

VISION

To establish a unique identity of a pioneer technical Institute for NIT Srinagar by developing a high quality technical manpower and technological resources that aim at economic and social development of the nation as a whole and the region in particular.

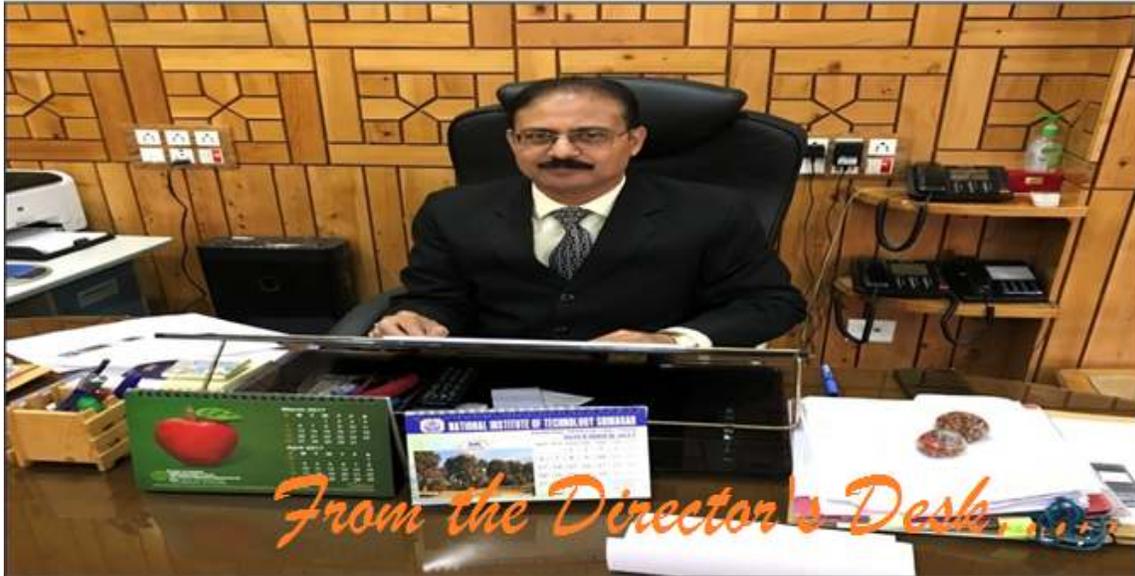
MISSION

The broad mission of NIT Srinagar is to create a strong and transformative technical educational environment in which fresh ideas, moral principles, research and excellence nurture and technically education and broadly talented engineers, future innovators and entrepreneurs graduate not only to understand the needs and the problems of the industry, the society, the state, and the nation, but also address to the same with the highest degree of confidence, professional excellence and engineering ethics.

OBJECTIVES

- To provide the best educational infrastructure for imparting high class education in science and technology and a creative atmosphere for inter-disciplinary research both by the students and the faculty.
- To enhance the quality of teaching by strengthening the teachers professional capabilities to meet the growing educational aspirations of students.
- To upgrade the syllabus and re-frame the course curriculum periodically in order to produce creative and capable engineers who meet effectively the growing job requirements.
- To inculcate amongst the students the highest standards of honesty, accountability, moral integrity, tolerance for diversity, and respect for ethnic and religious differences so as to make them good human beings.
- To develop amongst the students a strong personal commitment, as a member of the engineering professional, towards social outreach activities.

- To produce engineers having ethics of engineering profession, complete confidence in decision making and a good social outlook in all their activities so that they perform their duty to the best satisfaction of the organization and to the society.
- To maintain global standards in student-faculty ratio, scientific research output, research publications in technical journals of repute, and placement of students.
- To participate in and contribute to nation building through various flagship schemes of the Government of India / State governments requiring technological interventions thereby spurring economic growth for the welfare of the masses.
- To provide "research and development consultancy" to the respective industries so as to foster a healthy industry-academia partnership and develop a competitive edge to the indigenous manufacturing.



It gives me immense pleasure to present the 58th Annual Report of National Institute of Technology Srinagar, Hazratbal, Kashmir (J&K) for the year 2017-18. The Institute formerly known as Regional Engineering College Srinagar was established in the year 1960 , offers eight (08) B.Tech programmes in various branches of Engineering, eleven (11) P.G. programmes (M.Tech./ M.Sc.) in addition to Ph.D programmes in all the Departments and also M.Phil programme in the faculty of Applied Sciences. During the period under report, faculty members of the Institute actively participated in National and International Conferences/Seminars, Workshops, expert lectures and other related research activities and presented a good number of papers in these Conferences/Seminars. Apart from these activities, many R&D sponsored projects are in progress.

The Institute rendered useful services to other sister Institutions and continued to offer expertise and consultancy services to various government/semi-government/public and private organizations. The Institute has also signed MoUs with some NITs, IITs, Research Organizations to strengthen teaching learning and research projects.

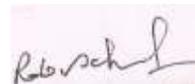


The Department of Training and Placement is making all the efforts in having National and Multinational companies for placement of students of the Institute. Many of them visited the Campus for placement. A good number of students have been placed through Campus Selection.

The students are also taking active part in co-curricular and extra-curricular activities within and outside the Institute. Students of the Institute participated in the sports activities outside the Institute also and won medals for the Institute.

I place on record my sincere gratitude to Ministry of Human Resource Development, Department of Higher Education, Government of India, Members of the BOG/FC/Senate, Faculty, Staff and the students of this Institute for their co-operation and support in running day to day affairs of the Institute smoothly.

At the end, I record my appreciation for the team under the overall supervision of Dr. S. K. Bukhari, I/C Registrar of the Institute for compilation of the Annual Report for the year 2017-18.



(Prof. Rakesh Sehgal)

Director



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1.0. INTRODUCTION

1.1. HISTORICAL BACKGROUND

The National Institute of Technology Srinagar (NIT Srinagar), (erstwhile Regional Engineering College), was established in July, 1960, by the joint venture of Govt. of India and the State Government during the



2nd plan period. It was one among the first batch of 8 such Institutes which were set up in the country. The other seven Institutes were Allahabad, Bhopal, Durgapur, Jamshedpur, Nagpur, Surathkal, and Warangal. The Institute initially started functioning in the historical Chinar garden of Naseem Bagh at Hazratbal, Srinagar, adjacent to the campus of University of Kashmir on the North side which is about 1.5 kilometres away from the present Campus which was



acquired for the Institute simultaneously and work of construction started. The Institute started shifting to the present campus in 1966.

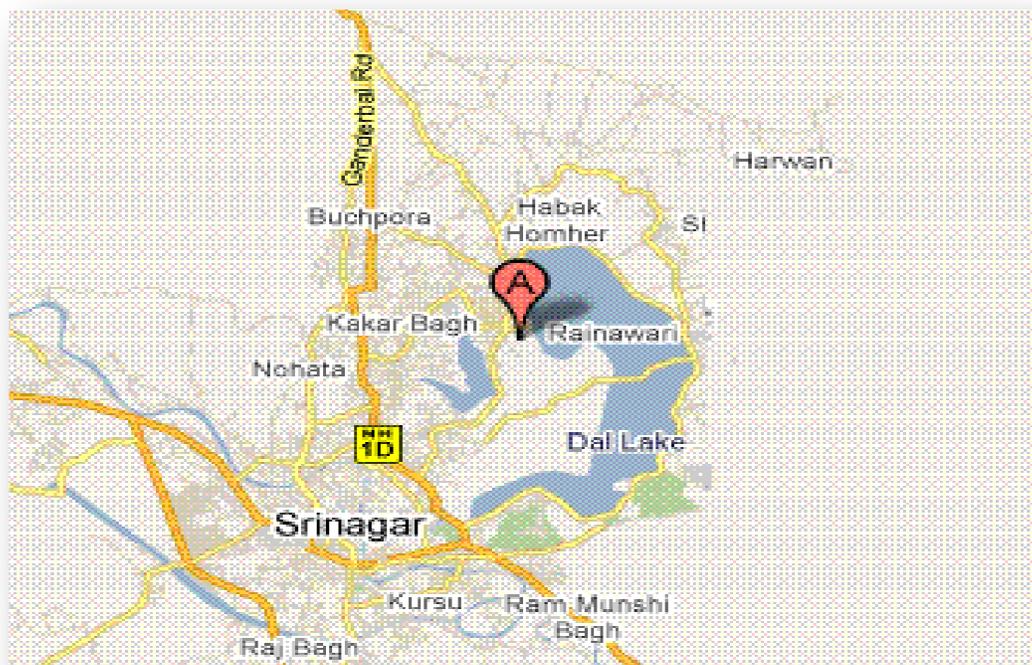


In 2003 the Institute was declared as National Institute of Technology with Deemed University Status by the Ministry of Human Resource Development (MHRD), Govt. of India and University Grants Commission (UGC). Even going through the difficult times in the valley since 90's, the Institute has proved its mettle through its output at various levels and has become a prestigious Institute of the region. The Institute also suffered a huge infrastructural loss due to 2014 floods and is presently trying to overcome it.



1.2. *THE CAMPUS & ITS LOCATION*

The Institute is located in Srinagar, the summer capital of J&K at Hazratbal, Srinagar 10 km from the city centre. The Campus is surrounded by the scenic Himalayan ranges, the Zabarwan mountains and world famous Dal Lake on its East side and the most revered shrine of the Country Hazratbal Shrine on the



North side. Hazratbal is well connected with most parts of the city and valley by a motorable road and other transport service. The campus is about 22 km away from the Srinagar International Airport. It falls on National Highway to Ladakh. The nearest railway station is Nowgam which is located about 18 km from the Institute Campus. The campus is connected with Jammu / Delhi by Srinagar-Jammu National Highway 44 which passes through high mountain passes which are picturesque and enjoyable, and can be covered in about 7-8 hours by a private taxi/car. The Institute is having a lush green campus spread over 67 acres of land on the banks of world-famous Dal Lake.

The Institute is residential with accommodation facility for students and staff in hostels and Residential Quarters. There are seven boys and two girls hostels which accommodate about 2000 boys and 200 girls with separate mess facility for each hostel.

Almost all necessary facilities and amenities are available in the campus which include Cafeteria, Shops, Bank, Medical Unit with ambulances, Guest House, Students Activity Centre, Gymnasium, Computer Services Centre with internet facility, Bus facility, Centralized Library etc.

1.3 ADMINISTRATION

National Institute of Technology Srinagar (J&K) is an autonomous Institute under the direct control of Ministry of Human Resource Development (MHRD), Government of India (GOI). The Institute functions under the overall guidance and control of Board of Governors (BOG). Director is the academic and executive head of the Institute. He is the Ex-Officio member of the Board of Governors and is responsible for maintaining proper administration and discipline and imparting instructions for smooth functioning and overall development of the Institute.

Director is assisted in the day-to-day affairs of the Institute by the Registrar, Deans, Heads of the Departments & Centres, Various committees and other

officers. The various other Important Committees in addition to BOG, responsible for advising in respect of the various matters of the Institute, include:

Senate	for	Academic Affairs
Finance Committee (FC)	for	Financial Matters
Building Works Committee (BWC)	for	Developmental Works

2.0 *ACADEMICS*

2.1. *Education System*

- 4- years full time Bachelor of Technology degree courses offered in (1) Chemical Engineering, (2) Civil Engineering, (3) Computer Science Engineering, (4) Electrical Engineering, (5) Electronics and Communication Engineering, (6) Information Technology, (7) Mechanical Engineering and (8) Metallurgical and Materials Engineering branches.
- Master of Technology (M.Tech) degree courses on full time & part-time basis offered in Chemical Engineering, Civil Engineering, Electrical Engineering, Electronics & Communication Engineering and Mechanical Engineering departments.
- The duration of M.Tech. course is of two years (four semesters) for full time students and 3 years for those admitted under part-time. Part time enrolment is given only to sponsored candidates.
- Doctor of Philosophy (Ph.D.) degree is awarded by the Faculty of Engineering in all branches of engineering available in the Institute.
- Master of Philosophy and Doctor of Philosophy is awarded by the faculty of Applied Science and Humanities & Social Science Department.
- The academic session is divided into two semesters, an autumn semester (August–December) and a Spring semester (March–July).
- The Semester system is enforced at both under-graduate (U.G.) and post graduate (P.G.) levels.
- The Senate approves the academic calendar consisting of schedule of activities for the whole year including dates for registration, semester examinations, inter-semester breaks, sports activities, annual day etc.
- Medium of instructions and examination for all courses including writing of dissertations of B.Tech. /M.Tech. /M.Phil. and Ph.D. thesis is British English.
- 05 days week period with at least 90 working days in each semester.
- Week days used for E.C.A. and other such activities.

- Credit Based continuous Assessment System with one midterm and one major examination in each semester.
- Compulsory Practical training & visits to the work sites both at graduate and post graduate levels.

2.2.ACADEMIC PROGRAMMES:

The Institute offered various academic programmes comprising of (08) B.Tech. programmes in eight branches of engineering; (10) M. Tech. programmes in 05 engineering departments, M.Phil. programme in Sciences and HSS departments and Ph.D. programme in all the engineering, science and HSS departments.

The Institute has eight Engineering Departments, four Allied Departments and three Centres. These are:

2.2.1 Engineering Departments

i) Chemical Engineering , ii) Civil Engineering, iii) Computer Science & Engineering iv) Electrical Engineering v) Electronics and Communication Engineering vi) Information Technology vii) Mechanical Engineering viii) Metallurgical and Materials Engineering

2.2.2 Allied Departments

i) Mathematics ii) Physics, iii) Chemistry and iv) Humanities & Social Sciences.

2.2.3 Centres

i) Central Research Facilities Centre ii) Computer Services Centre iii) Innovation, Incubation & Entrepreneurship Development Centre vi) Maintenance Engineering Centre v) Water Resources Management Centre

2.3. COURSES OFFERED

2.3.1. B.Tech. Degree programme

The Institute offers four years (eight semesters) full- time B.Tech. Degree Programme in the following branches of engineering:-

1. Chemical Engineering;
2. Civil Engineering;
3. Computer Science Engineering;
4. Electrical Engineering;
5. Electronics and Communication Engineering;
6. Information Technology;
7. Mechanical Engineering;
8. Metallurgical and materials Engineering .

2.3.2. M.Tech. Degree Programme

The Institute offers both full- time / part-time M.Tech. Degree Programmes in the following engineering disciplines:

- | | | |
|-----|---|------------------------------|
| 1. | Structural Engineering | Civil Engineering |
| 2. | Water Resources Engineering | Civil Engineering |
| 3. | Geotechnical Engineering | Civil Engineering |
| 4. | Transportation Planning & Engineering | Civil Engineering |
| 5. | Communication and Information Technology | Electronics & Comm.
Engg. |
| 6. | Micro Electronics | Electronics & Comm.
Engg. |
| 7. | Mechanical System Design | Mechanical Engineering |
| 8. | Industrial Tribology and Maintenance Management | Mechanical Engineering |
| 9. | Electric Power and Energy System | Electrical Engineering |
| 10. | Chemical Engineering | Chemical Engineering |

2.3.3. M.Sc. Degree Programme

- | | | |
|---|-----------------|--------------------|
| 1 | Applied Physics | Physics Department |
|---|-----------------|--------------------|

2.3.4. M. Phil Programme

The Institute offers full- time /part- time M.Phil. Degree Programme in the following departments:

1. Physics
2. Chemistry
3. Mathematics
4. Humanities and Social Sciences

2.3.5. Ph. D. Programme

The Doctoral Degree programmes are being offered in all the Engineering and Allied Departments. These programmes are offered on both full-time and part-time basis. **About 150 research** fellowships have been sanctioned with Scholarships at the rate as approved by MHRD from time to time.

2.4. ADMISSION PROCEDURE

2.4.1 Undergraduate Courses

As per the policy of Government of India for NIT's, admission to U.G. programmes is made on the basis of the merit in National Level Test Joint Entrance Examination (JEE) Mains, conducted by Central Board of Secondary Education (CBSE) New Delhi. 50% of sanctioned intake of 675 seats for B.Tech. is filled from domicile candidates of J&K State and 50% from candidates of other States, purely based on the merit/ranking in JEE Main Examination through a centralized on-line counselling system devised by the MHRD. In addition the Institute also has a sanctioned intake of 53 seats for students under DASA programme.

2.4.2 Post-graduate courses

The admission for Post graduate courses is made through CCMT based on GATE scores. However, admissions through a written test and Gate Score for sponsored candidates on full time and part-time basis is also available for in-service candidates interested in seeking admission in Post graduate Programmes.

The M. Tech Programme is of two years spread(four semesters) and a total number of 60 credits are required to be earned for its award. The coverage of various courses, labs, seminars, field work, dissertation etc is an essential part of the M.Tech. programmes.

2.4.3 M. Phil / Ph.D.

The Selection of candidate for M. Phil/ Ph.D. Programme is made through an Entrance test followed by viva voce examination conducted by the concerned Departmental Research Committee (DRC). The candidates with satisfactory performance are selected for M. Phil/ Ph.D. Programme.

2.5. ACADEMIC CALENDAR

The following Academic Calendar prepared by the Institute and approved by the Senate, was notified for the students and staff. The Academic Calendar is prepared in such a way so that all the curricular, co-curricular, extra-curricular and other related activities/programmes of the students are well distributed over the semester period.

Institute Academic Calendar for the Year-2017-18

ACADEMIC CALENDAR OF NIT SRINAGAR FOR THE YEAR 2017-18			
SPRING SESSION			
S. No.	Activity	Date	
		From	To
1	Registration		
	B. Tech 8 th Semester	15-03-2017	17-03-2017
	B. Tech 2 nd & 4 th semesters	27-03-2017	29-03-2017
	B. Tech 6 th and M. Tech/M. Sc. 2 nd & 4 th semesters	03-04-2017	05-04-2017
	Ph. D Spring : Normal	01-03-2017	15-03-2017
	Late	16-03-2017	25-03-2017
2	Commencement Of Classes		
	B. Tech 8 th Semester	20-03-2017	
	B. Tech 2 nd & 4 th Semesters	30-03-2017	
	B. Tech 6 th and M. Tech/ M. Sc. 2 nd & 4 th Semesters	06-04-2017	
3	Even Supplementary Examinations for belated Autumn-2016 Semester	03-04-2017	
4	Minor Examination		
	B. Tech 8 th Semester	19-04-2017	21-04-2017
	B. Tech. 2 nd , 4 th & 6 th ; M.Tech/ M. Sc. 2 nd & 4 th Semesters and Ph. D	08-05-2017	10-05-2017
5	Extra Curriculum Activities	11-05-2017	13-05-2017
6	Alumni Meet-2017	14-05-2017	14-05-2017
7	Mid-term Examination (To be conducted instead of Minor-1 & Minor-2 if approved by Senate)		
	B. Tech 8 th Semester	08-05-2017	11-05-2017
	B. Tech: 2 nd , 4 th & 6 th ; M.Tech/M. Sc. 2 nd & 4 th Semesters and Ph. D	22-05-2017	24-05-2017
8	Minor-2 Examination		
	B. Tech 8 th Semester	22-05-2017	24-05-2017
	B. Tech. 2 nd , 4 th & 6 th ; M.Tech/ M. Sc. 2 nd & 4 th Semesters and Ph. D	05-06-2017	07-06-2017
9	B. Tech Project viva-voce Exam	Latest by 26-06-2017	
11	Major Examination		
	B. Tech 8 th Semester	12-06-2017	

	B. Tech. 2 nd , 4 th & 6 th ; M.Tech/ M. Sc. 2 nd & 4 th Semesters and Ph. D	03-07-2017	
12	Special Supplementary Examination for 8th Semester	10-07-2017	
13	Supplementary Examination for Odd semester	19-07-2017	
AUTUMN SESSION			
S. No.	Activity	Date	
		From	To
01.	Registration for U.G, P.G & Ph. D	26-07-2017	28-07-2017
	Late Registration for U.G, P.G & Ph. D	31-07-2017	01-08-2017
02.	Commencement of Classes	31-07-2017	
03.	Tech. Fest	04-08-2017	06-08-2017
04.	Fresher's Orientation Day	3 rd week of August	
05.	Minor-1 Examination for U.G, P.G & Ph. D	04-09-2017	06-09-2017
06.	Extra Curricular Activities	07-09-2017	10-09-2017
07.	Mid Term Examination (To be conducted instead of Minor-1 & Minor 2 if approved by Senate)	18-09-2017	20-09-2017
08.	Convocation	Last week of September to 1 st week of October	
09.	Minor- 2 Examination for U.G, P.G & Ph. D	04-10-2017	06-10-2017
10.	Major Examination for U.G, P.G & Ph. D	06-11-2017	
11.	Supplementary Examination for even semester	20-11-2017	
12.	Winter Vacation for students	01-12-2017	

2.6. STUDENTS

The student strength of the Institute is around **2600**. The Institute has been able to attract the students from all parts of the Country. Students of NIT Srinagar in addition to doing well in academics, also take part in other co-curricular and extra-curricular activities as well with lot of enthusiasm. The students actively participate in the Institute affairs. The welfare of students is one of the major priorities of the Institute. For this purpose Students' welfare wing works towards the holistic development of the students.

2.7. EXAMINATION AND EVALUATION:

All under graduate, post graduate and M.Phil./ Ph.D. examinations, of the Institute are conducted centrally by the Examination Section of the Institute. The medium of examination for all examinations including dissertations and thesis is British English.

The performance of a student is evaluated in terms of two indices viz; the Semester Grade Point Average (SGPA) for a semester and Cumulative Grade Point Average (CGPA) which is the Grade point index for all the completed Semesters at any point of time. The Semester Grade Point Average (SGPA) is calculated on the basis of grades obtained in all courses in a semester and Cumulative Grade Point Average (CGPA) is calculated on the basis of pass grade in all completed semesters.

For each course, a grade is awarded on the basis of two written examinations in the case of theory papers i.e. Mid-term and Major Examinations with weightage of 30 and 60 marks, respectively. 10 marks are reserved for class performance and attendance of the student in the course. The paper setting and evaluation is done at the concerned Department level and monitored by a Departmental Monitoring Committee (DMC). Mid-Term examination answer scripts are returned to students and the major answer scripts are shown to them before submission of grade to the DMC.

B.Tech. students are required to submit a project report at the end of the 8th semester, which starts in 7th semester. It is to be submitted in the form of a bound thesis. The Heads of the Departments constitute a Project Evaluation Board (PEB) which assesses each individual project of the students. The evaluation is done in the following manner:-

<i>SUPERVISOR</i> 40%	<i>EVALUATION BOARD</i> 60%	
Based on the work done by the student during the tenure of the Project)	20% for Project Report Contents & Quality	40 % For Presentation & viva voce

The Project Evaluation Board comprises of:-

- a) Head of the Department concerned
- ii) One senior most faculty member of the concerned department
- iii) Supervisor concerned and
- iv) One expert from any other sister Department of the Institute for B.Tech.

In case of M.Tech. the expert is from outside the Institute, nominated by Director from an approved panel.

2.8.PLACEMENTS

The Institute has a well established Training and Placement (T &P) Department which takes care of the Technical/Industrial training and the Placement of the Students. The T & P Department is usually headed by a senior faculty member. The Department of T&P arranges for the industrial/work training of the students which is an essential requirement at 5th/7th semester levels of B.Tech. program and it also takes care of on-campus placement of the students by inviting /interacting with various agencies. Students from different departments of the Institute are also involved in the relevant activities of the T&P Department. The T&P Department also arranges trainings for the students for their better performance in interviews and other presentations.

2.9.GAMES & SPORTS:

The sports activities of the Institute are looked after by the Physical Education Section of the Institute. The Section puts in every effort to develop the sports activities for the bona-fide students of the Institute. The students are provided all possible facilities for their active participation in co-curricular and extra-curricular activities. They are also encouraged and provided all opportunities to participate in all major sports events including participation in inter-branch, inter-semester, inter-NIT, games/sports and other competitions. Besides this they are involved in a wide spectrum of social, cultural and technological activities throughout the year.

Both genders are fully exposed to higher level of competitions conducted at national and state level.

2.10.CAMPUS INFRASTRUCTURE

For maintenance and development of the campus infra-structure, the Institute has Planning and Development Wing which has three separate divisions of Civil Construction, Estates and Electrical Maintenance & Repairs.

