). Add: Interest on Saving Bank/FD A/c	1,30,529.00		-	
(iv). Less: Expenditure during the year	-	46,65,775.00	-	45,35,246.00
B. Maintenance fund				
(i). Balance at the beginning of the year	2,35,09,850.00		2,34,55,923.00	
(ii). Add: Addition during the year	-		53,927.00	
(iii). Add: Interest on Saving Bank/FD A/c	49,740.00		-	
(iv). Less: Expenditure during the year	-	2,35,59,590.00	-	2,35,09,850.00
C. Depreciation fund				
(i). Balance at the beginning of the year	27,42,297.00		27,42,297.00	
(ii). Add: Addition during the year	-		-	
(iii). Add: Interest on Saving Bank/FD A/c	-		-	
(iv). Less: Expenditure during the year	-	27,42,297.00	-	27,42,297.00
D. Institute Dev. Fund				
(i). Balance at the beginning of the year	11,17,70,835.49		10,19,09,968.49	
(ii). Add: Addition during the year	14,70,307.00		98,60,867.00	
(iii). Add: Interest on Saving Bank/FD A/c	27,20,615.09		-	
(iv). Less: Expenditure during the year	-	11,59,61,757.58	-	11,17,70,835.49
E. Endowment Fund				
(i). Balance at the beginning of the year	1,26,110.00		1,26,110.00	
(ii). Add: Addition during the year	-		-	
(iii). Add: Interest on Saving Bank/FD A/c	-		-	
(iv). Less: Expenditure during the year	-	1,26,110.00	-	1,26,110.00
TOTAL		14,70,55,529.58		14,26,84,338.49

Closing Balance Represented by:

	Staff Development Fund	Maintenance fund	Depreciation fund	Institute Dev. Fund	Endowment Fund
Cash and Bank Balance	19,15,256.00	2,25,11,465.00	16,87,910.00	5,03,83,808.49	1,26,110.00
Investment	27,50,519.00	10,48,125.00	10,54,387.00	6,35,65,892.00	-
Interest Accrued but not received	-	-	-	20,12,057.09	-
Total	46,65,775.00	2,35,59,590.00	27,42,297.00	11,59,61,757.58	1,26,110.00

S. Mondal
20/1/21
Accountant

Page 04

Asst. Registrar (F/A)



[ANNUAL REPORT 2020-21]
[NIT JAMSHEDPUR]

SCHEDULE 2(i) - CAPITAL GRANTS & LOANS

Amount in Rupees

Sl.No	Particulars	Current Year 2020-21	Total up to 2019-20	Total up to 2020-21
(A)	SPONSORED PROJECT (SCHEME GRANTS)			
1	Modernization of Laboratories	-2,43,15,632.90	2,69,16,862.00	26,01,229.10
2	Net Work Scheme	-66,00,819.65	69,79,760.00	3,78,940.35
3	Area of Excellence	-4,14,000.00	4,14,000.00	-
4	Area of Weakness	-1,20,08,930.15	1,43,33,422.89	23,24,492.74
5	Emerging Technology	-47,84,730.69	48,50,000.00	65,269.31
6	A I C T E	-91,494.36	7,81,296.50	6,89,802.14
7	Programme for New/Improve Technology	-51,99,158.11	53,64,381.54	1,65,223.43
8	Instrumentation Cell	-	1,75,000.00	1,75,000.00
9	Research Centre on Piezo Electro. Composite materials	-9,97,746.80	10,00,000.00	2,253.20
10	I. I. I. Cell	-2,92,830.14	3,62,000.00	69,169.86
11	UNESE	-	6,319.73	6,319.73
12	Sponsored Research Grant (SMDP-C2SD,VLSI, ECE Dept)	-	16,71,174.00	16,71,174.00
13	NID Project Grant (M K Sinha)	-22,55,565.00	23,04,704.00	49,139.00
14	Reasearch Grant BRNS Balram Ambade	-8,06,945.00	12,05,113.00	3,98,168.00
15	Sponsored Resarch Grant SERB	-	17,25,000.00	17,25,000.00
16	Sponsored Resarch Grant (NBHM Project, Sunil Kumar)	-	12,533.00	12,533.00
17	Center of Excellence Less Recurring Exp.	-1,69,33,290.62	3,88,22,248.50	2,18,88,957.88
18	Geology Project	-	47,224.78	47,224.78
19	V.L.S.I.	-1,94,360.00	3,79,347.00	1,84,987.00
20	TGAS Scheme	-	1,50,000.00	1,50,000.00
21	Unnat Bharat Abhiya	-1,53,077.00	1,53,077.00	-
22	SERC (DST) Project Mathematics (Sunil Kumar)	-13,334.00	2,25,070.00	2,11,736.00
23	SEED Project of Dr. Satish Kumar	-17,61,775.00	17,73,078.00	11,303.00
24	SERB Black Carbon Project (Dr. Balram Ambade)-Tapan	-21,85,251.00	23,22,462.00	1,37,211.00
25	SERB,DST GOI, ECRA Project of Dr. M.A Hassan	-18,01,629.00	18,01,629.00	-
26	SERB DST Project of Raj Nandkeolyar(ECR/2017/118)	-1,78,809.00	4,95,772.00	3,16,963.00
27	SERB-DST Project of Snehasis Kundu (ECR/17/000184)	75,257.00	2,25,337.00	3,00,594.00
28	SERB-DST Project of Vishesh R. Kar (ECR/16/001829)	-2,10,968.00	2,10,968.00	-
29	SERB PAH Project Balram Ambade (Amit Kumar)	-2,88,923.00	2,88,923.00	-
30	SERB DST PROJECT OF DR. RENU KUMARI	-1,93,818.00	17,50,000.00	15,56,182.00
31	SERB DST PROJECT OF DR. SHASHANK PANDEY	80,258.00	2,02,333.00	2,82,591.00
32	SERB DST PROJECT OF DR. SUBHASH SINGH	-5,70,224.00	12,86,126.00	7,15,902.00
33	DST-Inspire Project of Dr. Neha Agnihotri-Saurav Kr	-9,30,790.00	9,30,790.00	-
34	ICSSR Project of Dr. Manish Kr Jah	-67,652.00	1,57,076.00	89,424.00
35	ICSSR Research Project of Dr. Akancha Sukla	58,231.00	92,935.00	1,51,166.00
36	RCL_UBA Project of Dr. Ranjit Prasad	-3,62,689.00	4,45,000.00	82,311.00
37	SERB-CRG Project of Dr. Sanjay & Dr. MA Hassan	-4,33,236.00	25,77,133.00	21,43,897.00
38	SERB -DST Project of Dr. Dulari Hansdah (Mech)	-86,000.00	18,00,000.00	17,14,000.00
39	SERB- DST Project of Prof. Karunesh Kumar Shulka	-	30,810.00	30,810.00
40	SERB Project of Dr. Ashok Kumar Mandal	-9,31,523.00	33,66,799.00	24,35,276.00
41	SERB PROJECT OF MAHENDRA KUMAR GUPTA(MEENAKSHI)	-6,55,395.00	7,84,485.00	1,29,090.00
42	SERC (DST) Project	-	5,76,713.00	5,76,713.00
43	DRDO Project of Dr. Sumit Kr Debnath	25,04,237.00	-	25,04,237.00
44	DST Project of Dr. Ashok Kumar Mandal	11,70,050.00	-	11,70,050.00
45	DST-SERB Project of Dr. Satish Kumar	22,63,318.00	-	22,63,318.00
46	SERB Project of Dr. Neha Agnihotri	12,21,280.00	-	12,21,280.00
47	SERB Project of Dr. Prashant Kumar Dept of ECE	11,40,270.00	-	11,40,270.00
48	SERB Project of Dr. S N Singh	9,38,000.00	-	9,38,000.00
49	SERB Project of Dr. Somenath Mondal Dept of Civil	28,83,180.00	-	28,83,180.00
50	SERB Project of Dr. Tapas Das (EDCC)	16,72,915.00	-	16,72,915.00
43	Inspire Faculty Fund			
	Op Balance	20,14,395.00	20,14,395.00	
	Add: Inspire Faculty Fund received during FY 2020-21	-		
	Less Recurring Exp.	-5,68,955.00		
	Less : Assets Purchase trf to Capital A/c	-		14,45,440.00
	TOTAL: A	-7,02,68,160.42	13,10,11,297.94	5,87,28,742.52
(B)	RESEARCH ACCOUNT	-	98,520.48	98,520.48
	TOTAL: B	-	98,520.48	98,520.48

S. Mondal
10/05/21
Accountant

Page 05

Asst. Registrar (F/A)
10/05/21



[ANNUAL REPORT 2020-21]
[NIT JAMSHEDPUR]

Amount in Rupees				
Sl.No	Particulars	Current Year 2020-21	Total up to 2019-20	Total up to 2020-21
(C)	OUT SIDE ACCOUNT			
1	PTPG Accounts	-5,49,370.80	5,49,370.80	-
2	CEP (Continuous Education Prog) Receipt	-1,48,57,142.99	3,30,38,922.29	1,81,81,779.30
3	TSG account closed and Balance trf to SAS	-1,86,273.00	7,48,936.00	5,62,663.00
4	University examination account	-10,03,702.00	57,73,625.00	47,69,923.00
5	Non-formal B.Sc. Engg. Account	-1,94,477.40	1,12,78,070.40	1,10,83,593.00
6	Short term course account	-55,800.00	1,44,956.00	89,156.00
7	Short term course continuing computer education	-2,41,871.00	3,44,163.00	1,02,292.00
8	EDC / Mushroom	-2,64,168.00	4,22,814.00	1,58,646.00
9	Pravah A/c closed and Balance trf to OJASS A/c	-	5,57,626.00	5,57,626.00
10	N.S.S	-	4,16,024.00	4,16,024.00
	TOTAL: C		5,32,74,507.49	3,59,21,702.30
(D)	LOAN ACCOUNT			
	Loan From HEFA	20,00,000.00	57,20,00,000.00	57,40,00,000.00
	TOTAL: D		57,20,00,000.00	57,40,00,000.00
	GRAND TOTAL (A+B+C+D)		75,63,84,325.91	66,87,48,965.30

Page 06

S.M. 10/01/21
Accountant

Asst. Registrar (F/A)
10/01/21

SCHEDULE 3 - CURRENT LIABILITIES & PROVISIONS

Particulars	Current Year 2020-21	Previous Year 2019-20
A. Current Liabilities		
(a) Scholarship	1,85,17,798.56	1,92,75,535.56
(b) Balance on GPF A/Cs	-	7,48,50,178.46
Add: Current year transaction	-	34,14,487.51
Less: CC PF A/c Closed & Balance Trf to Inst. A/c	-	-25,06,797.00
		7,57,57,868.97
(c) Balance on CGI A/c	4,29,648.00	4,18,159.00
	4,29,648.00	4,18,159.00
(d) Student Funds and others		
(i) Hall account		
Balance as per last year account	14,71,99,692.20	12,18,78,192.20
Add: Receipt during 2020-21	-	2,53,21,500.00
Less: Transfer to Hostel account for Exp	-	-
	14,71,99,692.20	14,71,99,692.20
(ii) Gym khana account		
Balance as per last year account	3,26,71,928.25	2,31,91,328.25
Add: Receipt during 2020-21	28,80,000.00	94,80,600.00
Less: Transfer to SAS account for Exp	-	-
	3,55,51,928.25	3,26,71,928.25
Total (d)	18,27,51,620.45	17,98,71,620.45
(e) Sundry Deposits (Debt & Deposit)		
(i) Caution money payable	4,35,10,146.00	3,85,66,846.00
(ii) Group saving link scheme (SGLI)	85,990.46	89,170.46
(iii) PFC Deposit of M/s EHA SHIVAM TECHNOLOGY	79,212.00	-
(iv) Earnest money deposits	12,23,391.55	19,16,441.55
(v) Almuti account	1,12,74,395.37	89,20,395.37
(vi) JREDA	6,46,625.00	6,46,625.00
(vii) Security Deposits	5,07,500.00	5,07,500.00
(viii) Dept hospitality fund	30,569.00	30,569.00
(ix) Employees welfare fund	11,405.00	9,756.00
(x) Professional Development Fund	15,63,205.00	12,68,804.00
(xi) Research & Development Fund	15,63,203.00	12,68,803.00
(xii) Retention Money	1,67,380.00	-
(xiii) TATA PROJECTS LIMITED	97,680.00	-
	6,07,60,702.38	5,32,24,910.38
(f) Statutory Payable		
(i) PF subscription	25,07,657.00	12,62,282.00
(ii) NPS subscription	7,01,766.00	6,95,809.00
(iii) PF loan	2,500.00	1,23,200.00
(iv) TDS payable	-2,94,346.57	55,99,330.57
(v) LIC claim received payable to Emp	7,28,880.00	3,19,387.00
(vi) LIC premium extra recovery	-	12,956.00
(vii) Professional tax	-	91,500.00
(viii) GST Payable		
CGST	-	-45,796.81
SGST	-	-45,796.81
IGST	-	-
(ix) TDS Under GST Scheme (CGST)	1,250.00	1,74,101.20
(x) TDS Under GST Scheme (IGST)	-	5,600.00
(xi) TDS Under GST Scheme (SGST)	1,250.00	1,74,101.20
	82,37,649.57	83,66,673.35
(g) Others Payables		
(i) Admission A/c	8,29,166.00	-
(ii) Medicare Scheme Receipts (Students)	3,36,310.00	27,973.00
(iii) Payable to CEP (Ranjit Prasad Adv)	-	1,02,100.00
(iv) LIC Premium Recovery	1,93,634.00	2,07,669.00
(v) TCC Society	28,69,366.00	26,43,682.00
(vi) Smt. Mini Majhi W/o Late Biram Majhi	10,000.00	10,000.00
	42,38,476.00	29,91,424.00