The present campus is spread over 67 acres of land on the banks of World famous Dal lake. The land area available being insufficient, the Institute continues its efforts to provide the necessary infra-structure for better academic standards. Acquisition of additional land for the campus is also under consideration and it is hoped that in near future the Institute will succeed in acquiring additional campus.

For every Department of the Institute there are well established required laboratories, class rooms and other facilities. The Institute Campus being a residential one, has the residential facilities for both students and staff of the Institute. The construction of a Mega Hostel, Auditorium, Specious Guest House

are under consideration of the authorities to meet the additional requirements of the accommodation resulted from the increased in-take of the students and from other co-curricular activities.

The Institute has all basic and required amenities for the students and staff which include Medical Unit, Computer Services Centre, Well Maintained Play Ground, Recreational Centre, Students Activity Centre, Gymnasium, Transport facility etc.

2.11. STAFF POSITION

<u><i>S.No: Position</i></u>	<u><i>Staff sanctioned</i></u>	<u><i>Staff in position</i></u>
<i>1. Academic Staff:</i>		
<i>Director</i>	<i>01</i>	<i>01</i>
<i>Registrar</i>	<i>01</i>	
<i>Faculty</i>	<i>198</i>	<i>78+8 (Trainee Teachers)</i>
<i>2 Sr. Administrative Staff</i>	<i>20</i>	<i>02</i>
<i>3. Non-Teaching Staff</i>	<i>198</i>	<i>243</i>

NB: The excess staffs due to restructuring of the non-teaching staff of the NTIs as per MHRD orders.

3.0 ACADEMIC STATISTICS

3.1. COURSES OFFERED

B.Tech. Courses

<i>DISCIPLINE</i>	<i>SANCTIONED INTAKE</i>	<i>ADMISSIONS made 2017-18</i>
<i>Chemical Engineering</i>	<i>77 + 3(D.A.S.A)</i>	<i>62</i>
<i>Civil Engineering</i>	<i>123 + 10(D.A.S.A)</i>	<i>114</i>
<i>Computer Science Engineering</i>	<i>62 + 7(D.A.S.A)</i>	<i>67</i>
<i>Electrical Engineering</i>	<i>77 + 7(D.A.S.A)</i>	<i>74</i>
<i>Electronics and Communication Engineering</i>	<i>77 + 7(D.A.S.A)</i>	<i>74</i>
<i>Information Technology</i>	<i>62 + 7(D.A.S.A)</i>	<i>59</i>
<i>Mechanical Engineering</i>	<i>77 + 9(D.A.S.A)</i>	<i>78</i>
<i>Metallurgical Engineering</i>	<i>77 + 3(D.A.S.A)</i>	<i>19</i>
<i>Total</i>	<i>632 + 53(D.A.S.A)</i>	<i>547 + 0 (D.A.S.A)</i>

M.Tech. Courses

<i>DISCIPLINE</i>	<i>INTAKE</i>	<i>ADMISSIONS 2017-18</i>
<i>Water Resources Engineering (Civil Engineering Department)</i>	<i>15</i>	<i>12</i>
<i>Structural Engineering (Civil Engineering Department)</i>	<i>25</i>	<i>24</i>
<i>Communication and Information Technology (Electronics and Comm. Engineering)</i>	<i>25</i>	<i>18</i>
<i>Micro Electronics</i>	<i>13</i>	<i>09</i>

Mechanical System Design (Mechanical Engineering)	25	13
Industrial Tribology and Maintenance Management	26	11
Electric Power & Energy System	26	17
Transportation Engg	18	14
Geo-Tech	17	14
Chemical Engineering	18	04
<i>Total</i>	<i>208</i>	<i>136</i>

M.Sc. Physics

<i>DISCIPLINE</i>	<i>INTAKE</i>	<i>ADMISSIONS 2017-18</i>
M.Sc. Physics	25	03

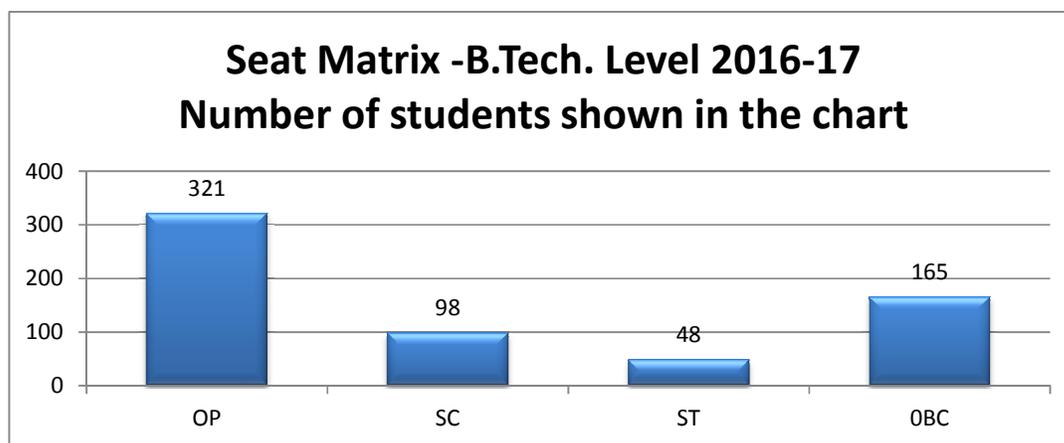
M.Phil / Ph.D. Programmes: 150 annually.

3.2. COURSE WISE ENROLMENT WITH CATEGORY/ GENDER BREAK-UP:

3.2.1 Seat Matrix- B.Tech Level 2017-18

Quota	Degree	Branch	OP	OPPH	SC	SCPH	ST	STPH	OBC	OBCPH	TOTAL
Other State (50%)	B.Tech	CSE	15	01	05	-	02	-	08	-	31
		IT	15	01	05	-	02	-	08	-	31
		Civil	29	02	08	01	05	-	15	01	61
		Mech	19	01	06	-	03	-	09	01	39
		Elect	19	01	06	-	03	-	09	01	39
		E&C	18	01	06	-	03	-	09	01	38
		Chem	19	01	06	-	03	-	09	01	39
		M&MT	18	01	06	-	03	-	09	01	38
		Total	152	9	48	01	24	-	76	6	316

Home State (J&K) (50%)	B.Tech.	CSE	15	01	05	-	02	-	08	-	31
		IT	15	01	05	-	02	-	08	-	31
		Civil	29	02	08	01	05	-	16	01	62
		Mech	18	01	06	-	03	-	09	01	38
		Elect	18	01	06	-	03	-	09	01	38
		E&C	19	01	06	-	03	-	09	01	39
		Chem	18	01	06	-	03	-	09	01	38
		M&MT	19	01	06	-	03	-	09	01	39
		Total	151	9	48	01	24	-	77	6	316



3.2.2 Students enrolment -Category wise

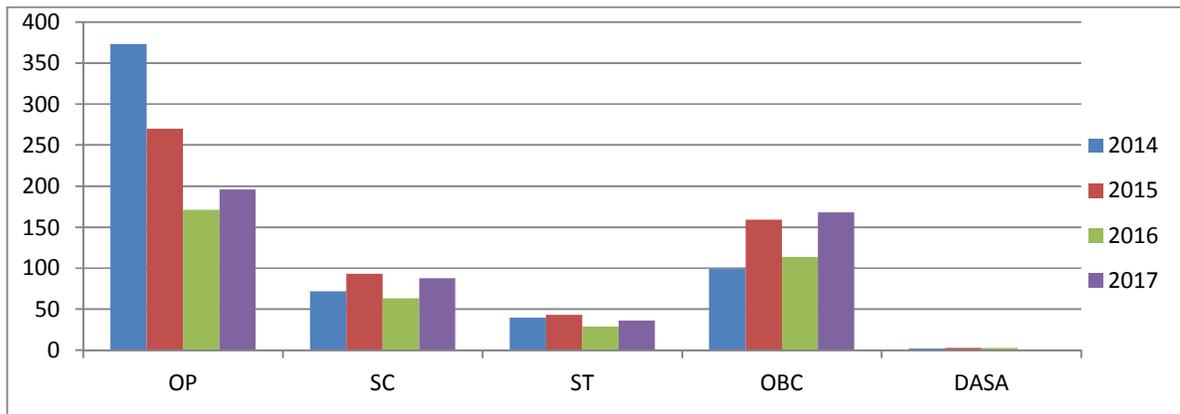
B.Tech. :

<i>Students Enrolled</i>							
<i>Year</i>	<i>Batch</i>	<i>OP</i>	<i>SC</i>	<i>ST</i>	<i>OBC</i>	<i>DASA</i>	<i>Total</i>
2014	Civil	71	15	08	24		118
	ELE	47	08	05	13		73
	ECE	48	09	04	12		73
	Chem	39	09	05	12		65
	Mech.	47	09	05	13	01	75



	Met.	43	08	05	10		66
	C. Sc.	38	06	04	09	01	58
	I.T.	38	08	04	06		56
		371	72	40	99	02	584
2015	Civil	51	17	07	34	01	110
	ELE	32	12	06	23		73
	ECE	32	12	05	22		71
	Chem	36	12	05	09		62
	Mech.	35	12	06	21		74
	M&ME	26	11	04	10		51
	C. Sc.	29	08	05	16	02	60
	I.T.	24	09	05	18		56
		265	93	43	153	03	557
2016	Civil	32	16	08	22		78
	ELE	22	09	05	18		54
	ECE	18	07	04	15		44
	Chem	21	08	01	07		37
	Mech.	24	08	02	21		55
	M&ME	13	04	02	06		25
	C. Sc.	25	06	05	12	03	51
	I.T.	16	05	02	13		36
		171	63	29	114	03	380
2017	Civil	39	15	09	42	0	105
	ELE	26	12	05	24	0	67

	ECE	30	10	04	23	0	67
	Chem	24	18	03	11	0	56
	Mech.	25	12	06	28	0	71
	M&ME	04	04	03	0	0	11
	C. Sc.	24	09	04	22	0	59
	I.T.	24	08	02	18	0	52
		196	88	36	168	0	488



Admission Statistics -B.Tech. (04- years)

M.Tech. :

<i>Admission Made</i>						
<i>Year</i>	<i>Programme</i>	<i>OP</i>	<i>SC/ST</i>	<i>Sponsored</i>	<i>OBC</i>	<i>Total</i>
2016	Water Resource Engg.	06	01/01	02	-	10
	Mechanical System Design	06	04/-	05	03	18
	Structural Engineering	13	03/01	03	02	22
	Industrial Tribology and Maintenance Management	09	02/-	03	01	15
	Communication Information Technology	12	01/01	05	-	19



	Electric Power & Energy System	11	02/01	05	01	20
	Transportation Engg	06	02/01	05	03	17
	Geo-Tech	06	01/01	05	01	14
	Micro Electronics	05	01/-	02	01	09
	Chemical Engineering	02	--	01	-	03
	TOTAL	76	17/06	36	12	147
<i>Year</i>	<i>Programme</i>					
2017	Water Resource Engg.	08	01	01	0	11
	Mechanical System Design	09	01	01	02	13
	Structural Engineering	16	03	01	03	23
	Industrial Tribology and Maintenance Management	09	-	-	-	09
	Communication Information Technology	15	-	01	-	16
	Electric Power & Energy System	11	01	01	04	17
	Transportation Engg	10	-	01	02	13
	Geo-Tech	08	01	01	03	13
	Micro Electronics	08	-	-	01	09
	Chemical Engineering	02	-	-	01	03
	TOTAL	96	07	07	16	127

M.Sc. Physics:

<i>Year</i>	<i>OP</i>	<i>SC/ST</i>	<i>Sponsored</i>	<i>OBC</i>	<i>Total</i>
2015	03	-	-	-	03
2016	04	-	-	03	07
2017	02	-	-	01	03

3.2.3. Students' Enrolment Gender wise

a) B. Tech

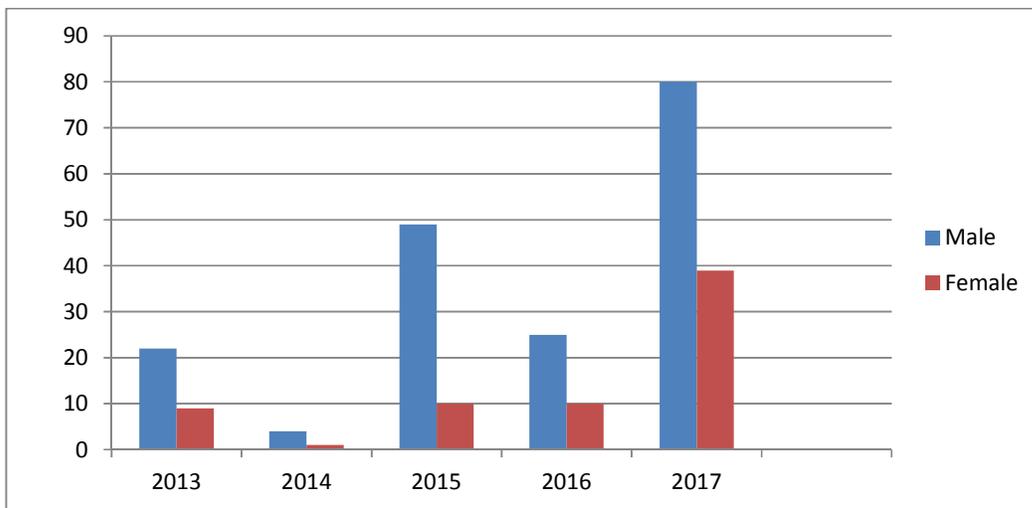
Batch	CIVIL		ELE		ECE		CHEM		MECH		METT		CSE		IT		TOTAL M/F
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
2014	109	09	61	12	64	09	54	11	74	01	56	10	50	08	48	08	584
2015	96	14	60	13	58	13	56	06	74	-	41	10	59	01	48	08	557
2016	64	14	50	04	35	09	31	06	55	-	21	04	48	03	32	04	380
2017	95	11	60	07	56	11	46	11	71	01	12	02	53	07	43	10	496
Total	364	48	231	36	213	42	187	34	274	02	130	26	210	19	171	30	2017

b) M. Tech. :

Batch	WRE		Mech. System Design		Structural Engg		Comm. & Information Tech		Industrial Tribology & Maintenance Management		Elect. Power & Energy System		Transportation Engg		Geo-Tech.		Micro Electronics		Chemical Engg.		M.Sc. Physics-		
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
2016	09	01	13	05	19	03	12	07	13	02	14	06	16	01	13	01	05	04	3	-	06	01	
2017	06	06	13	0	2	2	02	11	07	11	0	16	01	13	01	11	03	04	05	04	0	11	25

d) Ph.D. (Faculty of Engineering) :

Year	ECE		ELE		CIT/CSE		MECH		Chemica		MMED		CVIL	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
2014-15	-	01	-	-	01	-	-	-	03	-	-	-	-	-
2015-16	06	03	09	03	02	-	15	-	-	-	02	01	15	03
2016-17	03	04	01	-	02	02	09	01	1	-	01	01	08	02
2017-18	04	14	13	07	06	05	17	03	01	0	02	01	37	09

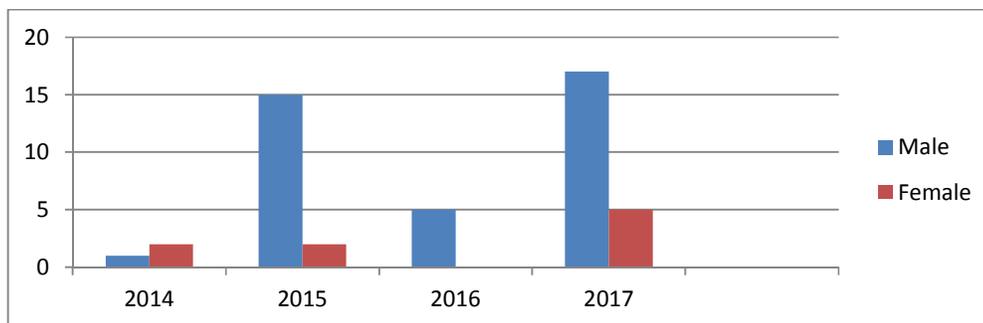


Ph.D. enrolment Gender wise (Faculty of Engineering)

e) Ph.D. (Faculty of Science) :

Batch	Physics		Chemistry		Math		HSS	
	M	F	M	F	M	F	M	F
2013	13	-	11	4	5	2	-	1
2014	01	-	-	02	-	-	-	-
2015	05	01	06	01	02	-	02	-
2016-17	01	-	04	-	-	-	-	-
2017-18	09	03	08	02	0	0	0	0





Ph.D. enrolment Gender wise (Faculty of Science)

3.3. STUDENTS' TOTAL STRENGTH

3.3.1. Strength in Undergraduate Programme

The below mentioned statement shows the student's strength with each category in this Institute:-

OM	1003
SC	316
ST	148
OBC	534
DASA	08
Total:	2019

3.3.2. Strength in M.Tech. Programme

OM	170
SC/ST	35
Sponsored	10
OBC	40
Total	255

3.3.3. M.sc Physics - 10

3.3.4. Ph.D. Programme - 316



4.0. DEPARTMENTS AND CENTRES

The Institute has Eight Engineering Departments, Four Science and Allied departments and the five Centres. The departments are:

(1) Chemical Engineering, (2) Civil Engineering, (3) Computer Science Engineering, (4) Electrical Engineering, (5) Electronics and Communication Engineering, (6) Information Technology, (7) Mechanical Engineering and (8) Metallurgical and Materials Engineering branches

Science & Allied Departments are : Chemistry, Mathematics, Physics and Social Sciences.

The Centres are: Computer Services Centre, Central Research Facilities Centre, Innovation, Incubation & Entrepreneurship Development Centre, Maintenance Engineering Centre, Water Resources and Management Centre

4.1 DEPARTMENTS

4.1.1 DEPARTMENT OF CIVIL ENGINEERING

Head: Dr. Shagoofa Rasool Shah

Introduction

The department of Civil Engineering is one of the earliest departments at the commencement of the Institute in 1960. Over the years, the department has progressed both in infrastructure facilities and faculty. The department has highly qualified and experienced faculty, supported by experienced technical staff and well equipped laboratories attached to different divisions. The department offers teaching at the undergraduate and post-graduate levels to

empower students to meet the technological needs and socio-economic challenges of the 21st century. The department also offers Ph.D. programs.

Academic Staff:			
Head	Dr. Shagoofa Rasool Shah		
Faculties:			
Professor	Associate Professor	Assistant Professor/ Teachers Trainee	Lecturer on Contract during the period
09	08	Asstt. Professors = 03 Teachers Trainee = 01	21

I. Papers published by the staff (National/Internal) during the period of (01.04.2017 to 31.03.2018):

S. No.	Name of the staff Member	Title of the paper	Conference/Journal etc, where published	Date of Publication
1	Yasir Altaf, Ahanger Manzoor Ahmad and Fahimuddin Mohd	MLR Based Statistical Downscaling of Temperature and Precipitation in Lidder Basin Region of India;	Environment Pollution and Climate Change 1:109	2017
2	Sarvat Gull, Ahangar M.A. and Ayaz Mohmood Dar	Prediction of Stream Flow and Sediment Yield of Lolab Watershed Using SWAT Model	Hydrology Current Research, Vol.8, Issue 1, No. 265.	2017
3	Yasir Altaf, Ahanger Manzoor Ahmad and Fahimuddin Mohd	Modeling Snowmelt Runoff in Lidder River Basin using coupled Model	International conference on Status and future of Large Rivers organized by University of Vienna and NIH Roorkee and held at India habitat centre -New Delhi.	2017
4	Yasir Altaf, Manzoor A. Ahanger & Mohammad	Hydrological response to climate change in a high altitude catchment	Int. J. Water, Vol. 12(2), pp: 170-193.	2018

	Fahimuddin			
5 (i)	Dr. B. A. Mir, Professor	On Integrated Testing and Performance Assessment of Dredged Solid Waste from Dal Lake for Sustainable Environment	American Journal of Civil and Environmental Engineering, USA, http://www.aascit.org/journal/ajcee .	pp. 1-72, Vol. 2, No.1, Aug. 2017
(ii)		Studies on the Mechanical Behavior of Bottom Ash for a Sustainable Environment (Best paper Award)	International Journal of Civil and Environmental Engineering- scholar.waset.org/1307-6892/10007302	pp. 857-863, Vol:11, No:7, July 2017 International Science Index
(iii)		Smart Materials and Their Applications in Civil Engineering: An Overview.	International Journal of Civil Engineering and Construction Science, USA	pp. 11-20, Vol. 4, No. 2, ISSN: 2472-9558, May 2017
(iv)		Mechanical Behavior of Cement Stabilized Dredged Soil.	Global Journal of Researches in Engineering (E), Print ISSN: 0975-5861, © 2017 Global Journals Inc. (USA)	pp. 42-48, Vol. 17, Issue 4, Version 1.0, Dec. 2017
(v)		Mechanical Behavior of Lime Stabilized Dredged Soil.	Proceedings of Indian Geotechnical Conference 2017 GeoNEst 14-16 December 2017	Th09_281, pp. 1-4, IIT Guwahati, India, Dec. 2017
(vi)		Evaluation of effect of Stiffness and Orientation of Reinforcement on the Shear Strength of Sand.	Proceedings of Indian Geotechnical Conference 2017 GeoNEst 14-16 December 2017	Th11_465, pp. 1-4, IIT Guwahati, India, 2017
(vii)		Some Studies on the Performance Behavior of Stabilized Dredged Soil as Highway Construction Material.	Proceedings of Indian Geotechnical Conference 2017 GeoNEst 14-16 December 2017	Th13_452, pp. 1-4, IIT Guwahati, India, Dec. 2017
(viii)		Role of Gliment as an additive on the CBR Behavior of Kerewa Soils.	Proceedings of Indian Geotechnical Conference 2017 GeoNEst 14-16 December 2017	Th09_579, pp. 1-4, IIT Guwahati, India, Dec. 2017
BOOK CHAPTERS				
Sl. No.	Name of the staff Member	Title of the Chapters	Book/Publisher etc,	Date of Publication
1	Dr. B. A. Mir, Professor	Some Studies on Mechanical Behavior of Cement Stabilized Dredged Soil from Flood Spill Channel of Jhelum River Srinagar.	Contemporary Issues in Geoenvironmental Engineering, Sustainable Civil Infrastructures, In D.N. Singh and A. Galaa (eds.), © Springer International Publishing AG 2018	pp. 386-406, Chp. No. 32, March 2018

2		Some Model Studies on Reinforced Dredged	Recent Advances in Environmental Science from the Euro-	pp. 1697-1700, Chp No. 94 ,© Springer
		Soil for Sustainable Environment	Mediterranean and Surrounding Regions, Advances in Science, Technology & Innovation. In A. Kallel et al. (eds.),	International Publishing AG 2018, March 2018
o6	Danish Ahmed	Solid Waste Management of Kashmir Valley	International Conference on Advancement in Engineering, Applied Science and Management, Mumbay IJESTR Vol-5, Issue -1 ISSN 2394-3386	07 Jan--2018
		Waste free Srinagar City	IJESTR Vol-5, Issue -1 ISSN 2394-3386 Hyderabad	Jan--2018
		Modified Low Cost Solar Water Purifies	International Journal of Advance in Science and Engineering, NIT Sgr ISSN(o) 2319-8334, ISSN 2319-8346 Vol-6 Dec 2017, RISTE-2017 BEST PAPER AWARD	
o7	Aijaz Ahmad Masoodi	Serviceability Limits in asbestos fiber RCC beams	International journal of Engineering Technology Science and Research	Vol. 05, Issue o2 February 2018
		Bacteria impregnated	International journal	Vol. 05,

	concrete – Effects on strength parameters	of Engineering Technology Science and Research	Issue 02 February 2018
	Behaviour of Fibre Reinforced Concrete Beams in Pure Torsion, Combined Bending and Torsion	Online International Interdisciplinary Research Journal (Bi-Monthly)	Vol. 07 June-2017, Special Issue 02, ISSN2249-9598

II. Sponsored Projects :

S. No.	Title of the Project	Investigator (s)	Sponsoring Organization	Amount (in Rs.)	Starting Date
01.	Briquetting of Dal Lake Weeds	Danish Ahmed Mushtaq Ahmed (Chemical Deptt)	SAP	23.90 Lacs	2018

III. Programme attended by the staff (Conference/Courses/Trainings):

S. No.	Name of the staff Member	Name of the programme attended	Institute where attended	Date
01.	Dr. A. Q. Dar	Data driven runoff modeling using different sets of predictors A case Study”	LD College of Engineering Ahmadabad, Gujrat	21-24 December, 2017
02.	Dr. B.A. Mir	Ist Euro Mediterranean Conference for Environmental Integration (EMCE) and to present paper at Tunisia	Tunisia	22-25 November, 2017
03.	Er. F.A. Mir	Geotechnical Modeling using GeoStudio “	I.I.T.Delhi	18-20 December, 2017
04.	Dr. A. Q. Dar	Gain course on Managing	Thiruvanthapuram	23-24 January,

		Floods and Droughts in a changing climate	Kerala	2018
05.	Dr. M .A. Lone	Managing Floods and Droughts in a changing climate	Jamia Millia Islamia New Delhi	15-20 January, 2019
06.		Indian Geotechnical Conference (IGC) 2017 and present his paper	I.I.T. Guwahati Assam	14-16 December, 2017
07	Dr. B. A. Mir, Professor	19 th International Conference on Civil, Environmental and Geological Engineering London, United Kingdom	Holiday Inn London – Wembley, Empire Way, Wembley, Middlesex, HA9 8DS, London	July 25 - 26, 2017
08		1 ST Euro-Mediterranean Conference for Environmental Integration, Sousse, Tunisia,	University of Sfax, Tunisia	November 22-25 2017
09	Aijaz Ahmad Masoodi	Bacteria impregnated concrete – Effects on strength parameters	2 nd International conference on New Frontiers of Engineering, Science, Management & Humanities	Mahratta Chamber of Commerce and Industries, Pune February 2018
10		Servicability Limits in asbestos fibre RCC beams	2 nd International conference on New Frontiers of Engineering, Science, Management & Humanities	Mahratta Chamber of Commerce and Industries, Pune February 2018

IV. Outgoing Doctoral Programme:

S. No.	Topic	Investigator	Supervisor(s)	Degree Awarded
01.	Integrated Climate and Hydrological Modeling of a High Altitude Western Himalayan Catchment	Mr. Yasir Altaf	Prof. M. A. Ahanger	Ph. D

02.	Effect of Obstacle type and Bed Material Gradation on Local Scour Phenomenon	Ms Bint ul Huda	Prof. M. A. Lone	Ph. D
03.	Protective Filter Design Criteria based on particle shape and base gradation Parameters	Nasir Ahmad Rather	Prof. M. A. Lone	Ph. D

V. Testing & Consultancy services rendered during 2017-18:

S. No.	Title of the Project	Consultancy rendered to (name of the agency)	Amount Earned
01.	Design of Bridges, Flyover, Retaining walls, Lab testing etc	Simplex, R&B, Kashmir, CUK etc carried out by Structural Section of the Department.	Rs. 32,50,000/=
02.	Collection and Analysis of Bed & Bank Soil samples of River Jhelum, Testing of two Bore Hole at Achan Wast Dump site Sgr, Const of Indoor Sports facility centre at NIT, Sgr., Soil Testing etc	General Manager WAPCOS ltd, Central Public Works Deptt. Office and other agencies carried out by Geotechnical Engineering Section of the Department.	Rs. 8,52,500/=
	Non Destructive Tests Conducted at BSF Campus Baramulla	NBCC Limited	4.5 Laacs

VI. Purchase Made:

S. No.	Name of the equipment /item	Date of purchase	Quantity	Annual Purchase
01.	Loading Jack 200 tons	31/ 08/2017	One No	Rs. 3,45,500/=
02.	Equipment for Water Testing like pH meter, BOD incubators, glassware, Etc	2017-2018	Remaining purchase under process	Environmental and sustainability studies centre ESSC

List of Laboratories:

01.	Structural Engineering Laboratory	05..	Surveying Laboratory
02.	Concrete Engineering Laboratory	06.	Engineering Geology Laboratory
03.	Geotechnical Engineering Lab.	07.	Transportation Engineering Laboratory
04.	PHE Laboratory	08.	Fluid Mechanics Laboratory

4.1.2 DEPARTMENT OF MECHANICAL ENGINEERING

Head: Prof. Sheikh Nazir Ahmad

Introduction

Established in 1963, the Department of Mechanical engineering has one B. Tech and two M. Tech programmes. The curriculum includes a diverse range of the subjects. The department has 12 labs to cater to the needs of the students. The

real strength of the department lies in its highly qualified and experienced faculty. Most of the outgoing students are recruited by reputed organizations during campus placement every year.

Faculty

Academic Staff:			
Head	Prof. Sheikh Nazir Ahmad		
Faculties:			
Professor	Associate Professor	Assistant Professor	Lecturer (on contract) during the period
<i>Babar Ahmad</i>	<i>Sheikh Shahid Saleem</i>	<i>Mohammad Mursaleen</i>	<i>Narnder Panwar</i>
<i>Mohammad Farooq Wani</i>	<i>Saad parvez</i>		<i>Kaleem Ahmad</i>
<i>G.A. Harmain</i>	<i>Mohammad Hanief</i>		<i>Himanshu Gupta</i>
<i>Sheikh Nazir Ahmad</i>	<i>M. S.Charoo</i>		<i>Sumit Kumar</i>
<i>Adnan Qayoum</i>			<i>Shuhaib Mushtaq</i>

I. Papers Published by the Staff (National / International) during the period of 01.04.2017 to 31.03.2018:

S. No .	Name of the Staff members	Title of the papers	Conference/Journal etc, where published	Date of publishment
01	Prof. M. F. Wani	1. "Effect of load on the retention of tribofilms at the contact interface under dry sliding conditions at 500 oC	Accepted for Publication in Journal of Material Science & Engineering Technology, 2018.	2018

		<p>2. Tribological performance evacuation of PTFE under dry sliding and aqueous environment using TA and GRA effect of material, test environment and load.</p> <p>3. Nano Indentation, Nano scratch and nano layer behaviour of metal-MoS₂ coatings on aluminum alloy 4047 deposited by PLD technique</p>	<p><i>J. of Polymer Composites</i></p> <p><i>Surface and Coatings Technology</i></p>	<p>2018</p>
		<p>4. Wear mechanism and optimization of tool wear and surface roughness in hard turning AISI D2 steel using Al₂O₃/TiC mixed ceramic tools</p> <p>5. High-Temperature Friction and Wear Studies of Fe-Cu-Sn Alloy Containing Graphite as Solid Lubricant under Dry Sliding Conditions</p> <p>6. Tribological characterization of N 80A and 21-4N valve materials against GGG-40 seat material under dry sliding conditions at temperatures to 500 oC</p> <p>7. Wear modeling revisited using electrical analogy</p> <p>8. Tribological Characterization of Hypereutectic Al-25Si Alloy under Dry and Lubricated Sliding Conditions</p> <p>9. Tribological Characterization of Graphene Oxide as Lubricant Additive on Hypereutectic Al-25Si/Steel Tribopair</p> <p>10. Fretting Wear Characterization of AZ91 and AE42 Magnesium Alloys Under Dry Sliding Conditions</p> <p>11. Mechanical and</p>	<p><i>J of Engineering Manufacture</i></p> <p><i>Material Research Express</i></p> <p><i>J. of Tribology</i></p> <p><i>J. of Tribology</i></p> <p><i>J. of Tribology</i></p> <p><i>Tribology Transaction</i></p> <p><i>J.of Tribology</i></p> <p><i>Tribology Transaction</i></p>	<p>2017</p> <p>2017</p> <p>2017</p> <p>2017</p> <p>2017</p> <p>2017</p> <p>2017</p> <p>2017</p>

		<i>Tribological properties of spark plasma sintered SiC/TiB₂ and SiC/TiB₂/TaC composites: Effects of sintering temperatures (2000°C & 2100°C)</i>		
		12. <i>High Temperature Friction and Wear Studies of Nimonic 80A and Nimonic 90 against Nimonic 75 under Dry Sliding Conditions</i>	<i>J. of Tribology</i>	2017
		13. <i>Self lubricating tribological characterization of lead free Fe-Cu based bearing material</i>	<i>J. of Tribology</i>	2017
		14. <i>Effect of load on the tribological properties of hypereutectic Al-Si alloy under boundary lubrication conditions</i>	<i>J. of Tribology</i>	2017
		15. <i>Friction and Wear Characterization of Hypereutectic Al-Si alloy under boundary lubrication conditions.</i>	<i>Mater. Resources Express</i>	2017
		16. <i>Friction and Wear Characterization of Hypereutectic Al-Si Alloy/steel Tribopair under Dry and Lubricated Conditions</i>	<i>J. of Tribology</i>	2017
		17. <i>Synthesis and Tribological Properties of Graphene: A Review</i>	<i>J. of Tribology</i>	2017
		18. <i>Performance evaluation of PCBN, coated carbide and mixed ceramic inserts in finish-turning of AISI D2 steel</i>	<i>Materils Today proceedings</i>	2017
		19. <i>Tribological Properties of MoS₂ Particles as Lubricant Additive on EN31 Alloy Steel and AISI 52100 Steel Ball</i>	<i>International Journal of Industrial Engineering Computations</i>	2017
		20. <i>Modeling and analysis of tool wear and surface</i>		2017

		roughness in hard turning of AISI D2 steel using response surface methodology 21. Role of Green Tribology in Sustainability of Mechanical Systems: A State of the Art Survey 22. The study of Microhardness of powder metallurgy fabricated Fe ₂ Cu alloy using Vickers indenter	Advanced Material proceedings.	2017
2	G.A.Harmain , Ankush Raina, Mir Irfan Ul Haq	Numerical investigation of flow around a 3D bluff body using deflector plate	<u>International Journal of Mechanical Sciences</u> Volumes 131–132, , Pages 701-711 ISSN NO: 0020-7403	Oct.2017
	G.A.Harmain , Azher Jameel	A coupled FE-IGA technique for modeling fatigue crack growth in engineering materials	Taylor & Francis, Mechanics of Advanced Materials and Structures, ISSN NO: 1537-6494,	14 Mar 2018
	G.A.Harmain, Azher Jameel	Fatigue crack growth analysis of cracked specimens by the coupled finite element-element free Galerkin method	Taylor & Francis, Mechanics of Advanced Materials and Structures, VOL. 0, NO. 0,1-14 ISSN NO: 1537-6494	2018
	G.A.Harmain, Showkat A. Kanth , Azher Jameel	Modeling of Nonlinear Crack Growth in Steel and Aluminum Alloys by the Element Free Galerkin Method	Materialstoday: Proceedings Volume 5, Issue 9, Part 3, , Pages 18805-18814 ISSN NO: 2214-7853	2018
	G.A.Harmain, Aazim Shafi Lone , Azher Jameel	A coupled finite element-element free Galerkin approach for modeling frictional contact in engineering components	Materialstoday: Proceedings Volume 5, Issue 9, Part 3, , Pages 18745-18754 ISSN NO: 2214-7853	2018
	G.A.Harmain, Azher Jameel	Extended iso-geometric analysis for modeling three-dimensional cracks	Taylor & Francis, Mechanics of Advanced Materials and Structures, 2018, VOL. 0, NO. 0,1-9 ISSN NO: 1537-6494	2018

	G.A.Harman, J.H.Masoodi	<i>Sediment erosion of Francis turbine runner in the Himalayan region of India</i>	<i>Hydropower and Dams, Issue One, ISSN No: 13522523</i>	2017
	G. A. Harmain, Showkat Ahmad Kanth Aazim Shafi Lone , Azher Jameel	<i>Level Set Methodology for Representing Different Discontinuities in Engineering Materials</i>	<i>Proceedings of 62nd Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM),</i>	December, 15-18, 2017
	G. A. Harmain, Aazim Shafi Lone , Showkat Ahmad Kanth , Azher Jameel	<i>A state of Art Review on the Level Set Method for Modelling Discontinuities in Engineering materials</i>	<i>Proceedings of 62nd Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM),</i>	December, 15-18, 2017
	G. A. Harmain, Aditya Kumar Singh, Azher Jameel	<i>Modeling of Large Elasto-Plastic Deformation in Bi-material Components by FEM</i>	<i>Proceedings of the 7th International Conference on Theoretical, Applied, Computational and Experimental Mechanics (ICTACEM) ,</i>	December 28-30, 2017
	G. A. Harmain, Junaid Hassan Masoodi, Mohammad Zehab Din, Ishfaq Makayei	<i>A CFD approach for Assessment of sediment Erosion on Dulhasti Power Station Runner</i>	<i>13th JK Science Congress,</i>	2018
	G. A. Harmain, Farooq A Najjar	<i>Life Cycle Assessment for Hydroelectric Power Plant Thrust Bearing</i>	<i>13th JK Science Congress,</i>	2018
	G. A. Harmain, Showkat Ahmad Kanth , Aazim Shafi	<i>Level Set Methodology for Representing Different Discontinuities in Engineering Materials</i>	<i>Proceedings of 62nd Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM),</i>	December, 15-18, 2017

	Lone , Azher Jameel			
	G. A. Harmain, Azher Jameel, Farooq A. Najar, Junaid H. Masoodi	Large Elasto-Plastic Deformations in Bi-Material Components by Coupled FE-EFGM	<u>IOP Conference Series: Materials Science and Engineering</u> 225 012295	2017
3	Sheikh Shahid Saleem and M. F. W ani	Tribological Characterization of N 80A and 21-4N Valve Materials Against GGG-40 Seat Material Under Dry Sliding Conditions at Temperatures Up To 500°C	ASME Journal of Tribology.139(6) 0616 05-061605-20. 2017 JOURNAL	Nov 2017
	Sheikh Shahid Saleem and M. F. W ani	Effect of load on tribofilms at the contact interface under dry sliding conditions at 500 °C	Material wissenschaft und Werkstofftechnik (Materials Science and Engineering Technology. WILEY-V C H VERLAG GMBH) 49(2), 169-184, 2018 JOURNAL	13 Feb 2018
4	Dr. M.S. Charoo (Associate Professor)	Pranav Dev Srivyas, M.S. Charoo , “Aluminum metal matrix composites – a review of reinforcement; mechanical and tribological behavior”	6th World Conference on Applied Science, Engineering and Technology (WCASET-18)	2nd & 3rd January 2018, GOA, INDIA.
		Pranav Dev Srivyas, M.S. Charoo , “Role of reinforcements on the mechanical and tribological behavior of aluminum metal matrix composites – a review” Materials Today: Proceedings Volume 5, Issue 9, Part 3, 2018, Pages 20041-20053, doi: 10.1016/j.matpr.2018.06.371	materials today Proceedings(Elsevier)	March 2018

		Pranav Dev Srivyas, M.S. Charoo , "Role of fabrication route on the mechanical and tribological behavior of aluminum metal matrix composites – a review" <i>Materials Today: Proceedings</i> Volume 5, Issue 9, Part 3, 2018, Pages 20054-20069, doi: 10.1016/j.matpr.2018.06.372	materialstoday Proceedings(Elsevier)	March 2018
		Wani Khalid Shafti, M.S. Charoo , "Nano Lubrication Systems: An Overview." <i>Materials Today: Proceedings</i> Volume 5, Issue 9, Part 3, 2018, Pages 20621-20630., doi: 10.1016/j.matpr.2018.06.443	materialstoday Proceedings(Elsevier)	March 2018
5	Mohammad Mursaleen	<p>1. Modelling and analysis of deboning in a smart beam in sensing mode using variational formulation</p> <p>2. Enhancing the Wear Resistance of WC-Co Cutting Inserts using Synthetic Diamond Coatings</p> <p>3. Development of a Dual Layered Diamond Coated-WC-Co Cutting Tool for Enhancing Tool Life in the Dry Machining of Mild-steel Alloy</p> <p>4. Mechanical and Tribological Behavior of Microcrystalline CVD- Diamond Coatings</p>	<p>Journal of King Saud University – Science</p> <p>Industrial lubrication and tribology journal-emerald publishing</p> <p>Journal of Engineering Manufacture</p> <p>Journal of Bio- and Tribo-Corrosion</p>	<p>https://doi.org/10.1016/j.jksus.2017.09.013</p> <p>Vol. 70 Issue: 7, pp.1224-1233, https://doi.org/10.1108/ILT-04-2017-0089</p> <p>sagepub.co.uk/journalsPermissions.nav vDOI.10.1177/0954405418780179 https://doi.org/10.1007/s40735-018-0144-1</p> <p>DOI</p>

		5.CVD Diamond	<i>Transactions of the Indian institute of metals</i>	10.1007/s12666-018-1454-1
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II. Programmes attended:

<i>S.No</i>	<i>Name of the Staff members</i>	<i>Name of the programme attended</i>	<i>Institute where attended</i>	<i>Date</i>
1	Prof. M.F.Wani	<ol style="list-style-type: none"> 1. attended Seminar at National School Of Engineering Sfax Tunisia 2. Two Days workshop on LAN 3. Earth Sciences and Engineering 4. Sensitization Workshop on Induction programme and Modalities 	<p>National School Of Engineering Sfax Tunisia</p> <p>NIT Srinagar</p> <p>National School Of Engineering Sfax Tunisia</p> <p>New Delhi</p>	<p>29th December, 2017</p> <p>2018</p> <p>2017</p>
2	Dr. G. A. Harmain	Workshop on Outcome Based Education (OBE) for Engineering Programs	AICTE Auditorium Nelson Mandela Marg Road Vasnt Kunj, New Delhi	8th to 9th Feb, 2018
3	Sheikh Shahid Saleem, Muhammad Junaid Mir, M. F. Wani, Shuhaib Mushtaq	5th International Conference and Exhibition on Sustainable Energy and Advanced Material (ICESEAM2017), 16-19 October 2017, Melaka, Malaysia.	Melaka, Malaysia.	16-19 October 2017

4	Shuhaib Mushtaq, M. F. Wani, Sheikh Shahid Saleem, Muhammad Junaid Mir	5th International Conference and Exhibition on Sustainable Energy and Advanced Material (ICESEAM2017), 16-19 October 2017, Melaka, Malaysia.	Melaka, Malaysia.	16-19 October 2017
5	M.S.Charoo	“Management Capacity Enhancement Programme for Teaching Staff” Under TEQIP III.	Port Blair	26 th Jan to 1 st Feb 2018.
6	Mohammad Mursaleen	TEM & HRTEM Material characterization	IIT, Kanpur	18-22 Sept. 2017.

III. Programme Conducted (Conferences/Courses/ Trainings) by the Department:

S.No.	Name of the Programme	Date When Conducted	Name of the Coordinator(S)	Sponsoring Agency, if any
1	Two Days workshop on “Outcome Based Accreditation”	17 th to 18 th March 2018	Prof.G A Harmain Dr. M. S. Charoo Dr. F. Q. Mir	TEQIP III
2	Outcome Based Education (OBE)	17th to 18th Feb, 2018	Dr.G. A. Harmain	TEQIP III

IV. Sponsored Projects

S.No.	Title of the Project	Investigator(s)	Sponsoring Organisation	Amount (in Rs)	Starting Year
1	International R&D Project: India-Tunisia Joint S & T Research Cooperation DST DST/INT/TUNISA/P-14/17	Prof. M.F.Wani, Dr.Shahid Saleem	DST	INR 21.6	2017
2	NDT of Steel frame structure of Multi level car Parking, Lal chowk		JK ERA	Rs 4,00,000/-	NDT of Steel frame structure of Multi level car Parking, Lal chowk
3	Development & Tribological Characterization of Self Lubricating Nano-Silicon Nitride and Nano-Silicon Ceramic Composites	Prof. M.F. Wani, Shahid Saleem, Rajat Gupta	DST	21,60,000/-	Oct 2017

V. Ongoing Doctoral Programme :

	Topic	Investigator	Supervisor(s)	Degree awarded
1	Nanomechanical and nanotribological properties of metal/MoS ₂ coating on Al-Si substrate by PLD	Sumera Bandy	Prof. M.F Wani	Pursuing
2	Tribological properties of filled PTFE based Composites under dry and aqueous environments	Jebran Khan	Prof. M.F Wani	Pursuing

3	<i>Tribological studies of nano coated Cutting tools</i>	Irshad Qadri	Prof. Wani	M.F	Pursuing
4	<i>Tribological characterization of MAX phase materials and its composites</i>	Jagtar Singh	Prof. Wani	M.F	Pursuing
5	<i>Engine Tribology</i>	Gurteej Singh	Prof. Wani	M.F	Pursuing
6	<i>Tribology of Composite Materials</i>	Sajad Lone	Prof. Wani	M.F	Pursuing
7	<i>Nanolubrication</i>	Quratalan	Prof. Wani	M.F	Pursuing
8	<i>Effect of Buoyancy and height ratio on the flow and heat transfer around a bluff body - An assumption on a trapezoidal geometry</i>	Dr. Parvez Malik	Dr.G.A. Harmain		Yes
9	<i>Supplier Involvement in Product Development Using Fuzzy Adaptive Resonance Theory</i>	Dr. Saad Parvez	Dr.G.A. Harmain		Yes
10	<i>Study of tribology of ceramic cutting tools during machining of Nickel alloy 718</i>	Mr. Irshad Qadri	Dr.G.A. Harmain		Pursuing
11	<i>A Study on Sediment Erosion of Francis Turbine Runner Blade</i>	Junaid Massodi	Dr.G.A. Harmain		Submitted
12	<i>An Assessment of Sediment Erosion of Pelton Turbine Buckets In Himalayan Belt of Jammu and Kashmir Pursuing</i>	Mr. Zehab Ud Din	Dr. G. A. Harmain		Pursuing
13	<i>Sediment based Tri-biological studies on some hydro runner materials used in Jammu & Kashmir State</i>	Mr. Ishfaq Makkai	Dr. G. A. Harmain		Pursuing
14	<i>Computational mechanics in fracture & fatigue of structures</i>	Mr. Azim Lone	Dr. G. A. Harmain		Pursuing
16	<i>Single overload fatigue at high temperature</i>	Mr. Ashutosh	Dr. G. A. Harmain		Pursuing
17	<i>Computational mechanics in fracture & fatigue of structures</i>	Mr. Showkat	Dr. G. A. Harmain		Pursuing
18	<i>An analysis of fatigue Crack Propagation in 304 LN Stainless Steel</i>	Mr. Chandra kant	Dr. G. A. Harmain		Pursuing

19	<i>Emissions and Performance Improvement of a 3 Cylinder SI Engine With Alternative Fuels and Water Based Micro-Emulsion Fuels</i>	<i>Ufaith Qadri</i>	<i>Prof M Marouf Wani</i>	<i>Pursuing</i>
20	<i>Emissions and Performance Improvement of a Single Cylinder VCR CI Engine With HCCI Combustion</i>	<i>Mushtaq Ahmad Rather</i>	<i>Prof M Marouf Wani</i>	Pursuing
21	<i>Tribology Area</i>	<i>Gurtej Singh</i>	<i>Prof M Farooq Wani Prof M Marouf Wani</i>	Pursuing
22	<i>Emissions and Performance Improvement of CI Engines Beyond The Use of Renewable Bio-fuels</i>	<i>Hussain Vali</i>	<i>Prof M Marouf Wani</i>	Pursuing
23	<i>Emissions and Performance Improvements of CI Engines Beyond The Use of Renewable Bio-fuels</i>	<i>Naresh Kumar Reddy</i>	<i>Prof M Marouf Wani</i>	Pursuing

VI. Purchase Made:

S. No.	Name of the equipment/Item	Date of purchase	Quantity	Annual purchase
01	<i>Structural Mechanic Module</i>	<i>5.4.2017</i>	<i>2 Nos.</i>	<i>70800.00</i>
02	<i>Non Linear structural Module</i>	<i>5.4.2017</i>	<i>2 Nos.</i>	<i>63600.00</i>
03	<i>Material library single cup looked</i>	<i>5.4.2017</i>	<i>2 Nos.</i>	<i>39600.00</i>
04	<i>Heat Transfer Module</i>	<i>5.4.2017</i>	<i>2 Nos.</i>	<i>70000.00</i>
05	<i>CFD Module Single user</i>	<i>5.4.2017</i>	<i>2 Nos.</i>	<i>138000.00</i>
06	<i>Consol math Physics single user</i>	<i>5.4.2017</i>	<i>2 Nos.</i>	<i>138000.00</i>
07	<i>Avial Flow fen Test Rig</i>	<i>9.6.2017</i>	<i>1 Nos.</i>	<i>629800.00</i>
08	<i>Flash Forge creator 3 D printer</i>	<i>19.5.2017</i>	<i>1 No.</i>	<i>98810.00</i>
09	<i>Online UPS 180 VOC</i>	<i>27.6.2017</i>	<i>4 Nos.</i>	<i>239144.00</i>
10	<i>65 oh. SMF Battery</i>	<i>27.6.2017</i>	<i>1 No.</i>	<i>23144.00</i>
11	<i>Stabilizer</i>	<i>27.06.2017</i>	<i>1 No.</i>	<i>107144.00</i>
12	<i>Electro Mechanical Equipment</i>	<i>06.07.2017</i>	<i>1 No.</i>	<i>580000.00</i>
13	<i>Tank</i>	<i>6.7.2017</i>	<i>1 No</i>	<i>160000.00</i>
14	<i>Self Pinning Pumping unit</i>	<i>6.7.2017</i>	<i>1 No.</i>	<i>160000.00</i>
15	<i>Agitator Assambly</i>	<i>6.7.2017</i>	<i>1 No.</i>	<i>90000.00</i>
16	<i>Main Control Pannel</i>	<i>6.7.2017</i>	<i>1 No.</i>	<i>60000.00</i>
17	<i>Minimum Quantity lubrication</i>	<i>13.10.2017</i>	<i>1 No.</i>	<i>178250.00</i>
18	<i>Portable surface Roughness Tester</i>	<i>25.10.2017</i>	<i>1 No.</i>	<i>188220.00</i>

19	Digital Portable Hardness Tester	25.10.2017	1 No.	77553.00
20	Digital Oscill 2 y60 Mnz	13.10.2017	1 No.	98550.00
21	Pressure Transmitter	8.1.2018	1 No.	29358.00
22	RPM Meter with displ	8.1.2018	1 No.	124630.00
23	Manetic Sensor Transmitter	8.1.2018	1 No	184370.00
24	Vibration Senosor Transmitter	8.1.2018	1 No.	155530.00
25	PLC paner (PLC with 16D1 + 8DO +BA1+4AD)	8.1.2018	1 No.	463500.00
26	Experimental Test Rig performance Test three sylinder four stroke Petrol Engine Test	8.1.2018	1 set	82000.00
27	Experimental Test Rig with Mechanical C.I loading arrangements single cylinder four stroke Engine	8.1.2018	1 set	71000.00
28	Micro hardness Tester	8.1.2018	1 No.	624644.00

VI. LIST OF LABORATORIES

S.No.	Name of laboratory
01	Dynamic lab.
02	Production lab.
03	CNC lab.
04	CAD lab
05	Advanced Material Testing lab.
06	I.C. Engine
07	Heat transfer
08	Steam lab
09	Industrial lab
10	Material Testing lab
11	Fluid Mech. Lab
12	Turbine Erosion Testing
13	Mechatronics lab
14	Tribology lab
15	Advanced Computational lab.
16	Fuel cell lab.
17	Energy Research lab.
18	Turbulence Research lab.