Page 07

S.M. 10/01/21
Accountant

Asst. Registrar (F/A)
10/01/21



[ANNUAL REPORT 2020-21]
[NIT JAMSHEDPUR]

Particulars		Current Year 2020-21		Previous Year 2019-20
(h) Gratuity Payable	11,68,217.00	11,68,217.00	5,73,520.00	5,73,520.00
(i) Sundry Creditors				
(i) Aarogyamm	-		88,513.00	
(ii) ASG Hospital Pvt. Ltd.	-		80,453.00	
(iii) Asim Navigation India Pvt.Ltd.	-		3,57,270.00	
(iv) City Medical	-		42,977.00	
(v) CITNET Services	-		2,47,446.00	
(vi) Cognitive Design Technology Pvt. Ltd.	-		11,23,500.00	
(vii) Dainik Vaitan Bhogi Karmachari Samiti	4,43,676.00		3,90,103.00	
(viii) Del Star Marketing	29,840.00		16,79,942.00	
(ix) HINDUSTAN MEDIA VENTURES LTD.	-		3,15,000.00	
(x) Jagran Prakashan Limited	-		34,560.00	
(xi) Jai Mata Di Travels	-		2,28,701.00	
(xii) Jusco Limited	99,002.00		99,002.00	
(xiii) Krishna Motels(Novanta)	-		30,055.00	
(xiv) Mani Medical	-		5,98,127.00	
(xv) MasterSoft ERP Solution Pvt Ltd.	-		6,78,500.00	
(xvi) Medica Hospital	-		2,06,400.00	
(xvii) Meditrina Hospitals Pvt. Ltd.	-		27,490.00	
(xviii) M/s Bennett Coleman & Co Ltd.	-		5,09,780.00	
(xix) Neutral Publishing House Ltd.	-		9,240.00	
(xx) NH Brahmanand Narayana Multispeciality Hospital	-		31,457.00	
(xxi)NSDL E-Governance Infrastructure Ltd.	-		4,078.00	
(xxii) P K Barman & Co.	1,47,500.00		2,95,000.00	
(xxiii) Raja Medical Stores	-		3,78,474.00	
(xxiv) Roots Corporation	-		14,443.00	
(xxv) S A Enterprises	-		67,950.00	
(xxvi) SHREE BALAJI MEDICALS	-		24,939.00	
(xxvii) Singhania Agarwal & Co.	3,30,400.00		3,30,400.00	
(xxviii) S.K.Network	-		56,640.00	
(xxix) Tata Main Hospital	-		21,489.00	
(xxx) Technocom	25,960.00		25,960.00	
(xxxi) Ace Infotexis Pvt. Ltd.	17,54,745.00		-	
(xxxii) AIMIL LTD	1,26,000.00		-	
(xxxiii) Eha Shivam Technologies	7,54,397.00		-	
(xxxiv) HYDRAULIC & ENGINEERING INSTRUMENTS	37,275.00		-	
(xxxv) Intellitest Solutions Pvt Ltd	7,10,640.00		-	
(xxxvi) Shiva Protection Force (P) Ltd.	19,13,660.00		-	
Total (i)		63,73,095.00		79,97,889.00
TOTAL (A)		28,24,77,206.96		34,84,77,600.71
B. Provisions:				
Arrear of Pension & Family Pension	4,44,65,307.00		4,44,65,307.00	
Electricity Charges Payable	12,82,315.00		14,88,597.00	
Examination Expenses	-		26,081.00	
Honorarium to Visiting Faculties & Others	-		14,000.00	
Institute Water Charges Payable	-		3,87,564.00	
Medical expenses	-		32,902.00	
Payable to Students (Fee Waiver)	-		6,86,17,978.00	
Pension payable	1,01,88,031.00		1,00,73,177.00	
Provision for Contribution to New Pension Scheme	9,82,527.00		9,74,139.00	
Salary Payable	2,40,48,037.00		2,43,46,264.00	
Security & Other Charges Payable	9,93,850.00		12,93,600.00	
Stipend to PG, Ph.D, & Other Students Payable	1,01,72,420.00		66,47,938.00	
Telephone Charges Payable	-		15,891.00	
Registration fee payable (SERB_Shashank Pandey)	13,000.00		-	
Provision for Gratuity (Actuarial Value)	17,44,27,112.00		-	
Provision for Leave Encashment (Actuarial Value)	18,22,54,544.00		-	
TOTAL (B)		44,88,27,143.00		15,83,83,438.00

S. Min...
Accountant

Page 08

Asst. Registrar (F/A)

(Handwritten Signature)
1/10/2021



[ANNUAL REPORT 2020-21]
[NIT JAMSHEDPUR]

Particulars		Current Year 2020-21		Previous Year 2019-20
C. Unutilised Grant Refundable to MHRD:				
(a) Plant Grant				
Balance at the beginning of the year	12,76,13,365.50		14,84,88,655.50	
Add: Capital Grant Receive during FY 2020-21	2,00,00,000.00		-	
Less: Payment to NIT Transit House	-3,50,000.00		-3,50,000.00	
Less: Payment for Capital Assets	-12,27,89,738.00		-2,05,25,290.00	
Total (a)		2,44,73,627.50		12,76,13,365.50
(b) Revenue Grant				
Balance at the beginning of the year	12,55,47,556.38		4,15,56,534.00	
Add: Revenue Grant Receive during FY 2020-21	78,18,81,834.00		94,30,55,847.00	
Less: Revenue Expenditure	-86,07,39,148.83		-85,90,64,824.62	
Total (b)		4,66,90,241.55		12,55,47,556.38
(c) Interest Refundable on Govt. Grant				
Balance at the beginning of the year	91,67,250.00			
Add: Interest earned during the year	80,91,460.00			
		1,72,58,710.00		91,67,250.00
TOTAL (C)		8,84,22,579.05		26,23,28,171.88
D. Short-Term Course/Wrkshop Fund				
(i) AICTE Sponsored ATAL Workshop	95,841.54		1,72,000.00	
(ii) Machine Vision-2020 (Shor-Term Course)	-		12,500.00	
(iii) Short Term Course- RTSM2019	-		64,500.00	
(iv) Short-Term Course RDSCCM-2019	36,703.00		59,000.00	
(v) Technica-2020	60,000.00		60,000.00	
(vi) AMBMS-2021	45,500.00		-	
(vii) AMIWRE-2020	37,490.00		-	
(ix) EPREC-2020	64,236.94		-	
(x) FIAM-2020	39,809.00		-	
(xi) GSGS-2020	9,338.00		-	
(xii) ICIA2020	10,955.00		-	
(xv) Material Next (Short-Term Programe)	49,983.00		-	
(xvi) NCECC-2020	39,000.00		-	
(xvii) NCMMM-2020	7,09,422.00		-	
(xviii) NCRASE-2020	4,500.00		-	
(xix) NCRWND-2020	14,500.00		-	
(xx) RDMPMC-2020	25,000.00		-	
TOTAL (D)		12,42,278.48		3,68,000.00
GRAND TOTAL (A+B+C+D)		82,09,69,207.49		76,95,57,210.59

S. Minid
10/5/21
Accountant

Asst. Registrar (F/A)
10/05/21



SCHEDULE 4 - FIXED ASSETS (Up to 31.03.2014)

S.No	ASSET HEADS	GROSS BLOCK					DEPRECIATION FOR THE YEAR 2020-21					NET BLOCK	
		OP. BAL 01.04.2020	ADDITIONS	DEDUCTIONS	CL. BALANCE	RATE OF DEPRECIATION (%)	DEP OPENING BALANCE	DEPRECIATION FOR THE YEAR	DEDUCTIONS/ADJUSTMENTS	TOTAL DEPRECIATION	31.03.2021	31.03.2020	
1	Land	-	-	-	-	0.00%	-	-	-	-	-	-	
2	Site Development	-	-	-	-	0.00%	-	-	-	-	-	-	
3	Buildings	22,75,26,178.32	-	-	22,75,26,178.32	2.00%	11,07,18,533.00	-	-	11,07,18,533.00	11,06,07,645.32	22,75,26,178.32	
4	Roads & Bridges	1,68,92,590.49	-	-	1,68,92,590.49	2.00%	94,25,096.00	-	-	94,25,096.00	74,67,494.49	1,68,92,590.49	
5	Tubewells and Water Supply	1,88,170.75	-	-	1,88,170.75	2.00%	34,687.00	-	-	34,687.00	1,53,483.75	1,88,170.75	
6	Sewerage & Drainage	-	-	-	-	2.00%	-	-	-	-	-	-	
7	Electrical Installation & Equipment	2,20,23,036.76	-	-	2,20,23,036.76	5.00%	1,81,10,480.00	-	-	1,81,10,480.00	39,12,556.76	2,20,23,036.76	
8	Plant & Machinery	1,73,24,159.67	-	-	1,73,24,159.67	5.00%	1,31,96,439.00	-	-	1,31,96,439.00	41,25,720.67	1,73,24,159.67	
9	Scientific & Laboratory Equipment	7,78,71,212.87	-	-	7,78,71,212.87	8.00%	7,23,02,343.00	-	-	7,23,02,343.00	55,68,869.87	7,78,71,212.87	
10	Office Equipment	45,30,372.29	-	-	45,30,372.29	7.50%	43,49,981.00	-	-	43,49,981.00	1,80,391.29	45,30,372.29	
11	Audio Visual Equipment	41,11,764.67	-	-	41,11,764.67	7.50%	32,23,840.00	-	-	32,23,840.00	8,87,924.67	41,11,764.67	
12	Computers & Peripherals	9,67,35,804.64	-	-	9,67,35,804.64	20.00%	9,67,35,804.64	-	-	9,67,35,804.64	-	9,67,35,804.64	
13	Furniture Fixtures & Fittings	3,09,78,244.48	-	-	3,09,78,244.48	7.50%	2,92,29,106.00	-	-	2,92,29,106.00	17,49,138.48	3,09,78,244.48	
14	Vehicles	40,50,745.47	-	-	40,50,745.47	10.00%	40,50,745.47	-	-	40,50,745.47	-	40,50,745.47	
15	Lib. Books & Scientific Journals	2,18,22,193.96	-	-	2,18,22,193.96	10.00%	2,12,67,551.00	-	-	2,12,67,551.00	5,54,642.96	2,18,22,193.96	
16	Small Value Assets	3,57,070.48	-	-	3,57,070.48	100.00%	3,57,070.48	-	-	3,57,070.48	-	3,57,070.48	
17	Other Assets	1,58,620.84	-	-	1,58,620.84	100.00%	1,58,620.84	-	-	1,58,620.84	-	1,58,620.84	
TOTAL (A)		52,45,70,165.69	-	-	52,45,70,165.69		38,31,62,297.43	-	-	38,31,62,297.43	14,14,07,868.26	52,45,70,165.69	
18	Capital Work in Progress (B)	-	-	-	-	-	-	-	-	-	-	-	
S.NO	INTANGIBLE ASSETS	OP. BAL 01.04.2020	ADDITIONS	DEDUCTIONS	CL. BALANCE	RATE OF DEPRECIATION (%)	DEP OPENING BALANCE	AMORTISATION FOR THE YEAR	DEDUCTIONS/ADJUSTMENTS	TOTAL AMORTIZATION/ADJUSTMENTS	31.03.2021	31.03.2020	
19	Computer Software	1,97,09,578.00	-	-	1,97,09,578.00	40.00%	1,97,09,578.00	-	-	1,97,09,578.00	-	1,97,09,578.00	
20	E-Journals	-	-	-	-	40.00%	-	-	-	-	-	-	
21	Patents	-	-	-	-	9 YEARS	-	-	-	-	-	-	
TOTAL (C)		1,97,09,578.00	-	-	1,97,09,578.00		-	1,97,09,578.00	-	1,97,09,578.00	-	1,97,09,578.00	
GRAND TOTAL (A+B+C)		54,42,79,743.69	-	-	54,42,79,743.69		-	40,28,71,875.43	-	40,28,71,875.43	14,14,07,868.26	54,42,79,743.69	