4.1.3. DEPARTMENT OF ELECTRICAL ENGINEERING

Head: Prof. Shameem Ahmad Lone

Introduction

The Department of Electrical Engineering is now 53 years old. For many years, the Department offered courses in both Electrical Engineering and Electronics & Communications Engineering. In 1984, the Department was bifurcated into two Departments viz Electrical Engineering and Electronics & Communications Engineering. The history since then has been one of continuous expansion and modernization. The Department has contributed and is contributing in several ways to the growth of Electrical Engineering, technology and industry in the Country.

Faculty

Academic Staff:			
Head:	Prof. Shameem Ahmad Lone		
Faculties:			
Professors	Associate Professors	Assistant Professors	Lecturer (on contract) during the period
03	02	02	15
Dr. M. D. Mufti	Dr. A. H. Bhat	Dr. M. A. Bazaz	Mr. Amit Kumar
Dr. Aijaz Ahmad	Dr. S. J. Iqbal	Ms. Tabish Nazir Mir (Teacher Trainee)	Mr. Masood Ibni Nazir
Dr. S. A. Lone			Mr. Zahid Farooq
			Ms. Saima Ashraf
			Ms. Bisma Hamid
			Mr. Imtiyaz Alam
			Mr. Keshav Dutt
			Mr. Deep Agarwal
			Mr. Chandan Kumar
			Mr. Nasir Rehman
			Mr. Rakesh Kumar
			Mr. Gaurav Bhatt
			Ms. Kiran Rana
			Mr. Sheikh Safiullah
			Mr. Aabid Hussain Sheikh

I. **Papers published by the staff(national/international) during the period of 01-04-2017 to 31-03-2018:**

S.No	Name of the staff members	Title of the papers	Conference/journal etc, where published	Date of publishment
1.	Prof. Abdul Hamid Bhat	Fuzzy logic controlled dynamic voltage restorer for mitigation of various power quality problems	International Journal of Industrial Electronics and Drives	2017
2.	Prof. Abdul Hamid Bhat	A Novel Control Approach for Improved Performance of a High-Power Factor Converter Under Supply and Load Perturbations	Journal of Electrical Engineering (JEE)	2017
3.	Prof. Abdul Hamid Bhat	Performance Investigation of Nine-level Cascaded H-bridge Inverter Based STATCOM for Various Power System Applications	International Journal of Industrial Electronics & Drives	2017
4.	Prof. Abdul Hamid Bhat	PLL-Less Adaline-Based Control of Self-Supported DVR for Grid Voltage Distortion and Imbalances	Journal of Electrical Engineering (SCOPUS-indexed)	2018
5.	Prof. Abdul Hamid Bhat and Ms. Tabish Nazir Mir	Speed-Sensorless DTC of a Matrix Converter Fed Induction Motor using An Adaptive Flux Observer	IETE Journal of Research (Springer)	2018
6.	Prof. Abdul Hamid Bhat	Review and Comparative Analysis of Dual Active Bridge Isolated DC to DC Converter with Different Control Techniques	Int. J. Industrial Electronics and Drives	2018
7.	Prof. Abdul Hamid Bhat	Design and Performance Evaluation of Self-Supported Dynamic Voltage Restorer for Mitigating Various Power Quality Problems	Int. J. Power Electronics	2018
8.	Prof. Abdul Hamid Bhat and Ms. Tabish Nazir Mir	Constant Switching Frequency DTC for Matrix Converter Fed Speed Sensorless Induction Motor Drive	Journal of Institution of Engineers, India (Springer)	2018
9.	Prof. Abdul Hamid Bhat	A Current Source Inverter-Based Unified Power Quality Conditioner for Mitigation of Voltage and Current Harmonics	Int. J. Industrial Electronics and Drives	2018
10.	Prof. Abdul Hamid Bhat	Capacitor Voltage Balancing in Neutral-Point	International Journal of Computers and	2018

		Clamped Rectifier Using Modified Modulation Index Technique	Electrical Engineering (Elsevier)	
11.	Prof. Abdul Hamid Bhat	Power Quality Improvement in Hybrid Filter Using Fuzzy Logic Controller	Int. J. Industrial Electronics and Drives	2018
12.	Prof. Abdul Hamid Bhat	Simultaneous Active and Reactive Power Compensation Using STATCOM with Supercapacitor Energy Storage System	International Journal of Industrial Electronics & Drives	2018
13.	Prof. Abdul Hamid Bhat	Neural Network Based Three-Phase NPC Rectifier for DC Bus Capacitor Voltage Balancing Under Perturbed Mains Supply Conditions	International Journal of Power Electronics	2018
14.	Prof. Abdul Hamid Bhat	Optimising the Performance of Three-Phase Neutral Point Clamped Rectifier Under Disturbed AC Mains	Int. J. Power Electronics	2018
15.	Prof. Abdul Hamid Bhat	ANN Based SVPWM for Three-Phase Improved Power Quality Converter Under Disturbed AC Mains	IEEE International Conference on "Computer Application in Electrical Engineering-Recent Advances (CERA-4)	2017
16.	Prof. Abdul Hamid Bhat	Comparative Analysis of Dual Active Bridge Isolated DC to DC Converter with Single Phase Shift and Extended Phase Shift Control Techniques	IEEE International Conference on "Computer Application in Electrical Engineering-Recent Advances (CERA-4)	2017
17.	Prof. Abdul Hamid Bhat	Comparative Analysis of Dual Active Bridge Isolated DC to DC Converter with Double Phase Shift and Triple Phase Shift Control Techniques	IEEE International Conference on "Recent Developments in Control, Automation & Power Engineering (RDCAPE)	2017
18.	Prof. Abdul Hamid Bhat	Comparative Analysis of Dual Active Bridge Isolated DC to DC Converter with Single-Phase Shift and Dual Phase Shift Control Techniques	IEEE International Conference on "Recent Developments in Control, Automation & Power Engineering (RDCAPE)	2017

19.	Prof. Abdul Hamid Bhat	Comparative Analysis of Dual Active Bridge Isolated DC to DC Converter with Single Phase Shift and Dual Phase Shift Control Techniques	IEEE International Conference on "Recent Developments in Control, Automation & Power Engineering (RDCAPE)	2017
20.	Prof. Abdul Hamid Bhat	Adaline-Based Control of Self Supported DVR for Mitigation of Various Source Side Power Quality Problems	International Conference on Recent Trends in Engineering, Technology, Agriculture, Applied Sciences, Humanities and Business Management for Sustainable Development (ETAHBS-2018)	2018
21.	Prof. Abdul Hamid Bhat	Back Flow Power Analysis and Identification of Optimum Operating Zone of Single-Phase Shift and External Phase Shift Control Modes in Dual Active Bridge Converter	International Conference on Recent Trends in Engineering, Technology, Agriculture, Applied Sciences, Humanities and Business Management for Sustainable Development (ETAHBS-2018)	2018
22.	Prof. Abdul Hamid Bhat	Power Quality Improvement using Three-Phase, Three-wire Self-supported DVR Based on SRF-Theory	International Conference on Recent Trends in Engineering, Technology, Agriculture, Applied Sciences, Humanities and Business Management for Sustainable Development (ETAHBS-2018)	2018
23.	Prof. Abdul Hamid Bhat	Power Quality Improvement of Utility-Distribution System Using Self-Supported DSTATCOM Based on Unit Template Based Control Algorithm in PFC and ZVR Modes	International Conference on Recent Trends in Engineering, Technology, Agriculture, Applied Sciences, Humanities and Business Management for Sustainable Development (ETAHBS-2018)	2018
24.	Prof. Abdul	Low Speed Sensorless	IEEMA Engineer	2018

	Hamid Bhat and Ms. Tabish Nazir Mir	Model Predictive Current Control of A 3-Phase Induction Motor from A Single-Phase Supply	Infinite Conference (eTechNxT 2018)	
25.	Prof. Abdul Hamid Bhat and Ms. Tabish Nazir Mir	New Modulation Methods for Single-Phase to Three-Phase Matrix Converters	IEEE power electronics, drives and energy systems conference, (PEDES 2018)	2018
26.	Prof. M. D. Mufti	Adaptive predictive control of a small capacity unit for improved frequency control of a wind-diesel power system	IET Renewable power generation	2017
27.	Prof. M. D. Mufti and Prof. S. A. Lone	Modelling and performance assessment of a standalone hybrid wind-diesel-superconducting magnetic energy storage system using four-quadrant operation of superconducting magnetic energy storage.	Wind Engineering, 42(5), 496-509.	2017
28.	Prof. M. D. Mufti and Prof. S. A. Lone	MATLAB/Simulink-based modelling and performance assessment of wind-diesel energy storage system.	Wind Engineering, 42(3)	2017
29.	Prof. M. D. Mufti	Enhanced load frequency control response with integration of supervisory controlled superconducting magnetic energy storage system in wind-penetrated two-area power system.	Wind Engineering, 41(5), 330-342.	2017
30.	Prof. M. D. Mufti	Predictive Controlled SMES for frequency control of Wind-diesel Stand alone Power system	IEEE Conf on Computation, Communication and automation (ICCCA) 2017.	2017
31.	Prof. M. D. Mufti and Prof. S. A. Lone	Matlab/Simulink Model for Stability Studies of a Multi Machine Power sytem incorporating static VAR Compensator and Power system Stabilizers	Int conf on Engineering Research and Applications May 17-18 2017, at Istanbul Turkey.	2017
32.	Prof. M. D. Mufti and Prof. S. A. Lone	Modeling and simulation of an energy storage based multi-machine power system for transient	2017 IEEE Conference on Energy Conversion (CENCON), Kuala Lumpur, 2017, pp. 78-	2017

		stability study	83.	
33.	Prof. M. D. Mufti and Prof. S. A. Lone	Modelling of a Multi-machine system aided with Power system stabilizers and shunt compensator for transient stability enhancement	IEEE conf on energy Communication, Data analysis and Soft computing, Aug 1-2, 2017 in Tamil Nadu.	2017
34.	Prof. M. D. Mufti	Fuzzy logic bases storage system for a standalone wind energy conversion system	IEEE Conf on Computation, Communication and automation (ICCCA) 2017.	2017
35.	Prof. M. D. Mufti	Modeling and simulation of a superconducting magnetic energy storage based multi-machine power system for transient stability study	2017 6th International Conference on Computer Applications In Electrical Engineering-Recent Advances (CERA), Roorkee, 2017, pp. 347-352.	2017
36.	Prof. M. D. Mufti and Prof. S. A. Lone	Voltage and frequency control of a hybrid Wind-Diesel system using SVC and predictively controlled SMES	2017 6th International Conference on Computer Applications In Electrical Engineering-Recent Advances (CERA), Roorkee, 2017, pp. 25-30.	2017
37.	Prof. M. D. Mufti and Prof. S. A. Lone	Predictive controlled SMES for frequency control of hybrid wind-diesel standalone system	2017 International Conference on Computing, Communication and Automation (ICCCA), Greater Noida, 2017, pp. 1395-1400.	2017
38.	Prof. Aijaz Ahmad	Optimizing the Performance of Three-Phase Neutral-Point Clamped Rectifier Under Disturbed AC Mains	International Journal of Power Electronic, Vol. 9, issue 1, pp.99-121	2018
39.	Prof. Aijaz Ahmad	Neural Network Based Three-Phase NPC Rectifier for DC Bus Capacitor Voltage Balancing Under Perturbed Mains Supply Conditions	International Journal of Power Electronics.	2018
40.	Prof. Aijaz Ahmad	Simultaneous Active and Reactive Power Compensation Using STATCOM with Supercapacitor Energy Storage System	IJIED International Journal of Industrial Electronics and Drives, 2017.	2017

41.	Prof. Aijaz Ahmad	A novel control approach for improved performance of a high power factor converter under supply and load perturbations	International Journal of Electrical Engineering. Volume: 13, No. 3 , pp. 392 – 407.	2017
42.	Prof. Aijaz Ahmad	-	I S E R 108th INTERNATIONAL CONFERENCEAt: Mecca, Saudi Arabia	2018
43.	Prof. Aijaz Ahmad	Voltage and frequency control of a hybrid wind-diesel system using SVC and predictively controlled SMES	2017 6th International Conference on Computer Applications in Electrical Engineering-Recent Advances (CERA)	2017
44.	Prof. S. A. Lone	Modelling and Performance assessment of a standalone hybrid wind diesel superconducting magnetic energy storage system using four-quadrant operation of superconducting magnetic energy storage	Wind Eng.	2017
45.	Prof. S. A. Lone	Adaptive predictive control of a small capacity SMES unit for improved frequency control of a wind-diesel power system	IET JOURNAL	2017
46.	Prof. S. A. Lone	Mat lab/Simulink Model for Stability Studies of a Multi Machine Power system incorporating static VAR Compensator and Power system Stabilizers	International conf. on Engineering Research and Applications May 17-18 2017, at Istanbul Turkey.	2017
47.	Prof. S. A. Lone	Modelling and Simulation of an energy storage based Multi Machine Power system for transient stability	IEEE conference on Energy Conversion 30-31 October 2017 in Kaulalampur Malaysia.	2017
48.	Prof. S. A. Lone	Voltage and frequency control of a hybrid wind-diesel system using SVC and predictively controlled SMES	IEEE CERA conf. at IIT Roorkee India 5-7th Oct, 2017	2017
49.	Prof. S. A. Lone	Predictive Controlled SMES for frequency control of Wind-diesel Stand-alone Power system	IEEE Conf. on Computation, Communication and automation (ICCCA) 2017	2017

50.	Dr. Sheikh Javed Iqbal	Impact of large scale wind penetration on power system frequency stability	2017 Second IEEE International Conference on Electrical, Computer and Communication Technologies (ICECCT), February 2017.	2017
51.	Dr.Mohammad Abid Bazaz	Neural Predictive Observer for Sensorless Controlled Induction Motor Drive	Control & Intelligent Systems, vol. 45, no. 2, pp. 84-91, 2017, ISSN: 1480-1752	2017
52.	Dr.Mohammad Abid Bazaz	Simulation Acceleration of High-Fidelity Nonlinear Power Electronic Circuits Using Model Order Reduction	Third IFAC International Conference on Advances in Control and Optimization of Dynamical Systems (ACODS 2018), pp. 289-294	2018
53.	Dr.Mohammad Abid Bazaz	Accelerated Simulation of a High-Fidelity DC-DC Buck-Boost Converter Using Model Order Reduction	2018 IEEE Indian Control Conference (ICC), pp. 107-112	2018
54.	Dr.Mohammad Abid Bazaz	Short Term Load Forecasting Using Artificial Neural Network	IEEE International Conference on Image Information Processing	2017
55.	Dr.Mohammad Abid Bazaz	Implementation of MPPT Technique For Solar PV System Using ANN	IEEE International Conference on Recent development in Control, Automation And Power Engineering (RDCAPE)	2017
56.	Dr.Mohammad Abid Bazaz	Model Order Reduction in Power Electronics: Issues and Perspectives	International Conference on Computing, Communication and Automation (ICCCA 2017), pp. 1417-142	2017
57.	Dr.Mohammad Abid Bazaz	Fuzzy Tuned PID Controller for Power System Stability	International Conference on Computing, Communication and Automation (ICCCA 2017), pp. 1379-1384	2017

II. Programme attended by the staff (conferences/courses/trainings):

s.no	Name of the staff members	Name of the programme attended	Institute where attended	Date
1.	Prof. Abdul Hamid Bhat	International Conference on Computer Applications in Electrical Engineering-Recent Advances (CERA-17)	IIT Roorkee	05-07, OCT,2017
2.	Prof. Abdul Hamid Bhat	International Conference on Recent Trends in Engineering, Technology, Agriculture, Applied Sciences, Humanities and Business Management for Sustainable Development (ETAHBS-2018)	NIT Srinagar	20-21, Oct, 2018
3.	Prof. Aijaz Ahmad	I S E R 108th International Conference on Electrical Engineering	Saudi Arabia,	Feb. 2018".
4.	Dr. Sheikh Javed Iqbal	2017 Second IEEE International Conference on Electrical, Computer and Communication Technologies (ICECCT)	-	February 2017
5.	Dr.Mohammad Abid Bazaz	International Conference on Computing, Communication and Automation (ICCCA 2017)	-	May 5-6, 2017
6.	Dr.Mohammad Abid Bazaz	IEEE International Conference on Recent development in Control, Automation and Power Engineering (RDCAPE),	NCR, India	October 2017
7.	Ms. Tabish Nazir Mir	2018 IEEMA Engineer Infinite Conference (eTechNxT)	Greater Noida, NCR of Delhi, India	13-14 March 2018

III. Programme conducted (conferences/courses/trainings) by the department:

S.no	Name of the programme	Date when conducted	Name of the coordinator(s)	Sponsoring agency, if any
1.	Workshop on Scientific and Technical Documentation Using LaTeX	21 – 22 April 2017	Dr. Mohammad Abid Bazaz	NIT Srinagar

IV. Ongoing doctoral programme:

S.No	Topic	investigator	Supervisor(s)	Degree awarded
1.	Performance Investigation of A 3-Phase Improved Power Quality Converter for Supply Side Perturbations	Deepak Sharma	Prof. A.H. Bhat	Awarded,2017
2.	Adaptive Predictive Control of SMES For Power Quality Improvement of Stand-Alone Wind Diesel Power System	Mubashir Zargar	Prof. S.A. Lone	Awarded,2018
3.	Dynamic Voltage Restorer for Power Quality Improvement	Humeera Altaf	Prof. A.H.Bhat	Enrolled,2017
4.	Performance Investigation of DC Microgrid	Amit Kumar	Prof. A.H. Bhat	Enrolled, 2017
5.	Power System Control and Stability	Asima Syed	Prof. M.D. Mufti	Enrolled, 2017
6.	Power System Protection	Abdul Waheed Kumar	Prof. M.D. Mufti	Enrolled, 2017
7.	Congestion Management in Deregulated Power Systems	Gajala Madhu Mohan	Prof. Aijaz Ahmad	Enrolled, 2017
8.	Hybrid System with Energy Storage	Zahid Afzal Thokar	Prof. S.A. Lone	Enrolled, 2017
9.	Control of Electric Drives	Suhail Ahmad Suhail	Dr. M.A. Bazaz	Enrolled, 2017
10.	Study of Highly Penetrated Renewable Energy Sources on Distribution Systems	Masood Ibin Nazir	Prof. Aijaz Ahmad	Enrolled, 2017
11.	Model Order Reduction for Controller Design	Danish Rafiq	Dr. M. A. Bazaz	Enrolled, 2017
12.	Power Management and Control of Distributed Generation Resources	Sheikh Suhail	Dr. S. J. Iqbal	Enrolled, 2017
13.	Energy Storage Devices in Power System Application	Bisma Hamid	Dr. S. J. Iqbal	Enrolled, 2017
14.	Grid-Tied PV System	Mukul Chanakya	Prof Aijaz Ahmad	Enrolled, 2017
15.	Stand-Alone Power System, Power System Stability and Control	Gazala Rashid	Prof. S. A .Lone	Enrolled, 2017
16.	Sub Synchronous Resonance	Viqar Yousuf	Prof Aijaz Ahmad	Enrolled, 2017
17.	Power System Energy Storage Devices in Power System Renewable Energy	Farhat Afzal Samoon	Dr. S. J. Iqbal	Enrolled, 2018
18.	Stand Alone Power System	Masiha Aijaz	Prof. S. A. Lone	Enrolled, 2018
19.	Control Systems	Uzma Javed	Dr. M. A. Bazaz	Enrolled, 2018
20.	Power Systems	Raza Owais	Dr. S. J. Iqbal	Enrolled, 2018

21.	Power Systems	Basit Mushtaq	Prof. M. D. Mufti	Enrolled, 2018
22.	Power Systems Stability Studies	Adil Mohiuddin	Prof. M. D. Mufti	Enrolled, 2018
23.	Renewable Energy with Power System	Zahid Farooq	Prof. S. A. Lone	Enrolled, 2018
24.	Power System Integrated with Renewable Incorporated with FACTS Devices	Nasir Rehman	Prof. M. D. Mufti	Enrolled, 2018
25	Power System Integrated with Renewable Incorporated with FACTS Devices	Sheikh Safiullah	Prof. S. A. Lone	Enrolled, 2018
26	Power Systems	Chandan Kumar	Prof. S. A. Lone	Enrolled, 2018

V. Purchase Made:

S. No.	Name of equipment	Date of purchase	Quantity	Price (total in Rs)	Annual purchase
1.	3-Phase Motor & Power Quality Analyzer	April 2017	2	15,70,000/-	2017
2.	OPAL-RT (Real Time Simulator)	September 2018	2	68,44,000/-	2018
3.	Programmable AC supply	October 2018	1	14,17,500/-	2018
4.	AC Filter Inductors and Capacitors	December 2018	3 inductors 3 capacitors	12,992/-	2018

List of laboratories:

1.	Basic Electrical Engineering Lab	2.	Power System Lab
3.	Power Electronics Lab	4.	Electrical Machines Lab
5.	Electrical Measurements Lab	6.	Control System Lab
7.	Virtual Instrumentation Lab	8.	High Voltage Engineering Lab
9.	Electrical Energy System Lab	10.	Computation Lab

4.1.4. DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Head: Dr. Farida Khursheed

Introduction

The Department of Electronics & Communication Engineering was established in the year 1984. The department conducts a four (04) years under-graduate academic programme leading to the award of B.Tech. Degree in Electronics & Communication Engineering. In addition, the department started M. Tech programme in Communication & Information Technology in the year 2004.