S. N. Saha
Accountant

Asst. Registrar (A/P)
10/10/21



SCHEDULE 4(i) - FIXED ASSETS (Plant/TEQIP)

S.No	ASSET HEADS	GROSS BLOCK				DEPRECIATION FOR THE YEAR 2020-21				NET BLOCK		
		OP. BAL 01.04.2020	ADDITIONS	DEDUCTIONS	CL. BALANCE	RATE OF DEPRECIATION (%)	DEP OPENING BALANCE	DEPRECIATION FOR THE YEAR	DEDUCTIONS/ADJUSTMENTS	TOTAL DEPRECIATION	31.03.2021	31.03.2020
1	Land	21,13,47,700.00	-	-	21,13,47,700.00	0.00%	-	-	-	-	21,13,47,700.00	21,13,47,700.00
2	Site Development	-	-	-	-	0.00%	-	-	-	-	-	-
3	Buildings	1,97,26,93,062.00	4,03,53,627.00	-	2,01,30,46,689.00	2.00%	9,85,27,602.16	4,02,60,933.78	-	13,87,88,535.94	1,87,42,56,153.04	1,87,41,56,459.84
4	Roads & Bridges	9,25,06,091.00	-	-	9,25,06,091.00	2.00%	38,52,929.76	18,50,121.82	-	57,03,051.58	8,86,03,009.42	8,86,53,161.24
5	Tubewells and Water Supply	1,25,96,947.00	90,24,420.00	-	2,16,21,367.00	2.00%	11,65,709.22	4,32,427.34	-	15,98,136.56	2,00,23,230.44	1,14,31,237.78
6	Sewerage & Drainage	2,23,72,772.00	-	-	2,23,72,772.00	2.00%	10,31,566.56	4,47,455.44	-	14,79,022.00	2,08,93,750.00	2,13,41,205.44
7	Electrical Installation & Equipment	8,05,28,302.00	1,03,34,349.00	-	9,08,62,651.00	5.00%	1,20,53,735.15	45,43,132.55	-	1,65,96,867.70	7,42,65,783.30	6,94,74,566.85
8	Plant & Machinery	34,98,902.00	1,14,89,087.00	-	1,49,87,989.00	5.00%	4,70,927.75	7,49,399.95	-	12,20,327.70	1,37,67,671.30	30,27,974.25
9	Scientific & Laboratory Equipment	6,46,50,204.50	1,17,44,597.00	-	7,63,94,801.50	8.00%	2,23,18,274.32	61,11,584.12	-	2,84,29,858.44	4,79,64,943.06	4,23,31,930.18
10	Office Equipment	27,17,612.00	1,45,795.00	-	28,63,407.00	7.50%	11,30,404.73	2,14,755.53	-	13,45,160.26	15,18,246.75	15,87,207.27
11	Audio Visual Equipment	17,81,023.00	13,36,681.00	-	31,17,706.00	7.50%	3,47,430.38	2,33,627.95	-	5,81,258.33	25,36,447.67	14,33,594.63
12	Computers & Peripherals	4,67,97,032.00	1,74,40,950.00	-	6,42,37,982.00	20.00%	4,11,47,960.00	49,00,458.20	-	4,60,48,418.20	1,81,89,563.80	-
13	Furniture Fixtures & Fittings	9,38,48,942.00	7,74,577.00	-	10,16,03,519.00	7.50%	2,27,42,862.11	70,96,763.93	-	2,98,39,626.04	6,47,83,892.87	7,11,06,079.90
14	Vehicles	35,81,553.00	-	-	35,81,553.00	10.00%	11,75,278.80	3,58,155.30	-	15,33,434.10	20,48,118.90	24,06,274.20
15	Lib. Books & Scientific Journals	3,69,89,543.50	15,17,008.00	-	3,85,06,551.50	10.00%	1,21,70,896.80	38,50,655.15	-	1,60,21,551.95	2,24,84,999.55	2,48,18,646.70
16	Small Value Assets	-	-	-	-	100.00%	-	-	-	-	-	-
17	Other Assets	-	-	-	-	0.00%	-	-	-	-	-	-
TOTAL (A)		2,64,59,09,888.00	10,41,61,101.00	-	2,75,00,70,789.00		21,81,35,577.74	7,10,49,671.05	-	28,91,85,248.79	2,46,08,85,540.19	2,42,21,25,038.25
18	Capital Work in Progress (B)	1,34,50,61,127.00	49,22,04,084.00	7,94,72,069.00	1,75,77,93,142.00	-	-	-	-	-	1,75,77,93,142.00	1,34,50,61,127.00

S.NO	INTANGIBLE ASSETS	OP. BAL 01.04.2020	ADDITIONS	DEDUCTIONS	CL. BALANCE	RATE OF DEPRECIATION (%)	DEP OPENING BALANCE	AMORTISATION FOR THE YEAR	DEDUCTIONS/ADJUSTMENTS	TOTAL AMORTIZATION/ADJUSTMENTS	31.03.2021	31.03.2020
19	Computer Software	92,75,362.00	41,94,919.00	-	1,34,70,281.00	40.00%	30,67,487.00	41,61,117.60	-	72,28,604.60	37,58,526.40	33,71,525.00
20	E-Journals	-	40,89,069.00	-	40,89,069.00	40.00%	-	16,35,627.60	-	16,35,627.60	24,53,441.40	-
21	Patents	-	-	-	-	9 YEARS	-	-	-	-	-	-
TOTAL (C)		92,75,362.00	82,83,988.00	-	1,75,59,350.00		30,67,487.00	57,96,745.20	-	88,64,232.20	62,11,967.80	33,71,525.00
GRAND TOTAL (A+B+C)		4,00,02,46,177.00	60,46,49,173.00	7,94,72,069.00	4,52,54,23,281.00		22,12,03,064.74	7,68,46,416.26	-	29,80,49,480.99	4,22,48,90,649.99	3,77,05,57,690.25

(Signature)
Asst. Registrar (V/A)

(Signature)
Accountant



SCHEDULE 4(I/A) - FIXED ASSETS (Plan)		DEPRECIATION FOR THE YEAR 2020-21										NET BLOCK	
S.NO	ASSET HEADS	GROSS BLOCK					DEPRECIATION FOR THE YEAR 2020-21					NET BLOCK	
		OP. BAL 01.04.2020	ADDITIONS	DEDUCTIONS	CL. BALANCE	RATE OF DEPRECIATION (%)	DEP OPENING BALANCE	DEPRECIATION FOR THE YEAR	DEDUCTIONS/ ADJUSTMENTS	TOTAL DEPRECIATION	31.03.2021	31.03.2020	
1	Land	21,13,47,700.00	-	-	21,13,47,700.00	0.00%	-	-	-	-	21,13,47,700.00	21,13,47,700.00	-
2	Site Development	-	-	-	-	0.00%	-	-	-	-	-	-	-
3	Buildings	1,97,26,93,062.00	4,03,53,627.00	-	2,01,30,46,689.00	2.00%	9,85,27,602.16	4,02,60,933.78	-	13,87,88,536.94	1,87,42,56,153.06	1,87,41,65,458.84	-
4	Roads & Bridges	9,25,06,091.00	-	-	9,25,06,091.00	2.00%	38,52,929.76	18,50,121.82	-	57,03,051.58	8,68,03,039.42	8,66,53,161.24	-
5	Tubewells and Water Supply	1,25,96,947.00	90,24,420.00	-	2,16,21,367.00	2.00%	11,65,709.22	4,32,427.34	-	15,98,136.56	2,00,23,230.44	1,14,31,237.78	-
6	Sewerage & Drainage	2,23,72,772.00	-	-	2,23,72,772.00	2.00%	10,31,566.56	4,47,455.44	-	14,79,022.00	2,08,93,750.00	2,13,41,205.44	-
7	Electrical Installation & Equipment	8,05,28,302.00	1,01,90,363.00	-	9,07,18,665.00	5.00%	1,20,53,735.15	45,35,933.25	-	1,65,89,668.40	7,41,28,996.60	6,84,74,566.85	-
8	Plant & Machinery	10,23,078.00	75,97,797.00	-	86,20,875.00	8.00%	2,40,611.55	4,31,043.75	-	6,71,655.30	79,49,219.70	7,82,466.45	-
9	Scientific & Laboratory Equipment	62,76,932.50	52,12,775.00	-	1,14,89,707.50	8.00%	8,11,602.00	9,19,176.60	-	17,30,778.60	97,56,928.90	54,85,330.50	-
10	Office Equipment	6,10,914.00	1,45,795.00	-	7,56,709.00	7.50%	1,82,390.83	56,753.18	-	2,39,143.81	5,17,565.20	4,28,523.37	-
11	Audio Visual Equipment	17,81,025.00	13,36,691.00	-	31,17,706.00	7.50%	3,47,430.38	2,33,827.95	-	5,81,258.33	25,36,447.67	14,33,594.63	-
12	Computers & Peripherals	3,74,48,201.00	1,58,51,892.00	-	5,33,00,093.00	20.00%	3,29,36,201.80	42,98,378.40	-	3,72,34,580.20	1,60,65,512.80	-	-
13	Furniture Fixtures & Fittings	9,00,48,691.00	6,55,169.00	-	9,07,03,860.00	7.50%	2,11,72,178.65	68,02,789.50	-	2,79,74,968.15	6,27,28,891.85	6,88,76,512.35	-
14	Vehicles	35,81,553.00	-	-	35,81,553.00	10.00%	11,75,278.80	3,56,155.30	-	15,33,434.10	20,48,118.90	24,06,274.20	-
15	Lib. Books & Scientific Journals	3,69,89,543.50	15,17,008.00	-	3,85,06,551.50	10.00%	1,21,70,896.80	38,50,655.15	-	1,60,21,551.95	2,24,84,999.55	2,48,18,646.70	-
16	Small Value Assets	-	-	-	-	100.00%	-	-	-	-	-	-	-
17	Other Assets	-	-	-	-	0.00%	-	-	-	-	-	-	-
	TOTAL (A)	2,56,98,04,812.00	9,18,85,527.00	-	2,66,16,90,339.00		18,56,66,133.46	6,44,77,651.46	-	25,01,45,784.92	2,41,15,44,554.09	2,37,96,24,679.35	-
18	Capital Work In Progress (B)	1,34,50,61,127.00	49,22,04,084.00	7,94,72,069.00	1,75,77,93,142.00	-	-	-	-	-	1,75,77,93,142.00	1,34,50,61,127.00	-
	TOTAL (A+B)	3,91,48,65,939.00	9,68,09,611.00	7,94,72,069.00	3,43,54,832.00		18,56,66,133.46	6,44,77,651.46	-	25,01,45,784.92	2,41,15,44,554.09	2,37,96,24,679.35	-
	TOTAL (A+B+C)	3,91,48,65,939.00	9,68,09,611.00	7,94,72,069.00	3,43,54,832.00		18,56,66,133.46	6,44,77,651.46	-	25,01,45,784.92	2,41,15,44,554.09	2,37,96,24,679.35	-
S.NO	INTANGIBLE ASSETS	OP. BAL 01.04.2020	ADDITIONS	DEDUCTIONS	CL. BALANCE	RATE OF DEPRECIATION (%)	DEP OPENING BALANCE	AMORTISATION FOR THE YEAR	DEDUCTIONS/ ADJUSTMENTS	TOTAL AMORTIZATION/ ADJUSTMENTS	31.03.2021	31.03.2020	
19	Computer Software	21,84,487.00	31,45,943.00	-	53,30,430.00	40.00%	21,84,487.00	12,58,377.20	-	34,42,864.20	18,87,565.80	-	
20	E-Journals	-	40,89,069.00	-	40,89,069.00	40.00%	-	16,35,627.60	-	16,35,627.60	24,53,441.40	-	
21	Patents	-	-	-	-	9 YEARS	-	-	-	-	-	-	
	TOTAL (C)	21,84,487.00	72,35,012.00	-	94,19,499.00		21,84,487.00	28,94,004.80	-	50,78,491.80	43,41,007.20	-	
	GRAND TOTAL (A+B+C)	3,91,70,50,426.00	59,13,24,623.00	7,94,72,069.00	4,42,89,02,980.00		18,78,52,620.46	6,73,71,656.26	0.00	25,52,24,276.72	4,17,36,78,703.29	3,72,46,85,806.35	

S. N. D. T. M.
Accountant

Asst. Registrar (F/A)



SCHEDULE 4(i)B - FIXED ASSETS OTHERS (TEQIP/Projects)

S.NO	ASSET HEADS	GROSS BLOCK				DEPRECIATION FOR THE YEAR 2020-21				Amounts in Rupees NET BLOCK		
		OP. BAL 01.04.2020	ADDITIONS	DEDUCTIONS	CL. BALANCE	RATE OF DEPRECIATION (%)	DEP OPENING BALANCE	DEPRECIATION FOR THE YEAR	DEDUCTIONS/ ADJUSTMENTS	TOTAL DEPRECIATION	31.03.2021	31.03.2020
1	Land	-	-	-	-	0.00%	-	-	-	-	-	-
2	Site Development	-	-	-	-	0.00%	-	-	-	-	-	-
3	Buildings	-	-	-	-	2.00%	-	-	-	-	-	-
4	Roads & Bridges	-	-	-	-	2.00%	-	-	-	-	-	-
5	Tubewells and Water Supply	-	-	-	-	2.00%	-	-	-	-	-	-
6	Sewerage & Drainage	-	-	-	-	2.00%	-	-	-	-	-	-
7	Electrical Installation & Equipment	-	1,43,986.00	-	1,43,986.00	5.00%	-	7,199.30	-	7,199.30	1,36,786.70	-
8	Plant & Machinery	24,75,824.00	38,91,300.00	-	63,67,124.00	5.00%	2,30,316.20	3,18,356.20	-	5,48,672.40	58,18,451.60	22,45,507.80
9	Scientific & Laboratory Equipment	5,83,73,272.00	65,31,822.00	-	6,49,05,094.00	8.00%	2,15,06,672.32	51,92,407.52	-	2,66,99,079.84	3,82,06,014.16	3,86,66,599.68
10	Office Equipment	21,06,698.00	-	-	21,06,698.00	7.50%	9,48,014.10	1,58,002.35	-	11,06,016.45	10,00,681.55	11,58,683.90
11	Audio Visual Equipment	-	-	-	-	7.50%	-	-	-	-	-	-
12	Computers & Peripherals	93,48,831.00	15,89,058.00	-	1,09,37,889.00	20.00%	82,11,758.20	6,02,079.80	-	88,13,838.00	21,24,051.00	-
13	Furniture Fixtures & Fittings	38,00,251.00	1,19,408.00	-	39,19,659.00	7.50%	15,70,683.46	2,93,974.43	-	18,64,657.89	20,55,001.12	22,29,567.55
14	Vehicles	-	-	-	-	10.00%	-	-	-	-	-	-
15	Lib. Books & Scientific Journals	-	-	-	-	10.00%	-	-	-	-	-	-
16	Small Value Assets	-	-	-	-	100.00%	-	-	-	-	-	-
17	Other Assets	-	-	-	-	0.00%	-	-	-	-	-	-
TOTAL (A)		7,61,04,876.00	1,22,75,574.00	-	8,83,80,450.00		3,24,67,444.28	65,72,019.60	-	3,90,39,463.88	4,93,40,966.13	4,25,00,358.93

18	Capital Work in Progress (B)	-	-	-	-	-	-	-	-	-	-	-
----	------------------------------	---	---	---	---	---	---	---	---	---	---	---

S.NO	INTANGIBLE ASSETS	OP. BAL 01.04.2020	ADDITIONS	DEDUCTIONS	CL. BALANCE	RATE OF DEPRECIATION (%)	DEP OPENING BALANCE	AMORTISATION FOR THE YEAR	DEDUCTIONS/ ADJUSTMENTS	TOTAL DEPRECIATION	31.03.2021	31.03.2020
19	Computer Software	70,90,875.00	10,48,976.00	-	81,39,851.00	40.00%	33,66,150.00	29,02,740.40	-	62,68,890.40	18,70,960.60	33,71,525.00
20	E-Journals	-	-	-	-	40.00%	-	-	-	-	-	-
21	Patents	-	-	-	-	9 YEARS	-	-	-	-	-	-
TOTAL (C)		70,90,875.00	10,48,976.00	-	81,39,851.00		33,66,150.00	29,02,740.40	-	62,68,890.40	18,70,960.60	33,71,525.00
GRAND TOTAL (A+B+C)		8,31,95,751.00	1,33,24,550.00	-	9,65,20,301.00		3,58,33,594.28	94,74,760.00	-	4,53,08,354.28	5,12,11,946.73	4,58,71,883.93

Accountant

Asst. Registrar (F/A)



[ANNUAL REPORT 2020-21]
[NIT JAMSHEDPUR]

SCHEDULE 5 - INVESTMENTS

		Amount in Rupees			
Sl.no	Particulars	Current Year 2020-21		Previous Year 2019-20	
1.	FD Corpus Fund (10678502461)	40,49,488.00		40,49,488.00	
2.	FD Corpus Fund (10678502472)	45,75,555.00		42,77,204.00	
3.	FD Corpus Fund (10678502483)	20,60,144.00		19,22,029.00	
4.	FD Corpus Fund (35665745370)	-		10,00,17,973.00	
5.	FD Institute Dev Fund (35629242085)	5,15,52,626.00		4,96,48,220.00	
6.	FD Maintenance Fund (35628908589)	10,48,125.00		9,98,385.00	
7.	FD Staff Dev Fund (35629548557)	27,50,519.00		26,19,990.00	
8.	FD Development Fund (35750935611)	1,20,13,266.00		1,20,13,266.00	
9.	FD-SBI (34029609053)	4,65,464.00		4,12,232.00	
TOTAL			7,85,15,187.00		17,59,58,787.00

SCHEDULE 6 - INVESTMENTS- OTHERS

		Amount in Rupees			
Sl.no	Particulars	Current Year 2020-21		Previous Year 2019-20	
TOTAL			-		-

SCHEDULE -7 Current Assets

		Amount in Rupees			
Sl.no	Particulars	Current Year 2020-21		Previous Year 2019-20	
(a)	Bank balance with schedule bank				
1.	Canara Bank - 28319	12,16,252.00		11,80,359.00	
2.	Cont. Edu Prog(CEP 10678399463)	44,80,591.29		2,05,22,774.29	
3.	Edu Loan A/c (34620592283)	1,77,20,490.70		5,47,641.00	
4.	ICICI Bank CA (240605000157)	-		5,00,000.00	
5.	PFMS-SBI (38610513962)	2,22,154.50		75,738.50	
6.	SBI Bank(Net Banking)- 37806905911	1,57,266.62		1,57,915.62	
7.	SBI FORIEGN REMITANCE AC NO. 37969125197	92,45,001.85		49,55,447.47	
8.	SBI Group Insurance A/c 30181765720	4,29,648.00		4,18,159.00	
9.	SBI Online Student Fee. A/c -33117999641	48,70,27,257.68		17,65,58,584.28	
10.	SBI Saving A/c -10678399349	23,36,17,234.30		38,55,08,835.10	
11.	SBI Scholarship A/c (34620603401)	84,45,489.50		87,94,780.50	
12.	SBI Spon.Res Project Grant - 10678399441	4,29,98,973.31		3,94,11,147.81	
13.	HDFC SB A/c. 50100374819962	10,76,18,282.00			
Total (a)			91,31,78,641.75		63,86,31,382.57
(b)	Accrued Income				
1.	Interest accrued on Term Deposits	8,83,26,035.95		7,98,27,439.00	
2.	Interest Accrued on FD (Corpus Fund)	14,24,150.42		10,29,051.00	
3.	Interest Accrued on FD (Institute Dev Fund)	20,12,057.09		11,95,155.00	
4.	Interest Accrued on FD (Maintenance Fund)	-		-	
5.	Interest Accrued on FD (Staff Dev Fund)	-		-	
6.	Interest Accrued on FD (CEP)	10,96,162.01		-	
Total (b)			9,28,58,405.47		8,20,51,645.00
(c)	T.D.S. Recoverable from I.T. Dept.				
1.	T.D.S. (2012-13)	11,236.00		11,236.00	
2.	T.D.S. (2013-14)	13,84,183.00		13,84,183.00	
3.	T.D.S. (2014-15)	15,50,650.00		15,50,650.00	
4.	T.D.S. (2015-16)	17,01,004.00		17,01,004.00	
5.	T.D.S. (2016-17)	54,98,366.00		54,98,366.00	
7.	T.D.S. (2018-19)	-		55,98,540.00	
8.	T.D.S. (2019-20)	-		79,36,918.00	
	T.D.S. (2020-21)	69,41,966.65		-	
Total (c)			1,70,87,405.65		2,36,80,897.00

Page 14

S.M. J
10/5/21
Accountant

Asst. Registrar (F/A)
K/50/01



[ANNUAL REPORT 2020-21]
[NIT JAMSHEDPUR]