Opportunity to do project work over a span of two semesters is provided to the students of B.Tech. to utilize their knowledge in several areas of Electronics, Communication and Computer Engineering. The students work either on design & fabrication of equipments of innovative nature or on other specific and relevant research topics as decided in consultation with the project advisor.

Faculty:

Academic Staff			
Head	Dr. Farida Khursheed		
Faculties			
Professor	Associate Professor	Assistant Professor	Lecturer (on contract during the period)
Prof. A.H.Mir	Er. A. A. Mir	Dr. G. R. Begh	(13)
Prof. G.M. Rather	Dr. Farida Khursheed		
Prof. Najeeb ud Din	Dr. Gousia Qazi		
	Er. A. G. Mir		

I. Papers Published by the Staff (National/International during the period of 01.04.17 to 31.03.2018:

S. No.	Name of the Staff members	Title of the papers	Conference/journal etc, where published	Date of publication
1	Dr. A.H.Mir	Enhancement and segmentation of pituitary gland from	International Journal of Medical Engineering and Informatics	September 2017.

		MR brain images		
		Internet of Things Security Issues, Threats, Attacks and Counter Measures	International Journal of Computing and Digital Systems	March 2018.
		Performance Analysis of Payload Header Suppression (PHS) for Transmission of VoIP over MPLS based IPv4/IPv6 Network	Proceedings of the 12th International Conference on Ubiquitous Information Management and Communication. ACM	January 2018.
2	Dr. G.M.Rather	Scope of potential in FSO Technology as compared to RF Technology in Next Generation Networks	Journal of Network Communications and Emerging Technologies (JNECET)	September 2017.
		Analytic model for the electrical properties of negative capacitance metal-ferroelectric insulator silicon (MFIS) capacitor	Integrated Ferroelectrics, An International Journal, Taylor & Francis	December 2017
		Millimeter Wave Communication for Fifth generation Mobile Networks	ICACIE-2017, Springer International Conference	July 2017
		A Study of the coverage area of Millimeter Wave (MMW) Communication Link for Fifth Generation (5G) Mobile Networks	ICIECE-2017, Springer International Conference	August 2017
		Switched Mode Power Amplifiers: A brief review	IEEE International Conference on Energy, Communication, Data Analytics and Soft	November 2017

			Computing (ICECDS 2017)	
		A Simulation Investigation of Single Gate-Laterally Double Diffused MOSFET for RF Applications	IEEE international conference on Current trends towards Converging Technologies (IEECCMC 2018)	January 2018
		Investigation of Characteristic features of Dual Gate LDMOS Through Simulations	IEEE international conference on Current trends towards Converging Technologies (ICCTCT 2018)	March 2018
3	Dr. Najeeb ud Din	Analytic model for the electrical properties of negative capacitance metal-ferroelectric insulator silicon (MFIS) capacitor	Integrated Ferroelectrics, An International Journal, Taylor & Francis	December 2017
		Comparison of parallel image scanning methods for achieving better throughput	4th International Conference on Signal Processing and Integrated Networks (SPIN)	December 2017
		Effect of chirp characteristics of directly modulated laser on the signal transmission performance	4th International Conference on Signal Processing and Integrated Networks (SPIN)	December 2017
4	Dr. G. R. Beigh	Constellation expanded active interference cancellation technique for suppression of out-of-band radiation in OFDM based cognitive radios	AEU-International Journal of Electronics and Communications	June 2017

II. Sponsored projects:

S. No	Title of the Project	Investigators(s)	Sponsoring Organization	Amount (in Rs)	Starting year
1	SMDP C2S	Prof. G.M Rather Prof Najeeb-ud-din	R & D in Electronics group, Department of Electronics and Information Technology MoCIT, New Delhi	129.09 lacs	2015
2	ISEA-II	Prof. A.H.Mir	Ministry of Communication and Information Technology, Department of Information Technology	36.06 Lacs	2015
3	Visvesvaraya	Prof. G.M Rather Prof Najeeb-ud-din	MHRD	16 lakh	2015

III. Ongoing Doctoral Programme:

S. No	Topic	Investigator	Supervisor(s)
1.	Medical Image Processing		Dr A. H. Mir
2.	Wireless Sensor Networks		Dr A. H. Mir
3.	Biometric Image Processing		Prof. Ajaz Hussain Mir
4.	Laterally Diffused MOSFET(LDMOS)	Najeeb ud din	Prof G.M.Rather Prof
5.	Analog-to-Digital Converter for Seismic Signals	Najeeb-ud-din	Prof G. M. Rather Prof
6.	Ferroelectric Field Effect Transistors		Dr Najeeb-ud-Din Prof. G.M. Rather
7.	DEVICE TO DEVICE COMMUNICATION IN 5G	DR. G.R. BEGH	PROF. G. M. RATHER
8.	Compact Microstrip (Patch) Antennas for Modern Wireless Applications		Prof. G.M. Rather

9.	Millimeter Wave Communication for Next Generation Networks		Prof. G M Rather
10.	Improving QOS In IoT Networks		Prof. G M Rather
11.	Interference Management In Millimeter Wave Networks	Dr. G.R. Beigh	Prof. G M Rather
12.	Fault Tolerance and Reconfiguration of NoCs	Dr. Najeeb-ud-Din	Dr. Roohie N Mir
13.	Organic Solar cells		Prof. Najeeb ud Din
14.	Performance Improvement Of Inorganic Solar Cells		Dr. Najeeb ud Din
15.	Cloud Security		Dr. Farida Khurshid
16.	Digital Image Forensics		Dr. FaridaKhurshid
17.	Optical Materials		Dr.Gausia Qazi
18.	Erbium Doped Optical Amplification System		Dr. Gausia Qazi
19.	Quantum Well Devices		Dr. Gausia Qazi
20.	CMOS IMAGE SENSORS		Dr. Gausia Qazi
21.	Laser Rate Equation		Dr. Gausia Qazi
22.	Interference and Resource management in NOMA for next generation Communication systems		Dr. G. R. Begh
23.	Full Duplex Wireless Communications.		Dr. G. R. Begh
24.	Investigation of Error Control Techniques for 5G Communications		Dr. G. R. Begh

IV. Purchase Made: List of Equipment purchased during the finical year 1st April 2017 to 31st March 2018 of ECE, Department:

S. No	Name of the equipment/Item	Date of Purchase	Quantity	Annual Purchase
1	Date Logger	05-05-2017	01.No	Rs: 91,980/=
2	16 Port D-Link Switch	05-05-2017	02.No	Rs: 13,440/=
3	Zed board & AES-FMC HDMI-CM	25-05-2017	01 each	Rs: 77,015/=
4	HP Laser Jet Printer pro M 1049	25-05-2017	01.No	Rs: 08,300/=

21	Projector DLP technology 128x800 with all Accessories	14-12-2017	02.No	Rs: 75,000/=
22	Online UPS 5 KVA with Insulator Input single Phase (By back batteries)	23-12-2017	01. No	Rs; 61,825/=
23	ASUS hybrid Programmable system (Computers Work station)	05-04-2018	06.No	Rs: 13,50,000/=

List of Laboratories:

1.	Analog Electronics Laboratory	10.	Network Security Laboratory
2.	Computational Laboratory	11.	Characterization Laboratory
3.	Image Processing Laboratory	12.	Biomedical Laboratory
4.	Digital Electronics Laboratory	13.	Biometric Research Laboratory
5.	Microprocessor Laboratory	14.	Embedded Laboratory
6.	VLSI Laboratory		
7.	Advanced Communication Laboratory		
8.	Communication Laboratory		
9.	Fiber Optical Laboratory		

4.1.5. DEPARTMENT OF CHEMICAL ENGINEERING

Head: Dr.F.Q.Mir

Introduction

The Department of Chemical Engineering was started in 1963 with a five year degree programme (B.E.) in Chemical Engineering. The Department presently offers instructions at undergraduate level leading to 4 year B.Tech. Degree in chemical Engineering.

Department has produced more than 1500 Chemical Engineering graduates, majority of them belonging to different parts of the Country and some belonging foreign countries like, Iran, Libya, Jordan, Palestine, Saudi Arabia and Sudan. The Department has been maintaining a high standard of teaching and professional training to enable the students to compete in the national and international job markets. Department has been maintaining close liaison with various Institutes and industries.

FACULTY

Academic staff:			
Head		Dr. F. Q. Mir	
Faculties:			
Professor	Associate Professor	Assistant Professor	Lecturer (on contract) During the period
Prof. M. N. S. Khan	Nil	Dr. F. Q. Mir	Mr. Mohammad Asif
		Mr. T. R. Dar	Mr. Mohd Umair Iqbal
		Dr. M. A. Rather	Dr. Shashikant Kumar
		Mr. M. P. Ahmad	Mr. Aash Mohammad
		Miss Fatima Jalid (Trainee Teacher)	Mr. Rupak Kumar Singh
			Miss Parul Singh
			Miss Iqra
			Miss Iqra Akbar
		Mrs Afkham Mir	

I. **Papers Published by the staff (National/International) during the period of 01.04.2017 to 31.03.2018**

S.No.	Name of the staff members	Title of the papers	Conference/Journal where published	Date of publishing
1.	Rather, M.A., Khan, N.S. and Gupta, R.	Hydrothermal carbonization of macrophyte <i>Potamogeton lucens</i> for solid biofuel production	Engineering Science and Technology, an International Journal	2017
2.	Tanveer Rasool	Fast pyrolysis studies on locally available biomass wastes: Kinetics and Physicochemical Characterization	National Conference on "Frontiers in Chemical Sciences"	Nov., 2017
3.	T. Rasool, M.N.S. Khan, V. C. Srivastava	Pyrolysis and kinetic analyses of Banyan tree (<i>Ficus Benghalensis</i>) plant biomass waste for bio energy potential	International Conference on Engineering Technologies, ICENTE'17, Konya Turkey.	07-09 Dec.-2017
4.	Tanveer Rasool, Shashikant Kumar, Waris Baba	Synthesis and Characterization of High Surface Area Bio-adsorbents from locally available biomass waste using chemical activation with H ₂ SO ₄	CHEMCON-2017	2017
5.	Fatima Jalid, Tuhin Suvra Khan, Fasil Qayoom Mir, M. Ali Haider	Understanding trends in hydrodeoxygenation reactivity of metal and bimetallic alloy catalysts from ethanol reaction on stepped surface.	Int. Journal of Catalysis	2017
6.	Fatima Jalid, Tuhin S. Khan, M. Ali Haider	Micro Kinetic Model for Ethanol Steam Reforming on Transition Metal Surfaces.	APCAT-7, Mumbai	2017
7.	Mushtaq Ahmad Rather	Synthesis of Activated Carbon from Dal Lake Water Chestnut Shell. Study Its Adsorption	9th International Conference on Science,	14th Oct 2017.

		Potential Towards Methylene Blue as Model Dye.	Technology and Management (ICSTM-17)	
8.	Mushtaq Ahmad Rather	Photocatalytic degradation of methylene blue dye.	Frontiers in Chemical Sciences (FICS) – 2017	Nov 4- 5, 2017.
9.	Mushtaq Ahmad Rather, Noor Salam Khan, Mohd Shafi Charoo, Mohd Hanief , Fasil Qayoom Mir	Catalytic Hydrothermal liquefaction of aquatic weed Ceratophyllum demersum for production of bio oil a promising alternative fuel.	International Conference on Engineering Technologies (ICENTE'17), Konya Turkey.	Dec 07-09, 2017.
10.	Prakhar Misra, Abhishek Sinha, Fasil Q Mir, Anurag S Rathore, Anupam Shukla, ,	A three plus three parameters mechanistic model for viral filtration.	Biotechnology Progress	2017
11.	Fasil Qayoom Mir, Babar Ahmad, Anupam Shukla.	Influence of Concentration and Temperature on Transport Properties In Cation-Exchange Membrane	International Conference on Sustainable Energy and Environmental Challenges	31-12-17 03-01-18
12.	T. Rasool, V. C. Srivastava, M. N. S Khan	Bioenergy potential of Salix alba assessed through kinetics and thermodynamic analyses.	Process Integration and Optimizati on for Sustainability	2018
13.	T. Rasool, M. N. S Khan, V. C. Srivastava	Utilization of waste biomass, walnut shells, to produce bio-products via pyrolysis: investigation using iso-conversional and neural network methods.	Biomass Conversion and Biorefinery	2018
14.	Rasool T, Srivastava VC, Khan MNS	Kinetic and thermodynamic analysis of thermal decomposition of deodar (<i>Cedrus Deodara</i>) saw dust and rice husk as potential	International Journal of Chemical Reactor	2018

		feedstock for pyrolysis.	Engineering	
15.	Mushtaq Ahmad Rather	Production of hydrochar providing fuel from aquatic weed <i>P. crispur</i> .	ICSTM' 17 Oct-14, 2017 Delhi	2017

II. **Program attended by the staff (conferences/courses/Training):**

S.No.	Name of the staff members	Name of the program attended	Institute where attended	Date
	Dr. Tanveer Rasool			
1.	Dr. Tanveer Rasool	"Artificial Neural Network and Fuzzy Logic through ICT"	NITTTR Chandigarh at N.I.T Srinagar	24-28 April, 2017.
2.	Dr. F. Q. Mir	Management Capacity Enhancement Program for Teaching Staff	Engineering Staff College of India at Dr. B. R. Ambedkar Institute of Technology Port Blair	28th Jan- 1st Feb, 2018.
3.	Dr. F. Q. Mir	Transport Processes	I.I.Sc. Bengaluru	July 24-28, 2017
4.	Dr. M. A. Rather	Transport Processes	I.I.Sc. Bengaluru	July 24-28, 2017
5.	Dr. F. Q. Mir	'Continuing Professional Development Programme on Air Pollution Monitoring and Modelling using Software Applications-Theory and Practical's	Engineering Staff College of India, Hyderabad.	28 th to 30 th Nov, 2017
6.	Dr. F. Q. Mir	Artificial Neural Network and Fuzzy Logic	Computer Science & Engineering Department, NIT Srinagar.	24 -28/04/2017.
7.	Prof. Muhammad .N. S. Khan	02 day workshop on Outcome Based Accreditations (under TEQIP-III)	N.I.T. Srinagar	March 17 to 18, 2018.

III. **Program conducted (conferences/courses/training) by the department:**

S.No.	Name of the Programme	Date when conducted	Name of the coordinator (s)	Sponsoring Agency , if any
1.	One day Workshop on Process Safety	8 th of June, 2017	Dr. F. Q. Mir	Financed by the Institute (NIT Srinagar) itself.
2.	"Connecting People with Nature-CPTN-2017" at N.I.T Srinagar,	25 th -29 th Sep., 2017	Dr. Tanveer Rasool, Dr. M. A. Rather	IEI JK State Center, Dawar Cements, H.K Cements, J&K Bank
3.	Short term course on "Process Control"	13-17, Nov-2017	Dr. M. A. Rather, Dr. F. Q. Mir	Financed by the Institute (NIT Srinagar) itself.
4.	National Conference on "Recent Innovations in Science, Technology and Engineering	Dec-2017	Dr. M. A. Rather	Financed by the Institute (NIT Srinagar) itself.
5.	Distance learning programme (National Mission on Education through information and Communication Technology , MHRD) from IIT Bombay	July 2017,	Dr. M.P. Ahmad	IIT Bombay
6.	Five day (one week) short term course on Transport Processes	February 20 to 24, 2018	Dr. F. Q. Mir, Dr. M. A. Rather	Financed by the Institute (NIT Srinagar) itself.
7.	02 day workshop as co-coordinator on Outcome Based Accreditation (under TEQIP-III)	March 17 to 18, 2018.	Prof. G.A. Harmain, Dr. M.S. Charoo, Dr. F. Q. Mir	Financed by TEQIP-III

IV. Sponsored Projects:

S.No.	Title of the Project	Investigator(s)	Sponsoring Organization	Amount (in MHRD)	Starting Year
01.	Briquetting of Dal Lake weeds to be used as fuel source	MHRD. M. A. Rather	MHRD	23.94 lacs	January 2018

V. Ongoing Doctoral Program:

S. No.	Topic	Investigator(s)	Supervisor(s)	Degree awarded
1.	Hydrothermal Conversion of Dal Lake Weeds into Biofuels	Mushtaq Ahmad Rather	Dr. M. N. S. Khan, Dr. Rajat Gupta	Yes

VI. Purchase Made:

S.No.	Name of the equipment/item	Date of purchase	Quantity	Annual purchase
1.	Ultrasonic bath (SS body & SS tank capacity -30Ltrs)	5/5/2017	01	2017-2018
2.	Magnetic stirrer with hot plate	1/8/2017	01	2017-2018
3.	REMI magnetic stirrer	12/12/2017	03	2017-2018
4.	Muffle furnace	18/1/18	01	2017-2018
5.	Refrigerator	22/1/2018	01	2017-2018
6.	Bench top orbital shaker	22/1/2018	01	2017-2018
7.	Sieve shaker	22/1/2018	01	2017-2018
8.	Chittic Apparatus	08/2/2018	01	2017-2018
9.	Overhead Mechanical Stirrer	08/2/2018	01	2017-2018
10.	Vacuum Pump	08/2/2018	01	2017-2018
11.	1KVA online UPS	08/2/2018	01	2017-2018
12.	Sieve Set	08/2/2018	01	2017-2018

LIST OF EXISTING LABORATORIES:

1.	Biochemical Engineering	7.	Mass Transfer
2.	CAD Laboratory	8.	Mechanical Operations
3.	Chemical Reaction Engineering	9.	Membrane Science & Technology
4.	Energy Engineering	10.	Process Control
5.	Environmental Engineering	11.	Catalysis Laboratory
6.	Heat Transfer		

Other Activity/Achievements with details:

A. Tanveer Rasool

1. Invited Speaker at a National Symposium" Frontiers in Chemical Sciences (FICS)-2017" at Govt. Degree College Sopore on Nov 04-05, 2017.
2. Delivered an expert lecture on Fluid flow measurements and Pumps, to students of Food Technology, IUST Awantipora J&K on 21-12-2017.
3. Conducted two AMIE Examinations (summer and winter) as Officer Incharge in June-2017 and Dec-2017.

B. Malik Parveez Ahmad

1. Delivered an expert lecture on Separation Technologies, to students of Food Technology, IUST Awantipora J&K on 27-12-2017.

C. Mushtaq Ahmad Rather

1. Invited Speaker at a National Symposium" Frontiers in Chemical Sciences (FICS)-2017" at Govt. Degree College Sopore on Nov. 04-05, 2017.
2. Delivered an expert lecture on Reaction Engineering, to students of Food Technology, IUST Awantipora J&K on 26-12-2017.
3. Organized fresher's orientation day at NIT Srinagar on August 16th 2017.
4. Conducted two AMIE Examinations (Summer and winter) as Superintendent in June-2017 and Dec-2017.

D. F. Q. Mir

1. Delivered an expert lecture on Heat Transfer Equipment Design, to students of Food Technology, IUST Awantipora J&K on 21-12-2017.

4.1.6. DEPARTMENT OF METALLURGY AND MATERIALS ENGINEERING

Head: Dr. Yashwant Mehta

The department of “**Metallurgical & Materials Engineering**” formerly known as the “Department of Metallurgical Engineering” was established in our Institute in the year 1963. The department conducts a four (04) years under-graduate academic programme leading to the award of **B.Tech.Degree** in engineering. A two semester “Project Work” is provided to the students to synthesize their knowledge in several areas of metallurgical & materials engineering.

The objective of the department is to produce technocrats who possess besides necessary technical knowledge, human and social values, leadership qualities and a high degree of confidence & technical creativity.

The department through interactions with academia and industries at national levels intends to excel in metallurgical and materials engineering and in the allied areas by up-dating its academic curriculum and R & D activities so as to meet the requirements of the academia, industries and R & D centres.

Academic staff:			
Head	Dr Yashwant Mehta		
Faculties:			
Professor	Associate Professor	Assistant Professor	Lecturer (on contract) during the period
Dr RajinderAmberdar	Dr GitanjalyGoel	Dr Yashwant Mehta	
Dr DMAfzal Khan		Dr AtikurRehman	

I. Papers published by the staff (National/ International) during the period of 01.04.2017 to 31.03.2018:

S. No.	Name of the staff member	Title of the paper	Conference/journal, where published	Date of publication
1.	Dr. Yashwant	Microstructural Evolution of High Phosphorus Steel	Materials Today: Proceedings Volume 4,	2017

	Mehta	Using Warm Multiaxial Deformation	Issue 9, 2017, Pages 9380-9383.	
		A study on chloride induced depassivation of Fe-P-C-Si and Fe-P-C-Si-N steels in simulated concrete pore solution	International Conference on Recent Advances in Materials, Mechanical and Civil Engineering ICRAMMCE-2017, (June 2017) Hyderabad-Telangana	2017
		Microstructural evolution in Fe-0.13P-0.05C steel during compression at elevated temperatures	International Conference on Recent Advances in Materials, Mechanical and Civil Engineering ICRAMMCE-2017, (June 2017) Hyderabad-Telangana	2017
2.	Dr. Atikur Rahman	Probing noncommutative theories with quantum optical experiments	Nuclear Physics	Oct 2017
		Synthesis, Characterization and Photocatalytic Studies of La, Dy - doped ZnO nanoparticles	Transactions of the Indian Institute of Metals, Vol.70, Issue(4), pp 1063-1074	May 2017
		Study of Degradation Behavior of Sputtered Co-Al Coatings on Superalloys	Proceeding of International conference on Recent Trends in “ Mechanical, Materials, Industrial, Automotive, Aeronautical and Nano-Technology” (MIANT-2017) organized by KRISHI SANSKRITI on 9 th September 2017, Convention centre, JNU , New Delhi, volume 4, issue 6, pp 515-515, 2017	Sep 2017

		High Temperature Oxidation Behavior of Fe-Ni-Al alloy	Proceeding of International conference on Recent Trends in “ Mechanical, Materials, Industrial, Automotive, Aeronautical and Nano-Technology” (MIANT-2017) organized by KRISHI SANSKRITI on 2 nd April 2017, Convention centre, JNU , New Delhi, volume 4, issue 1, pp 41-41, 2017	Sep 2017
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II. Testing and Consultancy services rendered during 2017-18:

S. No.	Title of the project	Consultancy rendered to (Name of agency)	Amount Earned
1	Testing of grinding balls	Cement industry/ Khrew	Rs. 10,000/-

III. Purchase Made:

S. No.	Name of the equipment/item	Date of purchase	Quantity	Annual purchase
1.	Disc polishing machine	29.06.2017	02	
2.	Metallographic belt grinder	08.06.2017	01	
3.	Microstructure image analysing	08.06.2017	01	

	system			
4.	Metallurgical inverted microscope	08.06.2017	06	

List of Laboratories:

1.	Physical Metallurgy	2	Mechanical Metallurgy
3.	Corrosion Engg	4.	Powder Metallurgy

4.1.7 . DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Head: M. Ahsan Chishti

Introduction

The Department of Computer Science & Engineering was started in the year 2007, offering four year undergraduate courses, wherein undergraduate students are imparted knowledge in multitude of specialties, including: computer Architecture, Network, Operating System, Data Structure and Algorithm, Theory of Computation, Numerical analysis, Compiler design, Graphics, Artificial intelligence, Database Management System, Data mining, Software Engineering, Human computer interaction, etc.

The Department of Computer Science and Engineering embodies the Institute's tradition of excellence as a world-class leader in computer science and engineering education and research. CSE is in a period of exciting growth and opportunity. In the current ever evolving industrial scenario contents delivered to the students are regularly updated by the faculty members who have themselves been at the helm of path breaking researches and innovations.

In addition to academic work, the CSE department also has computer science research programmes (for a full listing of specialties visit Research Areas) supported through government and industry funding. Faculty research helps define and expand the current and future use of technology.

During the year the students passed out from the department got placed in various National and Multinational companies with 100% placement.