Sl.no	Particulars	Current Year 2020-21		Previous Year 2019-20	
(d)	Fixed Deposits (Current Assets)				
1.	FD with CD PART TIME PG PROG (10678492281)	22,34,046.00		22,34,046.00	
2.	FD with CD PART TIME PG PROG (33045008946)	36,99,557.00		36,99,557.00	
3.	FD with CD PART TIME PG PROG (33045165161)	23,15,451.00		23,15,451.00	
4.	FD with CD PART TIME PG PROG (33045169960)	39,35,540.00		39,35,540.00	
5.	FD Debt & Depo Fund Inv (35629244559)	2,23,28,798.00		2,15,03,949.00	
6.	FD Depreciation Fund Inv (35629093277)	10,54,387.00		10,04,350.00	
7.	FD IRG Fund Investment (35629167344)	13,30,71,172.00		12,92,88,838.00	
8.	FD Non Formal Bsc Engg (10678492452)	29,92,087.00		29,92,087.00	
9.	FD Non Formal Bsc Engg (10678492463)	12,41,665.00		12,41,665.00	
10.	FD Non Formal Bsc Engg (30047312071)	31,53,904.00		29,67,604.00	
11.	FD Non Formal Bsc Engg(30167642015)	31,53,703.00		29,67,415.00	
12.	FD Non Formal Bsc Engg (30266098704)	70,81,577.00		70,81,577.00	
13.	FD SBI (37942480662)	5,64,65,788.00		5,00,00,000.00	
14.	FD SBI (37942484442)	5,64,65,788.00		5,00,00,000.00	
15.	FD SBI (37942484566)	5,64,65,788.00		5,00,00,000.00	
16.	FD SBI (37942484612)	5,64,65,788.00		5,00,00,000.00	
17.	FD SBI (37942484667)	5,64,65,788.00		5,00,00,000.00	
18.	FD SBI (37942484758)	5,64,65,788.00		5,00,00,000.00	
19.	FD SBI (37942484849)	5,64,65,788.00		5,00,00,000.00	
20.	FD SBI (37942484963)	5,64,65,788.00		5,00,00,000.00	
21.	FD SBI (37942496854)	5,64,65,788.00		5,00,00,000.00	
22.	FD SBI (37942496912)	5,64,65,788.00		5,00,00,000.00	
23.	FD SBI (38507165819)	1,99,00,000.00		1,99,00,000.00	
24.	FD SBI 38507636416	1,99,00,000.00		1,99,00,000.00	
25.	FD SBI (38507973008)	1,99,00,000.00		1,99,00,000.00	
26.	FD SBI (38507974783)	1,99,00,000.00		1,99,00,000.00	
27.	FD SBI (38507994483)	1,99,00,000.00		1,99,00,000.00	
28.	FD SBI (38507995680)	1,99,00,000.00		1,99,00,000.00	
29.	FD SBI (38507997417)	1,99,00,000.00		1,99,00,000.00	
30.	FD SBI (38507998375)	1,99,00,000.00		1,99,00,000.00	
31.	FD SBI (38507999866)	1,99,00,000.00		1,99,00,000.00	
32.	FD SBI (38508006108)	1,99,00,000.00		1,99,00,000.00	
33.	FD SBI (38508007907)	1,99,00,000.00		1,99,00,000.00	
34.	FD SBI (38508009096)	1,99,00,000.00		1,99,00,000.00	
35.	FD SBI (38508010193)	1,99,00,000.00		1,99,00,000.00	
36.	FD SBI (38508011153)	1,99,00,000.00		1,99,00,000.00	
37.	FD SBI (38508011992)	1,99,00,000.00		1,99,00,000.00	
38.	FD SBI (39059964414)	-		1,99,99,999.00	
39.	FD SBI (39060060415)	-		1,99,99,999.00	
40.	FD SBI (39060060754)	-		1,99,99,999.00	
41.	FD SBI (39060061168)	-		1,99,99,999.00	
42.	FD SBI (39060061725)	-		1,99,99,999.00	
43.	FD SBI (39060062139)	-		1,99,99,999.00	
44.	FD SBI (39060062457)	-		1,99,99,999.00	
45.	FD SBI (39060063971)	-		1,99,99,999.00	
46.	FD SBI (39060064341)	-		1,99,99,999.00	
47.	FD SBI (39060064817)	-		1,99,99,999.00	
48.	FD University Exam A/c (35577107856)	9,35,392.00		9,35,392.00	
49.	FD University Exam A/c (35577227448)	1,86,726.00		1,86,726.00	
50.	FD University Exam A/c (35577229423)	13,67,113.00		13,67,113.00	
51.	FD University Exam A/c (35578548653)	78,311.00		78,311.00	
52.	FD University Exam A/c (35578577151)	2,80,718.00		2,80,718.00	
53.	FD with Sbi A/c No 10678492178	26,85,003.00		25,26,400.00	
54.	FD with Sbi A/c No 10678492203	38,24,582.00		35,98,665.00	
55.	FD with Sbi A/c No 30047409517	45,89,509.00		43,18,407.00	
56.	FD with Sbi A/c No 30047412009	95,61,506.00		89,96,709.00	
57.	FD with Sbi A/c No 30047412474	56,14,621.00		52,82,965.00	
58.	FD with Sbi A/c No 30256203370	8,12,20,674.00		7,78,35,624.00	
59.	FD with Sbi A/c No 31564640109 (33839672421)	1,95,53,018.00		1,95,53,018.00	
60.	FD with Sbi A/c No 33024146927	1,54,99,820.00		1,38,24,173.00	
61.	FD with Sbi A/c No 35879516447	5,64,68,724.00		5,44,39,394.00	
	Total (e)		1,25,12,85,484.00		1,37,29,55,684.00



Sl.no	Particulars	Current Year 2020-21		Previous Year 2019-20	
(e)	Other Receivables (Current Assets)				
2.	CHABBRA ASSOCIATES	-		1,847.88	
4.	IIIT Ranchi	97,33,352.00		97,33,352.00	
6.	Medical Policy for Student (Receivable)	11,68,080.00		11,68,080.00	
7.	M/s Eagle Infra Limited	14,160.00		14,160.00	
8.	GPF Bank A/c-	-		7,57,57,868.97	
10.	Tax on Advance	15,102.00		15,102.00	
11.	Receivable From SERB	3,12,028.00		-	
12.	TDS-GST Receivable (CGST)	4,990.06		-	
13.	TDS-GST Receivable (SGST)	4,990.06		-	
14.	Electricity Charges Recpverable	4,64,077.36			
	Total (f)		1,17,16,779.48		8,66,90,410.85
	GRANT TOTAL		2,28,61,26,716.35		2,20,40,10,019.42

Page 16

S. Naidu
15/05/21
Accountant

Ass. Registrar (F/A)
15/05/21

SCHEDULE 8 - LOANS, ADVANCES & DEPOSITS

Amount in Rupees

Particulars	Current Year 2020-21		Previous Year 2019-20	
A. Advances				
a.) Out of Capital fund				
i). O.B. as on 01.04.2020	5,36,28,473.39		5,36,86,610.39	
ii). Add Paid during the year 2020-21	-		-	
iii). Less Adjusted during 2020-21	-37,000.00		-58,137.00	
Advance outstanding for more than 6 months		5,35,91,473.39		5,36,28,473.39
Advance outstanding for less than 6 months		-		-
Total		5,35,91,473.39		5,36,28,473.39
b.) Out of Revenue fund				
i). O.B. as on 01.04.2020	2,36,75,926.30		2,51,76,478.30	
ii). Add Paid during the year 2020-21	8,07,782.00		26,36,409.00	
iii). Less Recovered during 2020-21	-26,94,107.00		-41,36,961.00	
Advance outstanding for more than 6 months		2,17,89,601.30		2,19,68,568.30
Advance outstanding for less than 6 months		-		17,07,358.00
Total		2,17,89,601.30		2,36,75,926.30
c.) Advances to CPWD				
i. Capital Advance				
i). O.B. as on 01.04.2020	34,10,32,409.00		60,32,78,799.00	
ii). Add Paid during the year 2020-21	18,30,66,922.00		22,16,42,268.00	
iii). Less Adjusted during 2020-21	-		-	
iv). Less trf to Capital Work in progress	-46,89,39,017.00		-48,38,88,658.00	
		5,51,60,314.00		34,10,32,409.00
i. Revenue Advance				
i). O.B. as on 01.04.2020	3,07,47,167.00		47,80,802.00	
ii). Add Paid during the year 2020-21	1,60,50,605.00		2,99,00,407.00	
iii). Less Adjusted during 2020-21	-		-	
iv). Less trf to Capital Work in progress	-2,32,65,067.00		-39,34,042.00	
		2,35,32,705.00		3,07,47,167.00
d.) Security Deposit to HEFA				
	5,19,82,723.22		4,98,92,273.00	
Add: During the year	-		20,000.00	
Add: Interest received	25,52,702.00		23,00,500.22	
Less: TDS Receivable	-1,91,452.65		-2,30,050.00	
		5,43,43,972.57		5,19,82,723.22
TOTAL		20,84,18,066.26		50,10,66,698.91

Page 17

S. Naidu
15/05/21
Accountant

Ass. Registrar (F/A)
15/05/21



[ANNUAL REPORT 2020-21]
[NIT JAMSHEDPUR]

SCHEDULE 9 - ACADEMIC RECEIPTS

Particulars	Amount in Rupees	
	Current Year 2020-21	Previous Year 2019-20
A. Academic		
1. Tuition fee	18,17,15,499.03	16,44,04,357.71
2. Library Fee	1,32,28,000.00	1,42,40,000.00
3. Admission/Processing Fee inst Cont	5,78,150.00	5,08,743.00
4. PhD Thesis Fee	60,000.00	55,000.00
	19,55,81,649.03	17,92,08,100.71
B. Examinations		
1. Examination Fee	29,31,000.00	35,49,500.00
2. Degree Fee	8,76,000.00	4,77,000.00
3. Migration Fee	76,200.00	86,300.00
	38,83,200.00	41,12,800.00
C. Other Fee		
1. Fine/Misc Fee	1,38,700.00	18,31,095.38
2. Medical & Insurance Fee	97,250.00	4,33,100.00
3. Bus Charges (Transportation Fee)	11,22,000.00	71,21,000.00
4. E Campus Fee	1,36,04,000.00	1,43,66,000.00
5. Training & Placement Fee	33,37,000.00	35,49,000.00
6. Computer & Internet Fee	25,17,500.00	71,00,000.00
7. Student wellness Fee	33,07,000.00	35,50,000.00
8. Convocation Fee	8,94,000.00	15,06,000.00
9. Library Book Fine	3,99,529.24	1,74,692.30
10. PhD Application Fee	7,29,000.00	4,58,500.00
11. Transcript Fee	91,900.00	1,18,900.00
12. Workshop Application Fee	-	1,52,502.00
13. Maintenance & Establishment Fee	3,71,48,673.00	4,05,80,815.00
14. Supplementary Exam Fee	87,200.00	-
	6,34,73,752.24	8,09,41,604.68
TOTAL	26,29,38,601.27	26,42,62,505.39

S. Mishra
10/10/21
Accountant

Asst. Registrar (F/A)
10/10/21

SCHEDULE 10 - GRANTS/SUBSIDIES (IRREVOCABLE GRANTS RECEIVED)

Particulars	Amount in Rupees	
	Current Year 2020-21	Previous Year 2019-20
Grant Received from Govt. of India		
Revenue Grant (Recurring) Received	78,18,81,834.00	94,30,55,847.00
Less: Trf to Capital Fund to the extent utilized for Cap. Expend.	-	-
Less: Trf to Unutilised Grant	-	-8,39,91,022.38
Add: Trf from Unutilised Grant	7,88,57,314.83	
TOTAL	86,07,39,148.83	85,90,64,824.62

SCHEDULE 11 - INCOME FROM INVESTMENTS

Particulars	Amount in Rupees	
	Current Year 2020-21	Previous Year 2019-20
Interest on Security Deposit	25,52,702.00	23,00,500.22
Int on Term Deposits	10,60,17,700.95	8,07,41,911.00
TOTAL	10,85,70,402.95	8,30,42,411.22

SCHEDULE 12 - INTEREST EARNED

Particulars	Amount in Rupees	
	Current Year 2020-21	Previous Year 2019-20
Int on S.B. A/c No. 33117999641	43,74,805.00	74,99,872.00
Int on Canara Bank S.B a/c (28319)	35,893.00	39,316.00
Int on Non-Plan A/c No. 10678399430	-	1,72,514.00
Int on SB A/c No.10678399441	11,15,899.00	9,87,219.00
Interest on TDS Receivable	5,76,172.00	3,00,479.00
Interest Charge From Employees	-	3,070.00
Interest on HDFC Bank A/c No. 50100374819962	7,28,162.00	-
TOTAL	68,30,931.00	90,02,470.00

S. Mishra
10/10/21
Accountant

Asst. Registrar (F/A)
10/10/21



[ANNUAL REPORT 2020-21]
[NIT JAMSHEDPUR]

SCHEDULE 13 - OTHER INCOME

Amount in Rupees

Particulars	Current Year 2020-21		Previous Year 2019-20	
A. Income from Land and Building				
1. Hostel Room Rent Fee Receipt	80,56,500.00		4,00,91,500.00	
2. License fee (House Rent Recovery)	14,19,527.00		12,06,383.39	
3. Electricity charges recovered (Staff & others)	13,70,543.33		19,87,053.71	
4. Water Charges recovered (Staff & Others)	76,667.00		74,101.00	
5. Elect.& Water Chg Receipts (Student)	19,24,125.00		1,37,86,830.00	
6. Let Out Property/Quarters	6,93,247.08		97,375.00	
Total (A)		1,35,40,609.41		5,72,43,243.10
B. Others				
1. Contribution from CEP Receipt	1,42,00,000.00		34,05,903.00	
2. Labour Cess	-		10,221.00	
3. Leave Salary Contribution of Dr. Renu Kumari	-		1,92,813.00	
4. Leave Salary Contribution of Prof A. Choubey	2,81,892.00		2,54,100.00	
5. LTC Recovery	14,84,165.00		10,41,410.00	
6. Misc Income	8,21,512.23		32,04,669.79	
7. Pension Contribution of Prof. A. Choubey	5,40,132.00		4,95,121.00	
8. Project Overhead Receipt	12,88,962.00		10,65,977.00	
9. Receipt From National Board of Accreditation(NBA)	-		11,70,000.00	
10. Recruitment Application Fee	19,80,500.00		54,73,500.00	
11. Revenue from Testing Consultancy	26,75,700.00		1,00,54,757.00	
12. Sponsoreship for Smart India Hackethon	-		5,00,000.00	
13. Vehicle Recovery	6,720.00		6,720.00	
14. Penalty Charges Receipt	1,59,250.00		-	
15. Penalty Charges Recovery(LTC)	3,542.00		-	
Total (B)		2,34,42,375.23		2,68,75,191.79
TOTAL		3,69,82,984.64		8,41,18,434.89

S. Nandi
10/05/21
Accountant

Asst. Registrar (F/A)
10/05/21



[ANNUAL REPORT 2020-21]
[NIT JAMSHEDPUR]

SCHEDULE 14 - PRIOR PERIOD INCOME

Particulars	Amount in Rupees	
	Current Year 2020-21	Previous Year 2019-20
a) Academic Receipt	-	-
b) Income From Investment	-	-
c) Interest Earned	-	-
d) Other Income	8,831.00	3,64,71,007.04
TOTAL	8,831.00	3,64,71,007.04

SCHEDULE 15 - STAFF PAYMENTS & BENEFITS (Establishment Expenses)

Particulars	Amount in Rupees	
	Current Year 2020-21 (Non Plan)	Previous Year 2019-20 (Non Plan)
a) Salary and Wages		
Adm & Tech Staff Regular	10,41,34,097.00	10,22,88,582.00
Academic Staff Regular	28,20,72,472.00	27,87,99,530.00
Adm & Tech Staff Adhoc	1,36,89,790.00	1,51,95,133.00
Academic staff Adhoc	42,35,672.00	14,75,807.00
	40,41,32,031.00	39,77,59,052.00
b) Allowance & Bonus	49,563.00	-
c) Contribution to National Pension Scheme	1,15,45,695.00	1,15,04,330.00
d) LTC Facility	68,29,693.00	12,22,508.00
e) Children Education Allowance	31,05,000.00	39,24,000.00
f) Honorarium	-	-
g) Professional Development Allowance (CPDA)	21,66,708.00	16,10,948.00
h) Leave Encashment against LTC	41,18,117.00	14,47,387.00
i) Medical Facility	37,33,709.00	75,93,601.00
jj) Retirement Benefits		
Gratuity	1,29,43,589.00	89,10,424.00
Leave Encashment Retirement benefit	82,10,327.00	1,19,54,376.00
Arrear of Pension & Family Pension	2,66,912.00	-
k) Arrear Salary Academic Staff	-	6,75,437.00
l) Arrear Salary Adm & Tech Staff	2,02,939.00	3,77,462.00
m) DA/TA Arrear (Academic Staff)	-	55,77,558.00
n) DA/TA Arrear (Adm & Tech Staff)	-	5,96,060.00
o) DA/TA Arrear (Pensioner)	-	24,83,345.00
p) H R A Arrear	34,125.00	20,464.00
q) Arrear of Medical Allowance	-	-
r) Pension	13,43,79,837.00	12,92,81,246.00
s) Pension Commutation	34,57,114.00	51,88,335.00
t) Composit Transfer and Packing Grant	5,18,400.00	-
u) Transportation of Personal Effects	74,287.00	-
	19,16,36,015.00	19,23,67,481.00
Total Staff payment & Benefit	59,57,68,046.00	
Expenses from IRG		
Leave Encashment- Retirement Benefit (Actuarial)	18,22,54,544.00	-
Gratuity (Actuarial Value)	17,44,27,112.00	-
	35,66,81,656.00	
TOTAL	95,24,49,702.00	59,01,26,533.00

S. N. Mishra
10/10/21
Accountant

Asst. Registrar (F/A)
10/10/21



[ANNUAL REPORT 2020-21]
[NIT JAMSHEDPUR]

SCHEDULE 16 - ACADEMIC EXPENSES

Particulars	Amount in Rupees	
	Current Year 2020-21	Previous Year 2019-20
a) Examination Expenses	1,03,529.00	5,41,161.00
b) Student Welfare Expenses	-	50,060.00
c) Convocation Expenses	8,25,000.00	15,66,730.00
d) Counselling Fees & Expenses	-	-
e) Research and Development Exp	72,861.00	-
f) Stipend (PG, Phd & other students)	8,31,97,361.00	7,62,90,771.00
g) Arrear of Stipend	-	43,84,496.00
h) Training and Placement Exp	1,66,286.00	19,63,085.00
i) HRA (Stipend)	83,05,756.00	-
j) NBA Accreditation	-	4,78,085.00
k) Honorarium to Visiting Faculty & Others	8,27,525.00	9,82,752.00
l) Honorarium to Foreign Faculty	-	1,30,265.00
m) Laboratory Expenses	7,09,859.00	3,82,809.00
n) Online Subscription (E-Learning Resources)	2,31,72,383.75	1,98,03,204.00
o) Seminars/Conference/Workshop Exp	1,70,726.00	5,37,936.00
p) Smart India Hackathod--2019 Expenses	-	6,99,665.89
TOTAL	11,75,51,286.75	10,78,11,019.89

S. N. Mishra
10/10/21
Accountant

Asst. Registrar (F/A)
10/10/21

SCHEDULE 17 - ADMINISTRATIVE AND GENERAL EXPENSES

Particulars	Amount in Rupees	
	Current Year 2020-21	Previous Year 2019-20
A. Infrastructure		
a) Electricity and Power	1,30,80,824.55	2,56,89,390.00
b) Water Charges	19,37,820.00	23,25,384.00
	1,50,18,644.55	2,80,14,774.00
B. Departmental Operating Cost	24,53,190.85	20,71,728.00
	24,53,190.85	20,71,728.00
C. Communication		
a) Postage and Stationery	1,00,000.00	1,00,000.00
b) Telephone Charges	1,01,886.00	1,46,606.00
c) Internet Port Charges	36,70,425.00	15,75,000.00
	38,72,311.00	18,21,606.00
D. Advertisement and Publicity	7,65,493.00	23,05,065.00
	7,65,493.00	23,05,065.00
E. Legal Expenses	3,32,754.00	12,50,104.00
	3,32,754.00	12,50,104.00
F. Others		
a) Printing and Stationery	4,54,810.00	6,96,380.00
b) Travelling and Conveyance Expenses	1,08,828.00	9,81,823.00
c) Hospitality Expenses	20,498.00	2,65,321.00
d) Auditors Remuneration		
i. Internal Audit Fee	17,70,000.00	17,70,000.00
ii. Statutory Audit fee & Remuneration	4,44,650.00	4,29,140.00
e) Professional Charges	53,780.00	21,000.00
f) Uniform and Liveries	5,28,000.00	-
h) Meeting Expenses	14,914.00	2,07,095.00
i) Misc. Expenses	23,95,544.68	8,78,010.73
m) Outsourcing of Accounting Services	39,64,800.00	39,55,753.00
p) Interview/Recruitment Expenses	-	2,74,473.00
q) GST on Purchase from URP under RCM	47,08,243.00	32,62,285.00
r) Security Expenses	2,02,51,626.00	2,05,10,402.00
s) Manpower Services (Data Entry Operator)	19,13,660.00	-
t) Pest Contraol Services	3,41,972.00	-
	3,69,71,325.68	3,32,51,682.73
Total Administrative and General Exp	5,94,13,719.08	6,87,14,959.73
Expenses from IRG		
Testing & Consultancy Expenses	44,20,085.00	1,88,37,814.00
Holding Taxes	1,52,19,706.00	36,98,344.00
	1,96,39,791.00	2,25,36,158.00
Expenses from Advance from CPWD		
Repair & maintenance Exp	2,00,74,346.00	-
	2,00,74,346.00	-
Total	9,91,27,856.08	9,12,51,117.73

S. N. Mishra
10/10/21
Accountant

Page 23

Asst. Registrar (F/A)
10/10/21



SCHEDULE 18 - TRANSPORTATION EXPENSES

Particulars	Amount in Rupees			
	Current Year 2020-21		Previous Year 2019-20	
a) Vehicle Running and Maintenance Exp	7,09,285.00		11,62,737.00	
b) Vehicle Insurance and Taxes	2,01,014.00		1,90,690.00	
c) Vehicle Hire Charges	-		-	
Total		9,10,299.00		13,53,427.00

SCHEDULE 19 - REPAIRS AND MAINTENANCE

Particulars	Amount in Rupees			
	Current Year 2020-21		Previous Year 2019-20	
a) Repair & Maintenance Refrigeration	9,44,096.00		5,58,485.00	
b) Repair & Maintenance Computer and Networking	24,65,714.00		38,68,722.00	
c) Repair & Maintenance Electrical	2,71,800.00		8,24,902.00	
d) Sanitation and Cleaning	1,95,50,760.34		1,68,84,391.00	
e) Repair and Maintenance (furniture & fixture)	24,674.00		2,21,863.00	
f) Repair and Maintenance (Civil Work)	74,935.00		17,34,271.00	
g) Repair & Maintenance (P&M, Equipment)	1,23,424.00		20,580.00	
Total		2,34,55,403.34		2,41,13,214.00

SCHEDULE 20 - FINANCE COST

Particulars	Amount in Rupees			
	Current Year 2020-21		Previous Year 2019-20	
a) Bank Charges	24,180.66		51,350.00	
b) Stamp Duty & Taxes	-		-	
c) Interest on HEFA Loan	4,74,56,834.00		3,66,30,847.00	
Total		4,74,81,014.66		3,66,82,197.00

SCHEDULE 21 - OTHER EXPENSES

Particulars	Amount in Rupees			
	Current Year 2020-21		Previous Year 2019-20	
a) Provision for Bad and Doubtful Debts/Advance	-		-	
b) Irrecoverable Balances Written-off	-		-	
c) Grants/Subsidied to others institutions/organisation	-		-	
d) Others	-		-	
Total		-		-

SCHEDULE 22 - PRIOR PERIOD EXPENDITURE

Particulars	Amount in Rupees			
	Current Year 2020-21		Previous Year 2019-20	
Academic Expenses	1,08,775.00		3,63,067.00	
Administrative Expenses	-		-	
Establishment Exp.	-		-	
Other Expenses	-		-	
Repairs and Maintenance	-		-	
Total		1,08,775.00		3,63,067.00

S. Mondal
10/10/21
Accountant

Asst. Registrar (F/A)
10/10/21



SCHEDULE - 23

SIGNIFICANT ACCOUNTING POLICIES

1. Basis for preparation of accounts: The accounts are prepared under the Historical Cost Convention and generally on the Accrual method of accounting.

2. Revenue Recognition: Fees from students are accounted on realization basis. Fees collected from students towards Mess advance and Student Activities are transferred to relevant hostel and SAS accounts respectively. The expenditure incurred out of above fees is accounted by Respective Hostels and PI, SAS and the same are not shown in Institute's Income & Expenditure Accounts.

3. Fixed Assets and Depreciation: Since inception of the institute to 31.03.2014 fixed assets were being recorded at cost and no depreciation was being charged. Now the Asset Register till 31/03/2014 has been prepared in revised formats of financial statement for central higher educational institutions issued by MHRD and the same had been presented before the CAG Audit team during audit of Annual Accounts for the FY 2019-20. In addition to that depreciation of Rs. **40,28,71,875.43** has been charged at the rate prescribed by MHRD in Annual Accounts of the FY 2020-21.

However, assets register has been prepared for assets purchased from 1st April 2014 and depreciation on the same is being charged at the rate prescribed in revised formats of financial statement for central higher educational institutions issued by MHRD. Depreciation is provided for whole year on addition during the year.

4. Stocks: Inventories purchased by various departments/centres/sections are treated as consumed during the year of purchase and booked to revenue expenditure.

5. Retirement Benefits: From the current FY 2020-21 provision of Rs.35,66,81,656.00 for Gratuity and Leave Encashment has been made on the basis of actuarial valuation. Other retirement benefits are accounted on cash basis.

6. Government grants: Government grants are accounted on realization basis. However where a sanction for release of grant pertaining to the financial year is received before 31st March the same is accounted on accrual basis. Capital and Revenue Grant to the extent it is utilized for capital expenditure is added to Corpus/Capital Fund with effect from financial year 2014-15 as per guidelines given in the unified formats of financial statement for central higher educational institutions issued by MHRD. Utilization certificates for Revenue and Capital Grant received for any year are issued only after receipt of Audit Certificate for that year.