Faculty:

Academic Staff: Computer Science and Engineering			
Head	Dr. Ahsan Chishti		
Faculties			
Professor	Associate Professor	Assistant Professor	Lecturer (on contract) during the period
Prof. Roohie Naaz Mir		Dr. Mohammad Ahsan Chishti	Ms. Ambreen Bashir
		Dr. Shaima Qureshi	Ms. Tahoor Hussain
			Ms. Ifrah Sanobar
			Ms. Azra Nazir
			Ms. Snowber Mushtaq
			Ms. Rumaisa Firdous
			Mr. Asim Rafiq
			Mr. Nadeem Khanday

I. Papers Published by the Staff (National / International) during the period of 01.04.2017 to 31.03.2018:

<i>S. No.</i>	<i>Name of the Staff members</i>	<i>Title of the papers</i>	<i>Conference/Journal etc, where published</i>	<i>Date of publication</i>
1	Prof. Roohie Naaz Mir	Forensic-chain: Ethereum blockchain based digital forensics chain of custody	Scientific & practical cyber security journal (SPCSJ)	December, 2017
2	Prof. Roohie Naaz Mir	IoT Fog Cloud Model for Digital Reach in Rural India	International Conference on Computer Networks and Communication Technologies 2018, Singapore.	January, 2018
3	Dr. Mohammad Ahsan Chishti	Cyber terrorism in the light of Internet of things	5th Global Conference on Cyberspace, New Delhi, India	23 -24 November, 2017
4	Dr. Mohammad Ahsan Chishti	The Dark Side – Understanding and Mitigating the Current Threats in the Cyber Vapor and IoT	International Conference on Communication, Computing, Storage & Energy (IC3SE-18), Pune, India	15-17 February, 2018
5	Dr. Mohammad Ahsan Chishti	Identifying Various Risks in Cyber-Security and Providing a Mind-map of Network Security Issues to Mitigate Cyber Crimes	Springer LNNS Series - 2nd International Conference on Communication, Computing and Networking to be held during, Chandigarh, India	29-30 March, 2018

6	Dr. Mohammad Ahsan Chishti	Fog and IoT: A Survey	IEEE International conference on Communication and signal processing (ICCSP), Chennai, India	6-8 April, 2017
7	Dr. Mohammad Ahsan Chishti	A model to incorporate automated negotiation in IoT	IEEE International Conference on Advanced Networks and Telecommunications Systems (IEEE ANTS), ,Bhubaneswar, Odisha, India	17-20 December, 2017
8	Dr. Mohammad Ahsan Chishti	Distributed IoT Analytics across Edge, Fog and Cloud	IEEE Fourth International Conference on Research in Computational Intelligence and Communication Networks (ICRCICN 2018), , Kolkata, India.	22 – 23 November, 2018
9	Prof. Roohie Naaz Mir and Dr. Mohammad Ahsan Chishti	Clustering Internet of Things: A Review	Journal of Science And Technology	December, 2017
10	Prof. Roohie Naaz Mir and Dr. Mohammad Ahsan Chishti	Machine learning at the Edge of Internet of Things	CSI Communications	November, 2017
11	Prof. Roohie Naaz Mir and Dr. Mohammad Ahsan Chishti	Semantic Smart City: Context Aware Application Architecture	2nd IEEE International conference on Electronics, Communication and Aerospace Technology (ICECA 2018)	29 -31 March, 2018
12	Prof. Roohie Naaz Mir and Dr. Mohammad Ahsan Chishti	Ethical Objects for the Internet of Things	2nd IEEE International conference on Electronics, Communication and Aerospace Technology (ICECA 2018)	29 -31 March, 2018
13	Prof. Roohie Naaz Mir and Dr. Mohammad Ahsan Chishti	Incorporating Ethics in Internet of Things (IoT) Enabled Connected Smart Healthcare	The Second IEEE/ACM Conference on Connected Health: Applications, Systems and Engineering Technologies, , Philadelphia, USA	17 -19 July, 2017
14	Dr. Mohammad Ahsan Chishti and Dr. Shaima Qureshi	Performance Analysis of Payload Header Suppression (PHS) for Transmission of VoIP over MPLS based IPv4/IPv6 Network	ACM The 12th International Conference on Ubiquitous Information Management and Communication (ACM IMCOM), Langkawi, Malaysia	5 to 7 January, 2018

II. **Programme Conducted (Conferences/Courses/ Trainings) by the Department:**

<i>S. No.</i>	<i>Name of the Programme</i>	<i>Date When Conducted</i>	<i>Name of the Coordinator(S)</i>	<i>Sponsoring Agency, if any</i>
1.	Short term course on Artificial Neural Network & Fuzzy logic through ICT	24-28 April, 2017	Dr. Mohammad Ahsan Chishti	NITTTR Chandigarh
2.	2 nd Advanced Conference on Computing, Communication and Electronics	17-18 May, 2017	Dr. Mohammad Ahsan Chishti	
3.	Workshop and Coding Festival “Exordium”	3-7 November, 2017	Dr. Mohammad Ahsan Chishti	
4.	Short term course on Open Source Technologies	13-17 November, 2017	Dr. Shaima Qureshi	NITTTR Chandigarh

III. **Ongoing Doctoral Programme :**

	Topic	Investigator	Supervisor(s)	Degree awarded
1	VLSI Architecture	Mr. Burhan Khurshid	Prof. Roohie Naaz Mir	Awarded
2	Reconfigurable Hardware, Network-on-Chip	Mr. Liyaqat Nazir	Prof. Roohie Naaz Mir	Awarded
3	Wireless Sensor Networks	Mr. Shabir Ahmad Sofi	Prof. Roohie Naaz Mir	Pursuing
4	Security in IoT	Mr. Zahoor Ahmad Najar	Prof. Roohie Naaz Mir	Pursuing
5	Wireless Sensor Networks	Ms. Sukhkirandeep Kaur	Prof. Roohie Naaz Mir	Pursuing
6	Ethics in the Internet of Things	Mr. Sahil Sholla	Prof. Roohie Naaz Mir/ Dr. Mohammad Ahsan Chishti	Pursuing
7	Network-on-Chip	Mr. Afshan Amin Khan	Prof. Roohie Naaz Mir/ Prof. Najeeb Ud Din	Pursuing
8	Big Data Analytics	Mr. Asif Ali Banka	Prof. Roohie Naaz Mir	Pursuing
9	Fog Computing	Mr. Mohammad Irfan Bala	Dr. Mohammad Ahsan Chishti	Pursuing
10	Security in IoT	Ms. Omerah Yousuf	Prof. Roohie Naaz Mir	Pursuing
11	Data Analytics in IoT	Ms. Tausifa Jan Saleem	Dr. Mohammad Ahsan Chishti	Pursuing

12	Security in IoT	Ms. Syed Rameem Zahra	Dr. Mohammad Ahsan Chishti	Pursuing
13	Data Aggregation in IoT	Mr. Ab. Rouf Khan	Dr. Mohammad Ahsan Chishti	Pursuing
14	Resource Management in IoT	Ms. Saniya Zahoor	Prof. Roohie Naaz Mir	Pursuing
15	Blockchain Technology and its Potential Application Areas	Mr. Auqib Hamid Lone	Prof. Roohie Naaz Mir	Pursuing
16	Machine Learning at Edge	Mr. Mohammad Khalid Pandit	Prof. Roohie Naaz Mir/ Dr. Mohammad Ahsan Chishti	Pursuing
17	Pattern Recognition with Machine Learning	Mr. Vipul Kumar Sharma	Prof. Roohie Naaz Mir	Pursuing
18	Security in IoT	Ms. Neelam Saleem Khan	Dr. Mohammad Ahsan Chishti	Pursuing
19	Cognitive Radio Networks	Mr. Mohammad Asifuddola	Dr. Mohammad Ahsan Chishti	Pursuing
20	Internet of Things	Mr. Jameel Ahmed	Dr. Mohammad Ahsan Chishti	Pursuing

IV. **Purchase Made:**

<i>S. No.</i>	<i>Name of the equipment/Item</i>	<i>Date of Purchase</i>	<i>Quantity</i>	<i>Annual Purchase</i>
1	Oscilloscope	05/05/2017	05	
2	FPGA Module	12/06/2017	10	
3	HP LaserJet Printer	18/05/2017	01	
4	HP LaserJet Pro 3000S3	18/05/2017	02	

LIST OF LABORATORIES:

1	Computer Programming Lab	2	Internet & Web Designing Lab
3	Computer Networks Lab	4	Computer Graphics Lab
5	Database Lab	6	Artificial Intelligence Lab
7	Compiler Lab		

4.1.8 . DEPARTMENT OF INFORMATION TECHNOLOGY

Head: Mr. Shabir Ahmad Sofi

Introduction

The Department of Information Technology was established in 2007, offering four year undergraduate programme (B.Tech) in Information Technology. This undergraduate programme is of 4 years duration with the first year spread over two semesters which is common to all the branches. The intake capacity of the department was 40 in 2007 and then subsequently increased to 60 in 2011. The Department offers a broad curriculum including: Database Management, Software Engineering, Management of Information Systems, Data mining, Computer Graphics, Advanced Internet Technology, Computer Networks, Operating System, Data Structures and Algorithms as the main courses and other courses in collaboration with the other departments of the Institute at the undergraduate level.

The Department of Information Technology embodies the Institute's tradition of excellence as a world-class leader in IT education and research. IT sector is in a period of bloom in terms of growth and opportunity. In the current ever evolving industrial scenario contents delivered to the students are regularly updated by the faculty members who have themselves are well acquainted with path breaking research and innovations in the present technology-oriented world.

Faculty:

Academic Staff:				
Head		Shabir Ahmad Sofi Arooj Nissar w.e.f. 13/11/2017		
Faculties:				
Professor	Associate Professor	Assistant Professor	Teacher Trainee	Assistant Professor (on contract)
		Shabir Ahmad Sofi	Janibul Bashir	Neelam Saleem (Resigned 8/9/2017)
		Ms Arooj Nissar	Iqra Altaf	Aejaz Farooq (Resigned 18/8/2017)
				Jahangeer Ali
				Kalimullah Lone
				Farhana Nazir
				Rameesa Mufti
				Insha Altaf
				Insha Majeed (Resigned 18/8/2017)
				Asra Nissar (Joined 29/8/2017)
				Jasra Jabbar (Joined 11/9/2017)
				Deebha Mumtaz (Joined 11/9/2017)

I. Papers Published by the Staff (National / International) during the period of 01.04.2017 to 31.03.2018:

<i>S.No</i>	<i>Name of the Staff members</i>	<i>Title of the papers</i>	<i>Conference/Journal etc, where published</i>	<i>Date of publication</i>
1	Shabir Ahmad Sofi	“Natural algorithm based adaptive protocol for Underwater WSN”	IEEE	2017
2	Neelam Saleem	“Domain Dictionary based Metadata construction for	2nd Springer International	15-16 April 2017

		search over Encrypted Cloud Data”.	Conference on Intelligent communication, Control and Devices	
3	Neelam Saleem	“Secure Metadata based search over Encrypted Cloud Data Supporting Similarity Ranking”	International Journal of Computer Science and Information Security	March 2017
4	Jahangeer Ali	"Data Confidentiality by Using RSA Algorithm for Encryption and Decryption of Data in Multi-tenant Cloud Computing Environment"	IEEE	2017
5	Jahangeer Ali	"Enhancing the Security of CAPTCHA based on the New Character Locations"	IEEE	2017
6	Janibul Bashir	“Optical overlay nuca: A high-speed substrate for shared L2 caches”	ACM	2017
7	Janibul Bashir	“POSTER: BigBus: A Scalable Optical Interconnect”	IEEE	2017
8	Janibul Bashir	“NUPLet: A Photonic Based Multi-Chip NUCA Architecture”	IEEE	2017

II. Programme attended by the Staff (Conferences/Courses/ Trainings):

<i>S.No.</i>	<i>Name of the Staff members</i>	<i>Name of the programme attended</i>	<i>Institute where attended</i>	<i>Date</i>
1	Janiul Bashir	Parallel Architecture and Compilation Technique	PACT USA	9-16 September 2017
2	Janiul Bashir	International Conference on Computer Design	ICCD USA	1-14 November 2017

III. *Purchase Made:*

<i>S.No.</i>	<i>Name of the equipment/Item</i>	<i>Date of Purchase</i>	<i>Quantity</i>	<i>Annual Purchase</i>
<i>1</i>	8085 Microprocessor	24/04/2017	<i>1set</i>	
<i>2</i>	D-link Switch 16 port	04/05/2017	<i>6</i>	
<i>3</i>	HP pendrive 16GB	04/04/2017	<i>12</i>	
<i>4</i>	Wifi Devices	04/05/2017	<i>5</i>	
<i>5</i>	Printer inkjet brother	04/05/2017	<i>2</i>	
<i>6</i>	HP Scanjet	11/05/2017	<i>3</i>	
<i>7</i>	Hp Laserjet Printer	19/06/2017	<i>1</i>	
<i>8</i>	Electric Extension	20/06/2017	<i>20</i>	
<i>9</i>	D-link 24 port switch	21/06/2017	<i>4</i>	
<i>10</i>	Canon All-in-one	21/06/2017	<i>1</i>	
<i>11</i>	Vaccum Cleaner	21/06/2017	<i>1</i>	
<i>12</i>	Electric Kettle	21/06/2017	<i>2</i>	
<i>13</i>	Induction Heater	21/06/2017	<i>1</i>	
<i>14</i>	MicroWave Oven	21/06/2017	<i>1</i>	
<i>15</i>	Tool KIT	21/06/2017	<i>2</i>	
<i>16</i>	Biometric secure eye	17/08/2017	<i>1</i>	
<i>17</i>	1.3 MP Tr out Camera	17/08/2017	<i>1</i>	

LIST OF LABORATORIES:

1	IOT/WSN and Embedded Systems
2	Data mining and analytics lab
3	Information Security and Forensics Lab

4.1.9. DEPARTMENT OF MATHEMATICS

Head: Dr. Zamrooda Jabeen

Introduction

The Department of Mathematics, National Institute of Technology, Srinagar started its functioning in the year 1960. During past 52 years, many mathematicians of International repute like Prof. Q. I. Rehman, Prof. M. A. Ansari (Bretlee Ansari's test), Prof. S. I. Hussain, Prof. A. H. Siddiqui, Prof. A. G. Lone and many worked in the Department. The faculty members of this department are actively engaged in research and published more than 100 research papers in journals of national and international repute. The Department has produced 8 PhD's in last five years. The faculty of the Department is actively engaged in organizing workshops, national and international conferences.

The department is teaching around 50 courses to B.Tech students and 8 courses to M.Tech and M.Phil/Ph.D students.

Faculty:

1. Dr. Zamrooda Jabeen	Head of the Department
2. Dr. Ab. Liman	Associate Professor
3. Dr. Neyaz Ahmad Sheikh	Associate Professor
4. Dr. Tanweer Jalal	Associate Professor
5. Dr. Mehraj Ahmad Lone	Lecturer(on Contract)
6. Dr. Mohd Younus Bhat	Lecturer(on Contract)
7. Dr. Mohamd Saleem Lone	Lecturer(on Contract)
8. Mr.Tufail Mohammad Shah	Lecturer(on Contract)

R&D Work during 2017-18:

I. Papers published by the staff (National/ International) Journals.

S. No.	Authors	Title of the paper	Name of the Journal/ Conference	Venue & Date
1.	Prof. Ab. Liman	Inequalities pertaining to rational functions with prescribed poles	Filomat	May 2017
2.	Prof. Ab. Liman	Applications of the Schwarz lemma to inequalities for polynomials with restricted zeros	Journal of Analysis	July 2017
3.	Prof. Ab. Liman	Some Inequalities for polynomials with a multiple zero at origin	Non. Func. Anal.Appl	September 2017
4.	Prof. Neyaz Ahmad Sheikh	Some New Inequalities for Wavelet Frames On local Fields	Analysis In Theory And Applications	December 2017

Professor Abdul Liman,
Department of Mathematics
National Institute of Technology
Srinagar

FIELD OF SPECILIZATION : COMPLEX FUNCTION THEORY

Ph.D AWARDED :

1.Dr. Lubna Wali Shah, 2018, GROWTH, INEQUALITIES AND DISTRIBUTION OF ZEROS OF POLYNOMIALS .

2. Dr. Infan Ahmad Faiq, 2018, GEOMETRY OF MEROMORPHIC FUNCTIONS AND APPLICATIONS .

RESEARCH PAPERS PUBLISHED :

1. Irshad Ahmad and Ab. Liman, on the inequalities concerning the polar derivative of a polynomial, Filomate, 267-274, 2018. **(Scopus, SCI)**.
2. Shah Lubna Wali and Abdul Liman, Integral estimates for a class B_n of operators, Stud. Univ. Babe,s-Bolyai Math. 63(2018), No. 2, 175–188. **(Scopus, SCI)**.
3. Idrees Qasim, Abdul Liman and Tawheeda Rasool, Number of zeros of a polynomial in a

- disk , Journal of Mathematics and Applications, 41: 181-194, Nov., 2018.
4. Idrees Qasim, A. Liman, An integral Mean Estimate For the Polar Derivative of a Polynomial whose zeros are within a Circle, IJARSE, 2018, **07**(10), 232-237.
 5. Idrees Qasim, Abdul Liman and Tawheeda Rasool , Location of Zeros of Lacunary-Type Polynomials, JMA, 41: 171-180, 2018. **(SCI)**
 6. Irshad Ahmad and Ab. Liman, Inequalities pertaining to rational functions with prescribed poles, Filomat 31:5 (2017), 1149-1165, DOI 10.2298/FIL1705149A. **(Scopus, SCI)**.
 7. Irshad Ahmad and Ab. Liman, on the inequalities concerning the polar derivative of a polynomial, Thai Journal of Mathematics, 1686-0209, 2018. **(Scopus, SCI)**
 8. Irshad Ahmad and Ab. Liman, WM Shah, on an integral estimate concerning the polar derivative of a polynomial with restricted zeros, Filomate, 465-472, 2019-03-26. **(Scopus, SCI)**.
 9. Shah Lubna Wali and Abdul Liman, Refinement of some polynomial inequalities with restricted zeros, Journal of Analysis, DOI; 10.1007/s41478.017.0057-2, October, 2017. **(SCI)**.

PAPER PRESENTATION IN CONFERENCES: 22

Presented a paper in 3rd International conference on Mathematics and Computing ICMC 2017, January 17-21, 2017, Haldia Institute of Technology, Haldia, West Bengal, India.

BOOKS PUBLISHED

1. Mathematics for P.G. Entrance published by LAP Germany, ISSN 6135843710, Vol. I, 01-01-2018.
2. Mathematics for P.G. Entrance published by LAP Germany, ISSN 6137340872, Vol. II, 29-01-2018.

Professor Neyaz Ahmad

Department of Mathematics
National Institute of Technology
Srinagar Kashmir

Field of Specialization: Wavelet Analysis

Ph.D Awarded:

1. Mr Ishtaq Ahmad, Uncertainty Principle and Frames, 2018
 2. Mr. Owais Ahmad, A study of Wavelet and Gabor Frames on Local fields, 2018
- Research Publications:
1. **Some New Inequalities for Wavelet Frames On local Fields** (With F. A. Shah & Owais Ahmad), Analysis In Theory And Applications, Vol. 33, No. 2 (2017), PP 134-148. (SCI, Zentraballt & Google Scholar)
 2. **a-inner product on local fields of positive characteristic**, (With Ishtaq Ahmad), Journal of non- linear analysis and applications 2 (2) (2017). (Zentraballt & Google Scholar)
 3. **Orthogonal Gabor system on local fields**, (With Owais Ahmad), Filomat, 31 (16), (2017), 5193-5201. (SCI)
 4. **Multigenerator Gabor Frames on local fields**, (With Owais Ahmad) Facta Universtatis, Ser., Math. And informat., 33 (2) (2018). (SCI)
 5. **Non-uniform wavelet frames on local fields**, (With Owais Ahmad) Jordan Journal of Math. And Stat. Vol.11 (1), 2018, 51-67. (Scopus, Accepted)
 6. **Gabor Frames on Non-Archimedean fields**, (with Owais Ahmad & F A Shah) International Journal of Geometrical Methods in Modern Physics, Vol. 15, 2018, 1850079 (17 pages) (SCI).
 7. **On Characterization of Non-uniform tight wavelet frames on local fields** (With Owais Ahmad), Analysis in theory and Applications, Vol.34. No. 2, 2018, 135-146.

8. On **Characterization of Gabor Frames on Local fields**, (with Owais Ahmad) Journal of Non- linear Functional analysis and Applications 2018 No. 2 (2018) 1-8.

RESEARCH PROJECT:

Working on Major Research Project entitled Summability and Wavelet Analysis sponsored by DST- SERB, GOI Vide No. SR/S4/MS: 818/13

INVITED TALKS:

1. Delivered an invited talk on **“Bounds for Uncertainty Principle” in an International workshop on Wavelets, Frames and Applications-III held at Department of Mathematics, Kirori Mal College, University of Delhi (14th-20th Dec. 2017)**
2. Delivered an invited talk on **“Wavelets: Present, Past and Future” in an National conference on Recent Trends and Innovations in Pure and Applied Mathematics held at DAV College Jalandhar (23 - 24 Feb. 2018).**

Dr.Tanweer Jalal
Department of Mathematics
National Institute of Technology
Srinagar Kashmir

Publications of Dr. Tanweer Jalal 2017-2018

1. Tanweer Jalal, Some new Lacunary sequence spaces of Invariant means defined by Muselik-Orlicz functions on n-normed space, IJPAM 119(2), 1-11, 2018. (Scopus)
2. Tanweer Jalal , A note on fuzzy multi-ordered difference sequence spaces, Filomat 32(8), 2018. (To APPEAR) (SCI&Scopus)
3. Tanweer Jalal & Ishfaq Ahmad Malik , Some new triple sequence spaces over n-normed space, Proyecciones Jour. Math., 37(3) , 547-564, 2018. (Scopus)

Conferences Attended

1. 2nd International conference on Modern Mathematical Methods and High performance Computing in Science and Technology (M3HPCST-2018) January 4-6, 2018. IPEC Ghaziabad.
2. Ist International conference on New Frontiers in Engineering, Science and Technology (NFEST-2018) January 8-12,2018. DTU, Delhi.

II. Sponsored Projects:

S. No	Title of the Project	Investigator	Sponsoring Organisation	Amount(in Rs)	Starting year
1.	Summability and Wavelet Analysis	Prof. Neyaz Ahmad Sheikh	DST-SERB	11, 56,560/-	2014

III. Ongoing Doctoral Programme:

S. No	Topic	Investigator	Supervisor(s)	Degree Awarded
1.	A study of wavelet and Gabor frames on local fields	Dr. Owais Ahmad	Prof. Neyaz Ahmad Sheikh	12/02/2018
2.	Geometry of Meromorphic functions and Applications	Dr. Lubna Wali Shah	Prof. Abdul Liman	03/01/2018
3.	Uncertainty principle and frames	Dr. Istiyaq Ahmad	Prof. Neyaz Ahmad Sheikh	Ongoing
4.	Growth, Inequalities and distribution of zeros of polynomials.	Mr. Irfan Ahmad faiq	Prof. Abdul Liman	Ongoing
6.	Mesures of non-compactness in Banach spaces	Mr. Ishfaq Ahmad	Dr. Tanweer Jalal	Ongoing

List of Laboratortries:

01	Computer Lab with genuine mathematical softwares.
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4.1.10. DEPARTMENT OF PHYSICS

Head: Dr. M. Ikram

Introduction

The Department of Physics was established in 1960 and since then it remained actively engaged in imparting the instructions at U.G. level in addition of achieving higher standards in the field of research by guiding M.Phil/Ph.D programs and other sponsored research projects.

It offers two semester compulsory course of basic physics so necessary for engineering students. Besides, the Department offers Electromagnetic Fields and waves, Electronic Devices to the 5th semester (Electronics and Communication) students and Electromagnetic Field and Waves to the 3rd semester (Electrical) students. Besides, the Department has the expertise for giving elective courses, for students of the Civil, Electrical, Mechanical and Metallurgical Engineering Departments.

The Institute acquired the status of National Institute of Technology in August 2003. Since then, the Department of Physics remained very active in research and other academic activities. Till date more than 45 scholars have been awarded the degree of M. Phil/Ph. D. More than 500 research publications in the national and International Journals of repute have been published. Many research projects have been successfully completed and many are running in the Department. The Department is presently very active in research in different fields like Studies of Ionospheric and Magnetospheric Plasma, Material Science, Nuclear Physics, Solid State Physics, Photonics, Renewable sources of energy and Nano-science and Technology. At present 8 research scholars are working in various fields for their M. Phil and Ph. D Degree.