7. Investments: The funds of the institute are deposited in short term fixed deposits/Savings bank account in nationalized banks. Interest earned on fixed deposits is accounted on accrual basis with effect from financial year 2014-15. Interest on saving accounts is accounted on cash basis. The income out of investment of balance of various funds is credited to respective fund account.

8. Income Tax: The income of the institute is exempted from Income Tax under section 10(23C) of the Income Tax Act. Therefore, no provision of Tax is made in the accounts.

9. PF Accounts: From the current FY 2020-21 a Saving Bank accounts have been opened in the name of GENERAL PROVIDENT FUND, NIT JAMSHEDPUR and PF contributions are deposited in the above mentioned account.

10. Electricity & Licence Fee: Recovery of Electricity amount and Licence Fee are being accounted on realization basis.


(Accountant)


(Asst. Registrar F/A)



SCHEDULE - 24

CONTINGENT LIABILITIES AND NOTES ON ACCOUNTS

1. Contingent liabilities: As on 31.03.2021 arbitration case no. I.A.No. 1234 of 2012 in A.A.21 filed by Jamshedpur Utilities Service Co. Ltd. (JUSCO) presently known as Tata Steel Utilities and Infrastructure Services Limited (TSUIS) is pending for decision. The claim in the above case is amounting to Rs.8,59,16,657.00

2. Capital commitment: There is no capital commitment towards contracts to be executed on capital account.

3. Current assets loans and advances: In the opinion of the Institute the current assets loans advances and deposits have a value on realization in the ordinary course equal at least to the aggregate amount shown in the balance sheet.

4. Capital & Revenue Grant: The Details of Capital and Revenue Grant received during FY 2020-21 is as under:

A) Capital Grant received			
Letter No.	Dated	Instalment No.	Total
F.No.36-4/2020-TS.III	23-12-2020	15th	2,00,00,000
TOTAL			2,00,00,000

B) Revenue Grant received			
Letter No.	Dated	Instalment No.	Total
F.No.36-4/2020-TS.III	23-04-2020	1st	5,71,00,000
F.No.36-4/2020-TS.III	05-05-2020	3rd	5,71,00,000
F.No.36-4/2020-TS.III	22-06-2020	5th	5,71,00,000
F.No.36-4/2020-TS.III	20-07-2020	7th	4,22,00,000
F.No.36-4/2020-TS.III	20-08-2020	8th	4,22,00,000
F.No.36-4/2020-TS.III	08-09-2020	9th	4,22,00,000
F.No.36-4/2020-TS.III	23-10-2020	11th	7,20,00,000
F.No.36-4/2020-TS.III	04-11-2020	12th	7,20,00,000
F.No.36-4/2020-TS.III	08-12-2020	14 th	7,20,75,000
F.No.36-4/2020-TS.III	23-12-2020	15 th	4,57,50,000
F.No.36-4/2020-TS.III	09-02-2021	16 th	13,11,00,000
F.No.36-4/2020-TS.III	05-03-2021	18 th	4,36,00,000
F.No.36-3/2020-TS.III (HEFA)	20-04-2020	1 st	1,22,75,248
F.No.36-3/2020-TS.III (HEFA)	22-07-2020	3 rd	1,22,62,978
F.No.36-3/2020-TS.III (HEFA)	14-10-2020	4 th	1,07,93,060
F.No.36-3/2020-TS.III (HEFA)	21-01-2021	6th	1,21,25,548
TOTAL			78,18,81,834

5. As per the decision taken in the 31st Finance Committee meeting held online on 10th September 2020. Whereby it was confirmed that the balances as on 01.04.2019 under the head "Other deposits" Schedule-3(e)-(iii) of Rs. 3,73,51,535.04, Out of which Rs.8,95,000.00 reconciled and transferred to respective head of accounts during the FY 2019-20 and the available balance of Rs. 3,64,56,535.04 under above head has been transferred to Prior Period Income (Other) as IRG of the Institute. If any claim occurred in future then the same shall be paid from IRG Account.

6. The Excess Revenue expenditure of Rs 7,88,57,314.83 against the Revenue Grant received during the FY 2020-21 has been incurred from the unspent balance of the previous year.



[ANNUAL REPORT 2020-21]
[NIT JAMSHEDPUR]

7. The opening accumulated depreciation of Computer & Peripherals and Computer Software (Others) has been adjusted with amounting to Rs. 1,07,42,456.60 due to excess depreciation charged in previous FY 2019-20.
8. Schedule 01 to 24 is annexed to form an integral part of the Balance Sheet as at 31.03.2021 and the Income & Expenditure for the year ended on that date.
9. Previous year figures have been regrouped/re-arranged wherever necessary.
10. As per the requirement of AS 15 (Revised 2005) on "Employee Benefits" issued by The Institute of Chartered Accountants of India, an amount of Rs.35,66,81,656.00 has been provided in the Annual Accounts of FY 2020-21 on the basis of actuarial valuation report as on 31.03.2021.

S. Mridha
20/1/21
(Accountant)

(Signature)
10/05/21
(Asst. Registrar F/A)

NATIONAL INSTITUTE OF TECHNOLOGY JAMSHEDPUR
Receipts and Payments
1-Apr-2020 to 31-Mar-2021

Receipts	Amount (Rs)	Payments	Amount (Rs)
Opening Balance		Capital Grant & Loan	
Bank Accounts	63,86,31,382.57	Loan From HEFA	9,80,00,000.00
		Outside Account	1,64,90,139.00
Capital Grant & Loan		Sponsored Projects (Scheme Grant)	94,04,588.00
Outside Account	4,47,956.00		12,38,94,727.00
Sponsored Projects (Scheme Grant)	2,08,82,349.00	Current Liabilities & Provision	
Designated/Earmarked/Endowment Fund	14,69,614.00	Gratuity Payable	50,000.00
	2,27,99,919.00	Duties & Taxes	
Current Liabilities & Provision		CGST	2,22,837.12
Balance on CGI A/c	11,489.00	IGST	47,45,547.00
Gratuity Payable	6,44,697.00	SGST	2,22,838.12
Provisions		Provisions	
Grant (Head 35)	2,00,00,000.00	Electricity Charges Payable	14,88,597.00
Sundry Creditors	3,30,858.00	Examination Expense Payable	26,081.00
Other Payables	3,58,41,190.00	Honorarium to Visiting Faculties & Others Payable	14,000.00
Scholarship	74,70,961.00	Institute water charges payable	3,87,564.00
Short Term Course/workshop Fund	19,86,998.94	Medical Facility to Employees Payable	32,902.00
Statutory Liabilities	8,16,18,278.50	Payable to Student (Fee Waiver)	6,86,17,978.00
Sundry Deposit (Debt & Deposit)	1,56,60,632.00	Pension Payable (F.Y.19-20)	1,00,73,177.00
	16,35,65,104.44	Provision for Contribution to New Pension Scheme	9,74,139.00
Investment		Salary Payable (F.Y.19-20)	2,43,46,264.00
FD Corpus Fund (35665745370)	10,32,02,593.00	Security Charges Payable	12,93,600.00
Current Assets		Telephone Charges Payable	15,891.00
Loans, Advances & Deposits	18,61,221.15	Stipend to PG, Ph.D. & Other Students Payable	66,47,938.00
Sundry Debtors	37,75,293.00	Sundry Creditors	
Fixed Deposits (Current Assets)	21,25,92,870.00	Suppliers	8,80,80,897.09
TDS Recoverable From IT Dept.	1,35,35,458.00	Other Payables	3,76,58,308.00
	23,17,64,842.15	Scholarship	82,28,698.00
Academic Receipt		Short Term Course/workshop Fund	11,11,395.46
Academic	20,69,78,163.03	Statutory Liabilities	9,04,37,389.00
Examinations	38,84,300.00	Sundry Deposit (Debt & Deposit)	1,05,68,230.00
Other Fee	7,42,39,085.24	NIT Transit House	3,50,000.00
	28,51,01,548.27		35,55,94,270.79
Grant/subsidies		Fixed Assets	
Grant (Head 31)	35,62,31,834.00	Fixed Assets (FY 2014-15 Onwards):	
Grant (Head 36)	42,56,50,000.00	Fixed Assets (From 35 Gant)	1,15,24,379.00
	78,18,81,834.00	Fixed Assets (From Others Funds)	37,42,553.00
			1,52,66,932.00



[ANNUAL REPORT 2020-21]
[NIT JAMSHEDPUR]

Expenditure Grant Head-36			
Staff Payments and Benefits (Estb. Exp)- Head-36	13,40,515.00		32,19,230.12
	13,40,515.00		9,99,12,977.00
Interest Earned			62,835.00
	1,49,61,839.00		10,31,95,042.12
Other Income			
	3,22,33,392.31		80,51,291.00
Other Misc Exp (Round off)	0.58		1,100.00
			52,29,579.00
			1,32,81,970.00
Expenditure Under Grant Head-31			
Academic Expenses	13,22,697.00		39,37,85,716.00
Administrative & Gen Exp	1,66,332.00		
Repair & Maintenance	20,260.00		39,448.00
Staff Payment & Benefit (Estb. Exp)- Head-31	93,38,259.00		
	1,08,47,548.00		36,306.00
Expenses From IRG			
Testing & Consultancy Expenses			
	2,093.00		9,99,29,352.00
	2,093.00		3,52,39,647.00
			4,74,81,014.66
			1,08,775.00
			9,89,285.00
			16,35,24,241.00
			7,47,674.00
			34,80,19,988.66
Expenses From IRG			
Holding Tax			1,52,19,706.00
Hostel Maintenance & Establishment Exp			3,97,685.00
Testing & Consultancy Expenses			44,22,178.00
			2,00,39,569.00
Closing Balance			
Bank Accounts			91,31,78,641.75
Total	2,28,63,32,611.32	Total	2,28,63,32,611.32

S. N. Singh
Accountant

Asst Registrar (F/A)

Registrar

Director



NATIONAL INSTITUTE OF TECHNOLOGY JAMSHEDPUR
GENERAL PROVIDENT FUND ACCOUNT
Balance Sheet for the year ended 31.03.2021

Liabilities	Amount	Assets	Amount
CAPITAL FUND(GPF)		INVESTMENT:	
Opening Balance 01.04.2020	7,57,57,869.00	Investment in Bank FD	1,10,00,016.30
Add: GPF Subscription 13422425.00		Accrued Interest against auto sweep	52,335.00
Less: GPF paid during the year -4158118.00	92,64,307.00	Current Assets:	
		TDS Receivable	5,815.00
Add: Excess of Income over Expenditure	12,77,832.30	Balance at Bank A/c	7,52,41,842.00
TOTAL	8,63,00,008.30	TOTAL	8,63,00,008.30

Page 30

S. Nishu
10/1/21
Accountant

Asst. Registrar (F/A)

Registrar

Director

NATIONAL INSTITUTE OF TECHNOLOGY JAMSHEDPUR
GENERAL PROVIDENT FUND ACCOUNT
Income and Expenditure Account for the year ended 31.03.2021

Expenditure	Amount	Income	Amount
Bank Commission	-	Interest earned on SB (39414984167)	93,821.00
Excess of Income over Expenditure	12,77,832.30	Interest earned on Old A/c	11,25,845.00
		Interest earned on FD	58,166.30
Total	12,77,832.30	Total	12,77,832.30

Page 31

S. Nishu
10/1/21
Accountant

Asst. Registrar (F/A)

Registrar

Director



NATIONAL INSTITUTE OF TECHNOLOGY JAMSHEDPUR
GENERAL PROVIDENT FUND ACCOUNT
Receipt & Payment Account for the year ended 31.03.2021

Receipt	Amount	Payment	Amount
Opening Balance 01.04.2020	7,57,57,869.00		
Accumuated Funds		Accumuated Funds	
GPF Subscription for the year (39414984167)	1,10,71,800.00	GPF Withdrawl	41,58,118.00
GPF Subscription for the year (Old A/c)	23,50,625.00		
Investment		Investment	
Investment encashed on FD	-	Investment during the Year	1,10,00,000.00
		Interest against Autosweep	-
Interest		Expenses	
Interest earned on SB (39414984167)	93,821.00	Bank Commission	-
Interest earned on SB/FD (Old A/c)	11,25,845.00		
Interest against Autosweep(Acrued)	-	Closing Balance	
		SB (39414984167)	1,06,811.00
		Old A/c (SB/FD)	7,51,35,031.00
Total	9,03,99,960.00	Total	9,03,99,960.00

Page 32


Accountant


Asst. Registrar (F/A)


Registrar


Director

भारतीय लेखापरीक्षा और लेखा विभाग

कार्यालय महानिदेशक लेखापरीक्षा (केन्द्रीय) लखनऊ



INDIAN AUDIT AND ACCOUNTS DEPARTMENT

Office of the Director General of Audit (Central) Lucknow

DRD
480
5-10-21

No. DGAC/LKO/Br Ranchi/SAR-NITJ (2020-21)/ 122

Dated: 28.09.2021

AR (FA)
28/9/21

To,

The Director,
National Institute of Technology,
Jamshedpur - 831014

कुलसचिव
NITJ
28/9/21

Subject: Separate Audit Report on the accounts of National Institute of Technology, Jamshedpur for the year 2020-21.