Academic Staff			
Head	Dr M Ikram		
Faculties			
Professor	Associate Prof	Assistant Prof	Contract
Nil	Dr. M. Ikram	Dr PA Ganai	Dr Shabir Bhat
	Dr. S.Rubab	Dr MA Shah	Dr Wahid Dar
	Dr. G R Khan		Dr Jahangir Sheikh

I. Papers published by the staff:

	Name	Title	Journal	date
1	S. Rubab	'Enhanced cycling properties and better rate capabilities of Al-doped LiMn ₂ O ₄ nanorods and nanospheres,	Materials Research Express	2017
2	S. Rubab	'Electronic Structure, Optical and Transport Properties of Double Perovskite La ₂ NbMnO ₆ : A Theoretical Understanding from DFT Calculations'	Journal of Electronic Materials	2018
3	M A Shah	Enhanced photo-electrochemical potential of Fe ₂ O ₃ modified TiO ₂ nanotube array with multiple legs	Journal of Materials Science: Materials in Electronics	2017
4	M A Shah	Augmented Photo electro chemical Efficiency of ZnO/TiO ₂ Nanotube Heterostructures	Journal of Electronic Materials	2017
5	M A Shah	Fabrication mechanism of compact TiO ₂ nanotubes and their photo-electrochemical ability	Materials Res. Express (IOP)	2017
6	M A Shah	Influence of Precursor Concentration on Structural, Morphological and Optical Properties of Hematite (α -Fe ₂ O ₃) Nanoparticles	Current Nanomaterials	2017
7	M A Shah	<u>Enhanced Structural and Electrochemical Properties of</u>	Journal of Electronic	2017

		<u>LiMn₂O₄ Nanocubes</u>	Materials (Springer	
8	M A Shah	Enhanced cycling properties and better rate capabilities of Al-doped LiMn ₂ O ₄ nanorods and nanospheres.	Materials Res. Express (IOP)	2017
9	M A Shah	A comparative investigation of mechanical and tribological properties of multilayered CVD-diamond coatings	Advanced Materials Letters, 8 (2017)	2017
10	M A Shah	Enhancement in Tribological and Mechanical Properties of Cemented Tungsten Carbide Substrates using CVDdiamond Coatings	Tribology in Industry	2017
11	M A Shah	Deposition of dual-layer coating on Ti6Al4V	Surface Topography: Metrology and Properties, IOP	2017
12	M A Shah	Tribological Performance of Titanium Alloy Ti-6Al-4V via CVD-diamond Coatings	Journal of Super-hard Materials, Springer	2017
13	M. Ikram	Electronic excitation-induced structural, optical, and magnetic properties of Ni- doped HoFeO ₃ thin films”	Applied Physics A	2017
14	M. Ikram	Effect of Doping on Structural and Dielectric Properties of Barium Hexaferrite”	Science and Engineering Applications	2017
15	M. Ikram	Ion Beam Induced Ferromagnetism in Ca doped LaMnO ₃ Thin Films Grown on Si (100)	Radiation Effects and Defects in Solids	2017
16	PA Ganai	A Study of Gaugeon Formalism for QED in Lorentz Violating BackgroundCommun.	Theor. Phys. 69	2018
17	PA Ganai	Quasiparticle and γ -band structures in Dy ₁₅₆	Physical Review C 97	2018
18	PA Ganai	Quantum gauge freedom in the	International Journal of Geometric Methods in	2018

		Lorentz violating background	Modern Physics 15 (01)	
19	PA Ganai	Spontaneous symmetry breaking in Lorentz violating background	International Journal of Geometric Methods in Modern ...,	2018
20	PA Ganai	A study of 3-form gauge theories in the Lorentz violating Background	International Journal of Geometric Methods in Modern Physics	2018
21	PA Ganai	Chern–Simons theory in aether superspace	Modern Physics Letters A 32	2017
22	PA Ganai	Intrinsic properties of high-spin band structures in triaxial nuclei i	Nuclear Physics A	2017
23	PA Ganai	Spontaneous symmetry breaking in Lorentz violating background	International Journal of Geometric Methods in Modern Physics	2017
24	PA Ganai	Non-local deformation of a supersymmetric field theory	The European Physical Journal C 77 (9)	2017
25	PA Ganai	Boundary effects in super-Yang–Mills theory	The European Physical Journal C 77 (5)	2017
26	G R khan	Wireless Resource Virtualization in Device-toDevice Communication for 5G Cellular Networks,	International Journal of Electronics & Communication Engineering & Technology (IJECET), 9	2018
27	G R khan	Effect of Quantum Confinement on Thermoelectric Properties of Vanadium Dioxide Nanofilms,	Applied Physics A, 123	2017
28	G R khan	Room Temperature Tunability of Mo-doped VO ₂ Thin Films across Semiconductor to Metal Phase Transition,	Thin Solid Films (U.K.), 625	2017
29	G R khan	Gold-Gilded Zinc Oxide NanoDiamonds: Plasmonic and Morphological Effects,	International Journal of Nanoscience,16	2017

II. Programme attended by staff:

	Name	Name of Programme	Institution where Attended	Date
1	S. Rubab	Training Program on Computer Interfaced Science Experiments	IUAC New Delhi	2017
2	M A Shah	National Workshop on Science & Technology Policy	NISCAIR- New Delhi	2018

III. Programme conducted:

	Programme	Date	Coordinators	Sponsors
1	Inspire	26-30 Dec 2017	MA Shah	DST

IV. Sponsored Projects:

	Title	Investigators	sponsors	Amount	Year (start)
1	Growth & Characterization of Nanomaterials through Green approaches	M A Shah	Nano-Mission DST, New Delhi	200.00 Lakhs	2015
2	Effect of Synchrotron Radiation on the Photoemission Spectroscopy (PES) Studies of Double Perovskite.	M Ikram	UGC-DAE-Consortium for Scientific Research Indore	7.80 lacs	2015
3	Structural, Magnetic, Optical and Dielectric Properties of Double Layer Perovskite Oxides	M Ikram	CSIR, New Delhi	13.0 Lacs	2018

V. Ongoing Doctoral programme:

	Topic	Investigator	Supervisor	Degree Awarded
1	Synthesis and characterization of Metal Oxide nanostructures and their Energy applications	Shabir Akhoon	S. Rubab & MA Shah	Yes
2	Design of domestic solar dryer	Sebiha Rahman	S.Rubab	No
3	Effect of hands on demonstration on learning	Syed Ishtiyag	S.Rubab	No

	outcome			
4	Cu, CuO Nanomaterials: Properties and Applications	Mr. Anil Mani	Dr. M A Shah	No
5	Sensing Properties of Al ₂ O ₃ nanostructures	Mr. Mudasir	Dr. M A Shah & P A Ganai	No
6	Optical and magnetic properties of Fe ₂ O ₃ nanopores	Jaffar Faruq	Dr. M A Shah	No
7	Bi, Bi ₂ O ₃ /ZnO nanostructures: Properties and applications	A. Mateen	Dr. M A Shah	No

VI. Purchase made:

	Item	Date of purchase	Quantity	Annual purchase
	X-Ray Diffractometer	2018	1	
	UV Vis Spectrometer	2018	2	
	Microwave Synthesis Workstation	2018	3	

List of Laboratories

1	General Physics lab- B.Tech First Semester
2	General Physics lab- B.Tech Second Semester
3	Advanced optics lab
4	Electronics lab
5	Solid State Physics Lab
6	Materials Science lab
7	Characterization lab
8	Computation lab
9	Renewable Energy Lab
10	Synthesis lab
11	XRD lab
12	Spectroscopy Lab

4.1.11. DEPARTMENT OF CHEMISTRY

Head: Dr. Tabassum Ara

Introduction

The Department of Chemistry was established in 1960 and has been headed by the renowned personalities like Prof. R. P. Jeerath,, Dr. Ram Murthi, Dr. Shakti Rais Ahmad, and Dr. A. K. Choudhry. About fifteen Ph. Ds and 30 M. Phils have been produced by the Department till date. The faculty members of the Department have published many scientific papers and reviews in National and International journals of repute. Research, in the areas of Physical, Organic, Inorganic and Environmental Chemistry, are being carried out in the Department.

Faculty

Academic Staff:			
Head	Dr. Tabassum Ara		
Faculties:			
Professor	Associate Professor	Assistant Professor	Lecturer (on contract) during the period
-	Dr. S. A. Shah	Dr. J. A. Bandy	Dr. Rafia Bashir
-	Dr. Tabassum Ara	Dr. Hamada-Tun-Nisa	Dr. Rohi
-	Dr. Kowsar Majid	-	Dr. Wilayat

I. Papers Published by the Staff (National / International) during the period of 01-04-2017 to 31-03-2018:

S. No	Name of the Staff member	Title of the Paper	Conference/ Journal, etc. where Published	Date of Publishment
01.	Dr. S. A. Shah	1. "Studies on Physico-chemical Parameters of Water and Sediments of Dal Lake"	<i>Elixir Pollution</i>	2017, 103, 45573-45575
02.	<u>Tabassum Ara</u>	1. Study of Thermal, Electrical, and Photocatalytic Activities of Iron 2 Complex Doped Polypyrrole and Polythiophene Nanocomposites..	<i>Industrial And Engineering Chemistry Research</i>	DOI: 10.1021/acs.iecr.7b00167, 2017.

		<p>2. Ultrasound assisted one pot expeditious synthesis of new pyrido[2,3d]pyrimidine analogues using mild and inexpensive 4-dimethylaminopyridine (DMAP) catalyst</p> <p>3. Proficient synthesis of bioactive annulated pyrimidine Derivatives: A review.</p> <p>4. Chemical constituents of <i>Salvia sclarea</i> from Kashmir (India)</p> <p>5. Synthesis and antimicrobial activity of triazolyl analogs of diosgenin</p> <p>6. Synthesis and biological evaluation of novel 3-O-tethered triazoles of diosgenin as potent antiproliferative agents.</p>	<p>Beni-Suef University Journal of Basic and Applied Sciences</p> <p><i>Journal of Taibah University for Science</i></p> <p><i>Adv. Biomed. Pharma.</i></p> <p>The Journal of Phytopharmacology</p> <p><i>Steroids</i>: 1–8.</p>	<p>Accepted 16 April 2017</p> <p>PII: S1658-3655(17)30066-3</p> <p>DOI: http://dx.doi.org/doi:10.1016/j.jtusci.2017.05.005</p> <p>Reference: JTUSCI 389</p> <p>May -2017</p> <p>4:2 (2017) 44-54</p> <p>sept.2017; 6(4): 227-233</p> <p>2017</p>
03.	Dr. J. A. Bandy			
04.	Dr. Hamida Tun Nisa Chishti	<p>1.</p> <p>H. Chisti,</p> <p>Comparative characterization of water quality of Brari-Nambal Lagoon of Dal lake before and after kashmir floods.</p> <p>2.</p> <p>H. Chisti,</p> <p>Heavy metal sequestration from contaminated water: A review.</p> <p>3.</p> <p>Hamida Tun Nisa Chisti,</p> <p>Advanced Water Treatment</p>	<p>Current Environmental Engineering</p> <p>Journal of Environmental Science and Engineering</p> <p>IGI</p> <p>IGI</p>	<p>4(2), 121-129, 2017.</p> <p>2018, Volume 9, Issue 8, Page 2345-2355.</p> <p>1-18, 2018</p> <p>155-176, 2018</p>

		Systems and Their Applications. 4. Hamida Tun Nisa Chisti, Pesticidal Pollution		
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II. Programmes Attended by the Staff (Conferences/ Courses/ Trainings):

S. No.	Name of the Staff member	Name of the Programme attended	Institute where attended	Date
01.	Dr. S. A. Shah			
02.	Dr. Tabassum Ara	<p>1. Participated in one week National Level Workshop on "Connecting people to Nature"</p> <p>2. Paper Presented entitled, "One pot and metal free protocol for the synthesis of bioactive natural product based phosphoramidates ' in the International Conference on the "Recent innovations in science, agriculture, engineering and management"</p> <p>3. Paper Presented entitled " Phytochemical analysis and Anti-cancer evaluation of natural products from Artemisia Laciniata " in the National Seminar on Himalayan Biodiversity, charaterisation and Bioprospection for sustainable utilization ,</p>	<p>Department of chemical engineering in collaboration with the Institution of Engineers , National Institute of Technology ,Srinagar</p> <p>organized by university college of computer applications Guru Kashi University ,Punjab, India</p> <p>organised by centre for Kashmir Himalayan Biodiversity, University of Kashmir , Srinagar , Kashmir in collaboration with UGC,DST, And Deptt of biotechnology (DBT) , New Delhi,</p>	<p>" from 25th to 29th sept 2017 organized</p> <p>on 20thNovember 2017 page 44 in abstract book</p> <p>on 18th -19th September ,2017.</p>
03.	Dr. K. Majid	Surfactant assisted synthesis of Polythiophene/Ni _{0.5} Zn _{0.5} Fe _{2-x} Ce _x O ₄ ferrite composites: Study of structural, dielectric and magnetic properties for EMI shielding applications	PCCP (RSC)	22 March, 2017

04.	Dr. J. A. Banday	Subramani Kandhasamy, Sathiamurthi Perumal, Balaraman Madhan, Narayanan Umamaheswari, Javid A. Banday , Paramasivan T. Perumal, Vichangal Pridiuldi Santhanakrishnan. “Fabrication of Collagen- Coated Ostholamide Electrospun Nanofiber Scaffold for Wound Healing”. 10.1021/acsami.6b16488	<i>ACS- Applied materials and Interfaces</i> ,	2017, 9 (10), 8556–8568. DOI:
05.	Dr. Hamida Tun Nisa Chishti	1. One week national level workshop on connecting people to nature organized by Department of Chemical Engineering	NIT, Srinagar	September 25-29, 2017

III. Sponsored Projects :

S. No.	Title of the Project	Investigator(s)	Sponsoring Organization	Amount (in Rs)	Starting Year
01.	Development of Nanocomposite Sensors for heavy metal ions	Dr. Hamida Tun Nisa Chisti (Mentor)	SERB-DST	19,20,000/-	2017

List of Laboratories :

01.	Junior Chemistry Lab.	02.	Sr. Chemistry Lab.
03.	Inorganic Chemistry Lab.	04.	Environmental Chemistry Lab.
05.	Organic Chemistry Lab.	06.	Physical Chemistry Lab.
07.	Natural Product Chemistry Lab.		

4.1.12. DEPARTMENT OF HUMANITIES AND SOCIAL SCIENCES

Head: Mir Mukhtar Ahmad

Introduction

INTRODUCTION

1.0. Education System

The Department of Humanities and Social Sciences, which is one of the oldest departments of the institute, is contributing to the academics by offering various courses in English, Management, Economics and Entrepreneurship at B.Tech level and Research Methodology and Communication Skills at M.Tech level. The students of B. Tech & M. Tech are introduced to the basic concepts and advanced studies in the above mentioned subjects. As these courses equip the engineering students with the professional skills, the department makes every effort to keep these courses updated. It tries to amalgamate the field of engineering and the field of management by equipping students with the technical expertise and leadership skills as are required to advance their career in the fast-paced world of competition.

The subjects like Management and Economics play an excellent role in developing the managerial and professional capabilities of the students who have a potential market both in public and private companies of India and foreign countries. The courses are intended to enhance their employment opportunities in the growing corporate sector and bring together the technological problem-solving savvy of *engineering* and the organizational, administrative, and planning abilities of *management* in order to oversee complex enterprises from conception to completion. Apart from it, the Department has many programs of higher learning in mind but the non availability of staff is the main impediment. For some professional courses like MBA and Diploma in Entrepreneurship, the department is making efforts both in terms of staff and infrastructure. The department is also planning to arrange some guest lecturers for the personality development of the students as per

their demand. The department aims to promote student success in the Core Curriculum through advisement, support, and enrichment programs.

The Department has already submitted a proposal for the establishment of a Language and a Management Lab for improving the linguistic proficiency and the managerial skills of the students in general and academically weak, SC/ST & backward students in particular. Due to the continuing problem of space, the development of Language and Management lab could not be taken up. However, forty computers have been provided by the institute for the same which shall be installed once the infrastructure for the lab is ready.

Faculty

1. Academic Staff:

Head		Mir Mukhtar Ahmad, Associate Professor.	
Facilities:			
Professor	Associate Professor	Assistant Professor	Lecturer (on contract)during the period
Dr. M.F.Lala	Mir Mukhtar Ahmad	1.Dr. Tahir Ahmad Wani 2.Dr. Jaya Shrivastava	1.Dr. Rasak Annayat 2.Dr. Fouzia Jan 3. Dr. Shakeel Ah.Sofi

I. Papers Published by the Staff (National/International) during the Period of 01-04-2017 to 31-03-2018.

Sr. No.	Name of the Staff members.	Title of the papers.	Conference/Journal etc, where published.	Date of publish.
01.	Dr.Rasak Annayat	Learning English through Literature	Meethaq	March 2017

II. Programme attended by the Staff (Conferences/Courses/Trainings):

Sr.No.	Name of the Staff members	Name of the programme attended.	Institute where attended	Date.
01.	Dr. Fouzia Jan	National Conference on Entrepreneurship: Opportunities and Challenges in the Contemporary works	University of Kashmir.	March, 2017

III. Ongoing Doctoral Programme:-

Sr.No.	Topic	Investigator	Supervisor(s)	Degree awarded
01.	Impact of service quality on patient satisfaction in Kashmir Hospitals.	Ather Sidiq Zargar	Dr. M. F. Lala	Not Yet
02	Impact of Select Entrepreneurial Competencies and Environmental Factors on Entrepreneurial success: An Empirical Study of Entrepreneurs in Kashmir.	Mohd Shiob Shah	Dr. M. F. Lala	Not Yet

Any other activity/achievement with details:

The Department is actively involved in research activities. Presently two research scholars are on the rolls of the department and are pursuing their research activities rigorously. The department has also devised a comprehensive course line for remedial coaching classes where the students with weak language and communication skills are trained to improve their speaking and writing skills. A set of well-designed tutorial pack is prepared under the supervision of the senior faculty and the same is administered to those students with proper instructions, supervision and guidance. To achieve this objective the department is in the process of establishing a language lab. For which preliminary work has already started and some equipment has been provided by the institution.

4.2. CENTRES

4.2.1. WATER RESOURCES MANAGEMENT CENTRE

Head of the Centre: Prof. M. A. LONE

1. Introduction

WRMC was established by the Ministry of Education, Govt .of India in 1983 under new plan scheme for creation of infrastructure in the areas of emerging technology. The objectives of the Center are:

- i. To undertake work on specific technological problems of relevance and importance in Water Resources Management and to make fundamental contribution to the advancement of technology.
- ii. To undertake Research and Development work of a high order by mobilizing inter- disciplinary and inter- institutional collaboration.
- iii. To act as a resource center for the creation of knowledge and for the collection and dissemination of Information on the subject .
- iv. To undertake research works in the field of Water Resources Engineering to meet the requirements of industry, Research and Development establishments, irrigation and other water resources management agencies.

1. Facilities Available:

i) Library Facilities:

Fair amount of literature on topics related to Water Resources Engineering and other related topics is available in the main library of the Institute. Besides that

a good collection of books, journals and reports is available in the library of Water Resources Management Centre.

ii) Computational facilities:

The Centre has also a Mini-computer Centre with necessary computational facilities.

iii) Laboratory Facilities:

a) Hydraulics/Fluid Mechanics Lab.

Hydraulics /Fluid Mechanics laboratory which has been brought up to the higher standards of research and development is not only catering the requirements of the Centre but also meets the requirements of departments of Civil Engineering and Mechanical Engineering. It has got almost all necessary equipment and is being modernised with the latest equipments/instruments.

b) Hydrobiology lab:

This Lab. is being set up under the approval of the MHRD and is at the verge of its completion. The lab. after its completion will be fully equipped with the latest water and sewage testing equipments.

c) Hydrometeorological Observatory:

This observatory has also been set –up under one more scheme of MHRD and has a facility of recording all the important Hydro-meteorological parameters.

Research AndDevelopmentActivities

A Chair Professor in Water Resources , entitled, Sheikhu Alam Sheikh Nuruddin Chair for Water Resources , has been established by the Ministry of Water

Resources (MoWR) in the Centre under an agreement between the MoWR and the Institute, in 2008.

The main objective of the Chair is to carry out studies on water resources with special emphasis on assessment of effect of climate change on it and adaptation strategies in respect of planning, design and management of water resources systems of particularly Indus Basin. An important activity related to the Chair is the transfer of technology to CWC and other organizations of MOWR/GOI. Appointment of the Chair Professor was advertised but the selected person did not join and has been re-advertised.

Future Plans

The Centre has been nominated to act as Nodal Centre for Basin-wise studies with respect to impact of climate change on Water Resources by the MoWR , and is planning to actively participate in the study with other leading Institutes. The Centre is planning to upgrade its Hydro-meteorological Observatory with the latest available equipments and instrumentation so that the data collection is more authentic and accurate.

4.2.2. MAINTENANCE ENGINEERING CENTRE

Introduction

Maintenance Engineering Centre was originally set up during the years 1988 and 1989 in the former Regional Engineering College, Srinagar, (now National Institute of Technology, Srinagar) under Indo – Italian Friendship Program.

1. **Technical fields covered**

Existing equipment was purchased according to a survey performed in the mid '80ies, which considered modernization of the industrial and tourist infrastructure.

In particular, reference activities concerned: production of ironmongery parts, automation and packaging of fruit and vegetable products, automation of canning and bottling in the food-farming industry, maintenance of ropeways and ski-lifts for ski resorts, maintenance and improvement of silk looms, woodworking machinery, brick production machinery, general road transportation. Moreover, general mechanical maintenance capabilities were to be improved, with reference to local needs in mechanical construction: this put forward consideration of welding technologies and non-destructive testing. The following fields were selected for development:

- a) Wear and Lubrication
- b) Noise and Vibration
- c) Non – destructive Testing
- d) Welding and Plasma coating
- e) Data acquisition and elaboration

2. **Facilities Presently Available:**

Keeping in view the above selected fields, following facilities are presently available in the centre:

- i) CP30D Programmable Logic Controller.
- ii) MIG welding equipment - one set.
- iii) TIG welding equipment - one set.
- iv) Arc welding equipment – 2 sets.
- v) Ultrasonic (Gildran MG12) flaw detector with automatic monitor.

- vi) Wear testing machine pin ring.
- vii) Wear testing machine pin disk.
- viii) Automatic Hardness meter.
- ix) Pneumatic control model fitted with electrical control.
- x) Pneumatic control with double acting cylinders..
- xi) Pneumatic control fitted with sel1, sel2 and sel3.
- xii) H128D Water/ Oil Multi Pumps Test Bench.

These facilities are ready for imparting training to students and field engineers as well as doing consultancy, research and development work.

3. Activities during the reporting year

In view of the shortage of the staff the activities of the Centre remained limited to the Dissertation work of the M.Tech Students. However efforts are being made to make the staff available for taking the full advantage of the facilities developed.

4.2.3. COMPUTER SERVICES CENTRE

Head of the Centre: Dr. Shaima Qureshi

The institution has long back absorbed itself into the Computer culture and its effects can be well perceived in all over the campus. The Computer Services Centre developed under the scheme of Centre of Excellence aims to provide centralized computer/Inter-net work facilities to the teaching community, students including scholars, administrative staff and others. It has been providing latest and sophisticated computer service to all the departments and the sections.

All the Institute departments, sections and hostels are connected vide a campus wide network which covers almost all the Institute. At present Institute has two

links one is 512 Kbps provided by Enet India and other by BSNL (1Gbps internet connectivity).

The Centre has extended the facilities of internet to hostels including girls hostels through WiFi systems.

4.2.4 Central Research Facilities Centre

Head of the Centre: Prof. M. F. Wani, Professor, Mechanical Engg. Dept.

This Centre has been established with a vision to provide high end state of the art equipments like SEM, XRD, EDX etc. at the centralized place and to cater to research requirement of multi disciplinary nature. The centre has already made the SEM apparatus functional for use by the faculty and the research scholars. The purchase of equipments like XRD, EDX are in final stage of procurement. The Centre is run under the supervision of faculty group derived from different departments of the institute.

4.2.5 Innovation, Incubation and Entrepreneurship Development Centre :

Head of the Centre: Er. Saad Pervaiz, Associate Professor, Dept. of Mechanical Engineering

The Institute had since long established an Industry Institute Interaction Cell and Entrepreneurship Cell. The main object of these Cells was to share its experience with the Industry and to utilize the human resources and all other resources available at the Institute effectively with the assistance of participating Industries.