Sir,

I enclose a copy of the Audit Report and Audit Certificate along with audited National Institute of Technology, Jamshedpur for the year 2020-21 for information and necessary action.

2. A copy of each of the documents has been sent to the Secretary to the Government of India, Ministry of Human Resource Development, New Delhi for information and necessary action.

3. The audited Annual Accounts, Audit Report should be duly considered and adopted by the Governing Body (BOG) of the National Institute of Technology, Jamshedpur in the Annual General meeting before these are laid in the House of parliament.

4. A copy of (i) Resolution of Governing Body adopting the Audit Report and Audit Certificate with audited Annual Accounts, (ii) Date of its presentation before the House of Parliament and (iii) Annual Report of the Institute may be furnished to this office in due course for our records and onward transmission to the Comptroller and Auditor General of India, New Delhi.

5. The Hindi version of this SAR may kindly be furnished to this office within one week.

6. The receipt of this letter with enclosures may please be acknowledged.

Yours faithfully,

Director General of Audit (Central)

Encl: - As above.

FJS/5894A
Director's Secretariat
Dy. No. 215
Date 05/10/21

Separate Audit Report of the Comptroller & Auditor General of India on the accounts of National Institute of Technology (NIT), Jamshedpur for the year ended 31 March 2021

We have audited the attached Balance Sheet of National Institute of Technology, Jamshedpur as on 31 March 2021, 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, Powers and Conditions of Service) Act, 1971 read with Section 22 (1 to 4) of the National Institutes of Technology Act, 2007. These financial statements are the responsibility of the Institute's management. 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 of India (C&AG) 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. Our audit includes examining, on a test basis, evidences supporting the amounts and disclosure in the financial statements. It also includes assessing the accounting principles used and significant estimates made by the 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 and Income & Expenditure Account and Receipts and Payments Account dealt with by this report have been drawn up in the format approved by the Government of India, Ministry of Human Resource Development.

(iii) In our opinion, proper books of accounts and other relevant records as required under Section 22 (1 to 4) of National Institutes of Technology Act, 2007 in so far as it appears from our examination of such books.

(iv) We further report that;

A. Balance sheet

A.1 Liabilities

A.1.1 Corpus/Capital Fund (Schedule 1) – ₹ 530.26 crore

A.1.1.1 As per Rule 229 of GFR the Ministry or Department may consider creating a Corpus Fund for an Autonomous Body only with prior concurrence of Ministry of Finance if the Corpus is created out of budgetary allocation. If the corpus is created out of internal accruals of the body, approval of the administrative Ministry must be obtained.

Records revealed that the Institute created a Corpus Fund with the approval of BOG in 2008-09. The Institute, however, could not provide approval of Ministry for creation of Corpus Fund. The total fund of this account had of ₹ 11.93 crore as on 31.03.2021. The year of creation, source of fund of corpus was also not disclosed in Notes on Accounts.

A.1.1.2 As per new format of accounts prescribed by MHRD for central higher educational institutions, to the extent utilized towards capital expenditure of government grants are transferred to the Capital Fund and unutilised grants including advances paid out of such grants are carried and exhibited as a liability in the Balance Sheet.

Scrutiny of Annual Accounts for the Financial year 2020-21 revealed that the Institute had incurred capital expenditure amounting to ₹ 48.85 crore {(₹ 60.46 crore (Schedule-4-i) – ₹7.95 crore (deduction) – Revenue Expenditure ₹2.33 crore (Schedule-8) – ₹ 1.33 crore (TEQIP Project Schedule-4-i-B) already taken in capital fund} from Capital Grant during the year. However, the Institute had transferred a sum of ₹ 12.28 crore (Schedule-1B) only to the Capital Fund. This resulted in understatement of Capital Fund and overstatement of Current Liabilities by ₹36.57 crore.

A.1.1.3 The Institute had transferred a sum of ₹ 12.28 crore to the Capital Fund for the year 2020-21, out of which a sum of ₹ 8.31 crore was included advance paid to CPWD. This resulted in overstatement of Capital Fund and understatement of unutilised grant under the head Current Liabilities by ₹8.31 crore.

A.2. Current Liabilities and Provisions (Schedule 3) –₹ 82.10 crore

A.2.1. The opening balance of unutilized Revenue grant of the Institute as on 01.04.2020 was ₹ 20.65 crore and the Institute received ₹ 78.19 crore from the MHRD during the year. Thus, total fund available with Institute was ₹ 98.84 crore. Out of which the Institute utilized ₹ 84.46 (Rs.86.07 – Rs.1.61 crore) crore during the year.

As such the Institute was required to exhibit ₹ 14.37 crore as unutilized grant fundable to Ministry. But the Institute exhibited ₹ 4.67 crore refundable to MHRD. This resulted in understatement of current liabilities and overstatement of Capital fund by ₹9.70 crore.

A.2.2 As per new format of accounts prescribed by MHRD for central higher educational institutions, to the extent utilized towards revenue expenditure of government grants are transferred to the Income and Expenditure Account as income and unutilized grants including advances paid out of such grants are carried forward and exhibited as a liability in the Balance Sheet.

Scrutiny of Annual Accounts for the Financial year 2020-21, revealed that the Institute had received revenue grant of ₹ 78.19 crore from Ministry of Education, Government of India to incur expenditure for recurring activities during the financial year 2020-21. Balance of Revenue grant at the beginning of year was of ₹ 12.55 crore {Schedule-3-C(b)}. Thus, the Institute had ₹ 90.74 crore of revenue grant for the financial year 2020-21 but the Institute incurred expenditure of ₹ 86.07 crore only from this grant and leaving a balance of ₹ 4.67 crore as unutilized amount. The Institute had transferred a sum of ₹ 86.07 crore to the Income Expenditure Account as income under the head Grants/Subsidies for the year. However, the Institute showed deficit balance of Income & Expenditure Account for the year by ₹ 4.19 crore. The Institute did not follow the new common format of accounts. This resulted in understatement of income and overstatement of unutilized grant under the head Current Liabilities by ₹ 4.19 crore.

A.2.3 Institute had transferred a sum of ₹ 86.07 crore to the Income & Expenditure Account as income under the head Grants/Subsidies for the year 2020-21. Out of this, a sum of ₹ 1.61 crore was included in advance to CPWD. This resulted in overstatement of income and understatement of unutilized grant under the head Current Liabilities by ₹1.61 crore.

A.3 Fixed Assets(Scheduled-4)-₹436.63 crore

A.3.1 E journals are intangible assets to be accounted for under Schedule-4 of the Balance sheet. E journals attract depreciation at the rate of forty *per cent*.

The Institute purchased E journals amounting to ₹ 2.32 crore (Sch-16n) during the year. The Institute irregularly debited the above amount in Income and Expenditure Account instead of fixed assets.

The irregular treatment resulted in understatement of fixed assets and overstatement of excess of expenditure over income by ₹ 2.32 crore.

A.4 Loans, Advances and Deposits (Schedule 8) ₹20.84 crores

A.4.1 As per schedule-8 Loans, Advances & Deposits, Outstanding advances of ₹ 7.54 Crore to suppliers/agency and staff under capital fund and revenue fund had been lying outstanding for periods ranging from six months to 20 years. The Institute did not take action to recover these advances from the employees and suppliers/contractors. The Institute did not make any provision for bad and doubtful debts. The Institute did not take confirmation of debtors from the respective parties and also not taken suitable action to recover the outstanding advances.

There is no register of outstanding dues duly signed by competent authorities as such veracity of the amount shown in the balance sheet could not be vouched safe.

A.4.2 The CPWD had completed and handed over 08 no of works for ₹ 249.40 lakh against ₹311.08 lakh deposited by the Institute and the balance amount of ₹61.68 lakh neither taken nor adjusted in any other works by the institute. This resulted in overstatement of advance to CPWD understatement of fixed assets by ₹61.68 lakh.

B. Income & Expenditure Account

B.1 Scrutiny of bank reconciliation statement revealed that receipts of ₹24.40 Lakh was received through various instruments/sources during April 1995 to March 2021 which were debited in cash/bank books were not credited in bank till audit. This resulted in overstatement of Cash/Bank Book balance to that extent.

S.No.	Account No.	Amount (₹in lakh)	Period
1	SBI Saving A/c 10678399349	19.46	1995-2021
2	Edu Loan A/c 34620592283	4.94	2015-2017
	Total	24.40	

C. Accounting Policy and Notes on Accounts

C.1 As per significant accounting Policy No.5, the Institute had made provision for retirement benefits like Gratuity and Leave Encashment only. Other retirement benefit like pension was accounted on cash basis. The Accounting Policy adopted by the Institute contravenes Accounting Standard 15 issued by ICAI as well as format of accounts prescribed by MHRD which requires that all retirement benefits should be accounted on actuarial valuation basis.

C.2 The Institute leased on perpetual lease three acre of land to DAV College Trust and Management Society for 30 years for running a school from 01.11.1990. The fact was not disclosed in Notes on Accounts.

D. General

D.1 Discrepancy in unutilized grants balance and bank balance.

The Institute is not maintaining separate bank accounts for Grants received from Govt. which is in contravention of Format of accounts approved by MHRD.

D.2 Non-maintenance of Schedule 10 and 15A.

The Institute did not maintain Schedule-10- Grants/Subsidies (Irrevocable Grants Received) and 15A (Employees Retirement and Terminal Benefits) as per new format of accounts prescribed by MHRD for central higher educational institutions.

E. Grants in Aid

The Government of India sanctioned Grant-in-aid of ₹80.19 crore(Capital-₹2.00 crore &Revenue-₹ 78.19 crore) during the year. The unspent balance of the previous year was

₹33.62 crore(Capital-₹12.97 crore & revenue- ₹ 20.65 crore).Thus, the Institute had total fund available amounting to₹113.81 crore(Capital ₹ 14.97 crore & Revenue ₹ 98.84).Out of which the institute utilized a sum of ₹88.48 crore (Capital₹4.01crore & Revenue₹84.47 crore) during the year and leaving a balance of ₹ 25.33 crore(Capital ₹ 10.96 crore & Revenue ₹14.37 crore)as unutilized balance as on 31.03.2021.

F. Management letter

Deficiencies which have not been included in the Audit Report have been brought to the notice of the Institute through a management letter issued separately for remedial/corrective action.

(v) Subject to our observations in the preceding paragraphs, we report that the Balance Sheet, Income and Expenditure Account and Receipts and Payments Account dealt with by this report are in agreement with the books of accounts.

(vi)In our opinion and to the best of our information and according to the explanations given to us, the said financial statements read together with the Accounting Policies and Notes on Accounts, and subject to the significant matters stated above and other matters mentioned in the Annexure to this Audit Report give a true and fair view in conformity with accounting principles generally accepted in India.

(a) In so far as it relates to the Balance Sheet of the state of affairs of the National Institute of Technology, Jamshedpur as on 31stMarch 2021, and

(b) In so far as it relates to Income and Expenditure Account of the deficit for the year ended on that date.

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

Place: Lucknow

Date: 28.9.2021



Director General of Audit (Central), Lucknow



ANNUAL REPORT

2020 - 21