In view of the prevailing scenario for encouraging innovation and enterprise, it was decided to establish a centre where activities related to innovation, incubation and entrepreneurship could be undertaken in a coordinated manner

on modern approaches. Accordingly these two cells were merged and renamed centre under the title “ Innovation, Incubation and Entrepreneurship Development Centre” was established due approval of the Competent Authority. The Centre has already started extending its technical support to young Innovators and has held number of interactions with the local industrialists. The Centre is in the process of preparation of a DPR for establishing a major innovation centre for the benefit of the region.

An advisory committee has been constituted having an Interdisciplinary representation to guide the activities of the Centre.

5.0. STUDENTS' WELFARE

5.1 Concessions provided to students

The SC/ST students are provided concessions in tuition fee as per Government of India Guidelines.

5.2 Scholarships

The Institute has been providing all sorts of financial assistance in terms of scholarships and aids to the deserving admitted students. Students admitted under reserved categories having the good academic record are eligible for post matric scholarship. Physically handicapped Students are eligible for national Scholarship on the basis of their academic performance.

The Institute offers merit scholarship to about 25% of the students based on the performance of their 1st semester examination.

Besides above MOMA scholarships are also available for the meritorious students. The Institute also provides aid from students welfare fund to those of the students who are economically in adverse condition and not covered by other scholarships.

Various scholarships availed by the students of the institute areas under:

1	Ph.D. Scholarships
2.	M. Tech (GATE) Scholarship
3.	Aid from Students Welfare Fund
4.	Post Matric Scholarship
5.	H & W Scholarship
6.	Merit/Merit-cum means Scholarship (MOMA)
7.	S.T. Scholarships
8.	S.C. Scholarship
9.	Scholarships of Social Welfare Departments of different states and other agencies
10	Directorate of Technical Education, Chattisgarh scholarship
11	Labour Commissioner J&K scholarships

6.0. Welfare Schemes for staff:

- I) Staff welfare fund: During this period no loan under this fund were provided to any staff member.
- II) Benevolent Fund :During the period no financial assistance were provided to any staff member.

The funds under these two schemes are based on contributions made by the Institute staff towards these funds as well as some contribution out of the revenue generated through consultancies. The two funds are managed by duly constituted governing body and committee as per well laid down bylaws.

7.0. CENTRALIZED SERVICES

The Institute has a number of Centralised Services which facilitate the carrying out of various activities of the students and the staff effectively. A brief description of these facilities is given below:

7.1. TRAINING AND PLACEMENTS

The Industrial Training and placement are the two important issues of the students which are being taken care of by a well established "Training and Placement "(T&P) Department of this

Institute. The T&P Department is usually headed by a senior faculty member and assisted by some administrative staff and the student's representatives from the different departments.

The students have to essentially undergo a practical training period of six to eight weeks at 5th/7th semester level in projects and industry within or outside the state in Jan-Feb each year, when the institute observes winter vacations. This training plays a vital role in exposing the students to actual industrial environment and in broadening their professional outlook. Thus, this training increases the employability opportunities of the students.

The T & P Department is making every effort to introduce the institute to more and more companies and organizations concerned for better placement of the students. The institute has been able to attract a good number of relevant reputed companies and organizations for on campus selection of the students. Mock test, counseling and seminars are carried out for the students to train them for better performance in their interviews for placements. In this context a good number of reputed companies have recorded their appreciations for co-ordination of departments and students representative's efforts in conducting on campus placements. The Endeavour of the T & P Department is to attain cent percent placement. The students from different departments are also involved in various relevant activities of the training and Placement like quizzes, mock tests, mock group discussion etc.

The details of the students of the institute placed in different organizations during the year 2017-18 are given in the following table:

S.NO.	NAME OF COMPANY VISITED	CIVIL	ELE	CSE	MECH	ECE	CHEM	MET TA	IT	TOTAL	CTC/An num	Avg. Package
1	ADOBE SYSTEMS	-	-	-	-	-	-	-	-	-	-	
2	SHEROES	-	-	-	-	-	-	-	-	-	-	
3	NUCLEUS	-	-	-	-	-	-	-	-	-	-	
4	LG SOFT	-	-	-	-	-	-	-	-	-	-	
5	SAMSUNG (R&D)	-	-	-	-	-	-	-	-	-	-	
6	HPCL	2	-	3	3	-	-	-	1	9	-	
7	ARTIC INVENT	-	-	1	-	1	-	-	-	2	-	
8	BLOGVAULT (INTEM)	-	-	1	-	-	-	-	1	2	3.0 LPA	
9	ADVERB(Internship)	-	-	-	1	-	-	-	-	1	3.0 LPA	
10	INFOSYS	6	3	11	2	6	3	4	6	41	3.2 LPA	
11	TATA PROJECTS	1	1	-	2	-	-	-	-	4	3.75 LPA	
12	IBM	-	6	4	-	12	-	-	6	28	3.75 LPA	
13	RANKWATCH	-	-	1	-	-	-	-	-	1	3.8 LPA	
14	LNT Infotech	-	-	5	-	2	-	-	8	15	4.2 LPA	
15	SAGACIOUS RESEARCH	-	-	3	1	2	-	-	1	7	4.25 LPA	
16	JCB	-	-	-	1	-	-	1	-	2	4.5 LPA	
17	KEC	3	3	-	-	-	-	-	-	6	4.5 LPA	
18	KPIT	-	1	-	-	3	-	-	-	4	4.75 LPA	
19	JOHNSON CONTROLS	-	1	-	-	-	-	-	-	1	4.8 LPA	
20	Resonance	-	-	-	-	4	-	-	-	4	4.8 LPA	
21	Virtusa	-	-	-	-	-	-	-	1	1	5.0 LPA	
22	Cummins	-	-	-	2	-	-	-	-	2	5.0 LPA	
23	L&T Contraction	11	4	-	1	-	-	-	-	16	5.0 LPA	
24	TAT POWER	-	1	-	-	-	-	-	-	1	5.2 LPA	
25	Gray B	-	-	1	-	-	-	-	1	2	5.2 LPA	
26	AFCON INFRASTRUCTRE	1	-	-	-	-	-	-	-	1	5.5 LPA	
27	TEK Systems	-	-	1	-	-	-	-	-	1	6.0 LPA	
28	Persistent Systems	-	-	1	-	-	-	-	-	1	6.0 LPA	

29	TATA MOTORS	-	-	-	8	-	-	-	-	8	6.0 LPA	
30	Reliance JIO	-	-	-	-	-	-	-	1	1	6.0 LPA	
31	WIPRO	1	-	7	-	3	-	1	8	20	6.0LPA	
32	ZS ASSOCIATES	-	-	-	1	-	1	-	1	3	6.5 LPA	
33	VEDANTA	-	3	-	3	-	3	8	-	17	7.95 LPA	
34	ENVESTNET YODLEE	-	-		-	-	-	-	2	2	8.7 LPA	
35	OIL INDIA	-	-	-	2	-	-	-	-	2	12.00 LPA	
36	IOCL	4	4	-	-	-	-	-	-	8	16.49 LPA	
37	GAIL	2	-	-	-	-	-	-	-	2	17.00 LPA	
	TOTAL PLACEMENTS	31	27	39	27	33	7	14	37	215		5.84 LPA
	Batch Strength	118	73	59	76	73	64	65	56	584		
	Students eligible for Placement	88	58	49	60	48	53	46	49	451		
	% age placement	32	45	76	40	63	15	30.4	73. 5	48		

7.2. CENTRAL LIBRARY

The Institute has a Central Library named Library & information Resources Centre to cater to the needs of students, faculty, supporting staff and research scholars. The Central library has a separate section for SC/ST students with a stock of about 9898 books issued to them for study in a full semester.

Resources. The library which had suffered huge losses due to September 2014 floods took number of steps for making up the losses and books worth around 30 lacs were purchased and a massive renovation is going on.

At present the readers have access to library OPAC and circular section is computerized. Following e-resources through INDEST consortium are available online through the Library for the benefit of community in the campus;

Electronic Resources

URL

ASCE Journals online www.pubs.asce.org/journals/jrns.html

ASME Journals online www.asme.org/pubs/journals

IEL online <http://ieeexplore.ieee.org>

India standards internet version

Nature www.nature.com

Pro quest science <http://www.il.proquest.com/pqdauto>

Springer verlag www.springerlink.com

JCCC <http://jccc.indest.informindia.co.in>

The library is also connected to IGNOU Educational Programmers through Dish antenna. The students are making use of these educational programmes.

In addition the library offers the following services:-

1. Video view facility
2. CAS & SDI services
3. Reprographic services.

Library Timing.

9.00 a.m. to 9.00 p.m(During Summer)

9.00 a.m. to 8.00 p.m(During Winter)

Services to SC/ST students.

The library has got good collection of some ten thousand books separately meant for SC/ST students. Separate section is maintained for acquisition and processing their material. The books are issued to the students for one semester. The aim is to help this weaker section of the society.

1. Purchase Made:

S No	Name of Equipment	Date of Purchase	Annual Purchase
1	Books	17-06-2017	Rs 21,047.00
2	10 KVA UPS along with 15 Batteries (Exide)	09-10-2018	Rs 1,48,786.00
3	Water Purifier	08-03-2018	Rs 14,500.00
4	Subscription of IEEE-IEL Online	January 2018	Rs 37,62,754.29
5	Subscription of Science Direct	17-08-2017	USD 1,82,374.85

	online		
6	Computers(DELL) 50 No's	June 2017	Received from CPU

2. Papers Published By the Staff

S No	Name of the Staff Member	Title of Paper	Conference/Journal etc.(where publisher)	Date of publication
	N/A	N/A	N/A	N/A

3. Programme Attended by the Staff (Conferences/Courses/Trainings)

S NO	Name of the Staff Member	Name of the Programme Attended	Institute Where Attended	Date
1	Mr. Mohammad Farooq(Asstt.Librarian)	Role of Academic Libraries for Excellence in Reasearch	IISER Bhopal	18-02-2018

Programme Conducted (Conference/Course/Training)

S No	Name of the Programme	Date when Attended	Name of the Coordinators	No. Background of Participants
1.	Author Workshop Conducted by M/S Elsevier	13-09-2017	Prof.M S Mir(CLC)	50 Faculty Members& Research Scholars

7.3 Planning & Development Wing

The renovation works as well as new works which were carried out by P&D wing during the 2017-18 are as under:

S:No.	Name of work	Work done cost
1.	<i>Renovation / Face lifting of existing structures of the Institute</i>	
	(i) <i>Renovation of Library Block</i>	Rs. 220.00 lacs
	(ii) <i>Renovation of Hostel Mess of Indus hostel.</i>	Rs. 96.47 lacs
	(iii) <i>Renovation of Hostel Mess of Chenab hostel.</i>	
	(iv) <i>Renovation of Dining hall of Indus hostel.</i>	
	(v) <i>Renovation of Dining hall of Chenab hostel.</i>	
2	<i>Construction of Puff Panel Pre-Fabricated I & L type class rooms 11 No's & 4 No's & also hostel accommodation.</i>	Rs. 1307.27 lacs
3	<i>Furniture for Puff Panel Pre-Fabricated I & L type class rooms 11 No's & 4 No's & also hostel accommodation.</i>	Rs. 208.15 lacs
4	<i>Conversion of two No. of class rooms into Hi-tech class rooms</i>	Rs. 59.00 lacs
5	<i>Repair of Boundary wall including barbed wire fencing</i>	Rs. 23.42 lacs
6	<i>P/F of Chain link fencing around ply field</i>	Rs. 30.74 lacs
7	<i>Construction of Three ladies toilet blocks</i>	Rs. 20.00 lacs
8	<i>Conversion of Tin shed into Mess (Dining Hall) near Dal hostel for students.</i>	Rs. 15.00 lacs
9	<i>Renovation of Bio-Chemical Engineering Laboratory in Chemical Engineering Department</i>	Rs. 12.56 Lacs
10	<i>P/F & repair of collapsible shutters for the various sites in hostels</i>	Rs. 3.00 lacs
11	<i>Renovation of Roof of Workshop</i>	Rs. 24.78 lacs
12	<i>Installation of Fans & Augmentation of various shops of Institute Workshop</i>	Rs. 10.84 lacs
13	<i>Fabrication of Aluminum Cabins including tables for Research Scholars in all Departments</i>	Rs. 39.84 lacs

7.4. CENTRAL WORKSHOP

Department / Section

Central Workshop

Department / Section Head

Er Syed Irsahd Ahamd Qadri

Introduction

The field of engineering continues to grow rapidly, transcending disciplines and driving economic growth. Workshop practice have become more significant in the industrial environment to manufacture products for the service of the mankind. Workshop Practice is a core subject and is highly essential for all engineers and technocrats for formalizing themselves with the latest techniques and concepts of manufacturing. The basic requirement is to impart instructions and practical knowledge of workshop technology to all the engineering students. In addition to introduction to various tools, processes and materials, live practical demonstration has been prepared for various trades in the workshop.

A well equipped workshop forms the most important centre in all the Engineering institutions for training of students of all the branches and trades. The students are trained to acquire basic knowledge and skills about engineering materials, manufacturing practices, equipment, tools and safety precautions to be observed during manufacturing of different products. The students carry out manual operations using mostly hand tools and elementary machines in the carpentry, pattern making, bench work and fitting, welding, sheet metal, black smithy and forging, machining, foundry and casting trades etc.. These trades are relevant and common to most of the industries manufacturing and repairing mechanical, electrical, computers, and electronics, instrument and control products.

The student has to acquire practical knowledge and skills of using machines and equipment, various cutting, measuring and marking tools, performing main operations through simple exercises.

The Central Workshop provides facilities in various trades of fabrication and manufacturing.

The workshop is a Central facility and provides full assistance to the students of all departments to under take the classes of Workshop Practice and provides practical training in all its nine engineering streams and also looks after the transport section with an aim to provide the transport to the students for technical tours and other related functions.

The primary objective of the Central Workshop is to impart the workshop practice to the engineering students and carry out the fabrication of project work of B. Tech and M. Tech students besides it plays pivotal role in maintenance and repair work of Institute.

Students Project work

Central Workshop has undertaken fabrication of various jobs and projects of the final year students of B. Tech and M. Tech. during the period 2017-2018.

I. Papers Published by the Staff (National / International) during the period of 01.04.2017 to 31.03.2018:

S.No.	Name of the Staff members	Title of the papers	Conference/Journal etc, where published	Date of publication
01	Er Syed Irshad Ahamd Qadri	A Study on Wear Analysis of Mixed Ceramic Cutting Tool	International Conference On Recent Trends in “ Engineering, Technology, Applied Sciences, Humanities and Business Management for Sustainable Development (ETAHBS-2018) Organized by: The Department of “Metallurgical and Materials Engineering”, NIT Srinagar, <i>Jammu and Kashmir</i> – 190006 and “Krishi Sanskrit” New Delhi On 20 th - 21 st October, 2018 Venue: NIT, Srinagar, <i>J&K</i>	20 th - 21 st October, 2018

II. Programme attended by the Staff (Conferences/Courses/ Trainings):

S.No.	Name of the Staff members	Name of the programme attended	Institute where attended	Date
01	Er Syed Irshad Ahamd Qadri	International Conference On Recent Trends in “ Engineering, Technology, Applied Sciences, Humanities and Business Management for Sustainable Development (ETAHBS-2018)	Organized by: The Department of “Metallurgical and Materials Engineering”, NIT Srinagar, <i>Jammu and Kashmir</i>	20 th - 21 st October, 2018

III. Programme Conducted (Conferences/Courses/ Trainings) by the Department:

S.No.	Name of the Programme	Date When Conducted	Name of the Coordinator(S)	Sponsoring Agency, if any
01	Conduct of Workshop classes of Goyt College of Engineering and Technology Safa Pora Gander bal Kashmir	26-09-2018 to 05 - 12-2018	Syed Irshad Ahamd Qadri	Goyt College of Engineering and Technology Safa Pora Gander bal Kashmir
02	Conduct of Workshop classes of University of Kashmir, North Campus Dalina Baramulla Kashmir	25-07-2018 to 02 - 08-2018	Syed Irshad Ahamd Qadri	University of Kashmir, North Campus Dalina Baramulla Kashmir
03	Conduct of Workshop classes of Department of Food Technology, Islamic University of Science and Technology Awanti Pora Kashmir	10-07-2018 to 13 - 07-2018	Syed Irshad Ahamd Qadri	Department of Food Technology, Islamic University of Science and Technology Awanti Pora Kashmir
04	Conduct of Workshop classes of Central University of Kashmir, Srinagar	29-01-2018 to 07 - 02-2018	Syed Irshad Ahamd Qadri	Central University of Kashmir, Srinagar

IV. Departmental Students Jobs / Projects:

S.No.	Title of the Project	Investigator(s)	Sponsoring Organisation	Amount (in Rs)	Starting Year
01	Various Jobs and Projects of Students of Final Year B.Tech students and research scholars Total Numbner of jobs 13 Nos	Concerned Investigator of respective departments of projects	Concerned departments of the Institute	Nil	2017-2018

List of Sections/ Workshops

1	Machine Section	2	Sheet Metal Section
3	Fitting and Bench Work Section	4	Welding Section
5	Foundry and Casting Section	6	Smithy and Forging Section
7	Carpentry and Patteren making Section		

7.5. CAD LABORATORIES

The Institute has two well established CAD laboratories in civil and mechanical engineering departments as centralised facilities. Sufficient number of systems and software's are available for the use of staff and the students.

7.6 IGNOU PROGRAMME STUDY CENTER

The Institute also functions as A Programme Study Canter for two UG and two diploma programmes of the Indra Ghandi National Open University (IGNOU), New Delhi. The programmes include B.Tech. in Water Resource Engineering and Construction Management. Diploma programmes include Diploma in Civil Engineering and Advanced diploma in Mechanical Engineering.

7.7 PHYSICAL EDUCATION

In-Charge- Dr. S. K. Bukhari

The primary objective of the department is to provide sporting and recreational facilities to the students keeping in mind the famous quotation "sound mind carries sound body". In this direction the department of physical Education is providing various sporting and recreational facilities to the students in the main ground and in the in- door Common Hall. From last few years the department is excelling in all the sports activities like Cricket, Football, Volleyball, Chess, Carom, Badminton, Athletics etc. The main ground of the Institute was made fully operational and capable to hold almost all sporting events.

Sporting and recreational facilities available to:

A. Boy students:

- 1- Common Indoor Hall and TV Hall
- 2- Gymnasium
- 3- Basket ball court
- 4- Playground
- 5- Volleyball court
- 6- Badminton Court

- 7- Lawn tennis court
- 8- Football ground
- 9- Cricket ground
- 10- Indoor games: Table Tennis, Carom, Chess

B. Girl Students:

1. Table tennis
2. Carom
3. Chess
4. Volleyball
5. Badminton
6. Treadmill
7. Mini Gymnasium
8. Kho Kho,
9. Recreational facility: TV facility is provided to the students in hostel of their residence.

Purchase Made:

S.No.	Name of Equipment	Date of purchase	Amount
1	Sports Goods	01-04-2017 to 31-03-2018	Rs.8,18,296.00/-

7.8 STUDENTS' RESIDENTIAL FACILITIES

The Institute has eight boys hostel named after famous rivers of our state. These are Chenab, Indus, Dal, Jhelum, Manasar, Manasbal, Tawi & PG and Two Girls Hostel which provide accommodation to about 2004 students at present. The residential capacity of each is as under:

Batch Wise Detail of hostels for year 2017

S. No	Name Of the Hostel	No. Of students
01	Jhelum & Dal Batch -(2014)	467
02	Chenab Batch-(2016)	300
03	Indus Batch - (2017)	390
04	Tawi Batch- (2015)	458
05	P.G Ph. D scholars	40
06	Girls-I and II	151
	Total	1806

Batch Wise Detail of hostels for year 2018

S. No	Name Of the Hostel	No. Of students
01	Jhelum Batch -(2015)	291
02	Dal Batch-(2015)	156
03	Chenab Batch-(2017)	377
04	Indus Batch - (2018)	491
05	Manasbal Batch -(2016)	195
06	Manasar Batch-(2016)	100
07	Tawi Batch- (M tech 2017,2018)	138
08	P.G Ph. D scholars	36
09	Girls-I (Junior Students)	121
10	Girls -II(Senior Students)	99
	Total	2004

During the period, Dr. Abdul Liman was Dean Students Welfare and Dr. Niyaz Ahmad was the Associate Dean Students Welfare.

Hostel /Mess Wise list of wardens are as under.

S. No	Name	Department	Hostel Assigned
01	Dr. Niyaz Ahmad	Mathematics	Jhelum & Dal
02	Dr Atiqur Rehman	Metallurgy	Chenab
03	Dr Kausar Majeed	Chemistry	Girls Hostel
04	Dr Tanveer Rasool	Chemical	Mansar & Manasbal
05	Dr Mushtaq Ahmad Rather	Chemical	Indus Tawi & PG

7.9. RESIDENTIAL AND SHOPPING FACILITIES

The Institute being a residential Institute therefore campus provides residential facilities to some of its employees comprising of the faculty, administrative staff and the other supporting staff .

In addition to dedicated lodge for the Director and a well furnished guest house located on the bank of the world famous Dal Lake, the residential campus has the following staff quarters:

1. Directors lodge : 01
2. P-type Quarters : 08
3. A-type Quarters : 24
4. L-type Quarters : 42

The Institute also has facilities of day to day needs, like food commodities, stationery, tailoring facilities and STD facilities etc. for the students and the staff. There are number of shops within the campus to cater to the daily needs of the residents and non-resident employees and the students of the Institute, details given as follows:

1. General Provision & Stationery Stores	:	02
2. Barber Shop	:	01
3. Tailor Shop	:	01
4. Tea Stall / Restaurants	:	03
5. STD Stall	:	03
6. Cafeteria	:	01

7.10. MEDICAL UNIT

The Medical Unit of the Institute is headed by a qualified and experienced Medical Officer and manned by trained Lab. and other paramedical staff. In addition a lady doctor is available daily on part time basis. The Medical Unit has a two storied separate building spread over an area of 303 sq.mtr. Apart from providing facilities for consultations and investigations, medicines are issued to the students and staff free of any cost. The Unit has two Ambulances available to cater to emergencies round the clock. In the recent past the hospital has been modernized and has been equipped with the latest diagnostic tools like the Haematological and Biomedical equipment and a fully automatic ECG unit. The Medical Unit also ensures proper hygiene in the students messes and restaurants / tea stalls by advisories and inspections.

Total number of patients attended..... 27718/-

Annual Work done statement for the year 2017-18.

Total Number of Patients OPD		Dressing and Minor Surgical Interventions		Patients referred to various Hospitals		Total Lab. Investigations under taken		Total number of patients for Institute Councillor		Total number of X-Ray/ ECG		Total Patients admitted	
Students	Staff	Students	Staff	Students	Staff	Students	Staff	Students	Staff	Students	Staff	Students	Staff
1552	72	1159	45	220	90	277	12	180	36	861	28	108	49
22788	66	1611	2	310		1487	10	216		1149	8	157	

7.11. BANK

A fully computerized branch of J&K bank is functioning within the Institute premises having net worked ATM. The bank has installed internet banking / phone banking/mobile banking in the branch. The bank also extends swift facility of house building loans, consumer's loans and many other small loans to the staff and educations loans to the students. Besides ATM of SBI has been installed in the campus.

7.12. TELEPHONE EXCHANGE

Our Institute has a fully automated telephone exchange providing internal and external phone connectivity.

7.13. Transport Unit

Prompt attention was given to repair and maintenance of the Institute vehicles. Transport facilities were provided the various experts and other Institute guests invited for placement of students and other academic activities. The transport



facilities were also provided to the students for conducting the various technical tours. In addition, Ambulance service has been provided to the Medical Unit of the Institute which facilitates the students in getting the proper medical care during emergency. Besides it, three numbers of light vehicles were purchased during the year 2018.

The list of vehicles presently operational in the Institute is as under:-

SNo	Name of the Vehicle	Quantity
01	Mini Bus, LP 709	02 Nos
02	Fortuner Toyota	01 No
03	Innova Crysta0	01 No
04	Scorpio Mahindra	01 No
05	Ambassador Staff car	01 No
06	Ambulance	02 No,s
07	Mini Truck	01 No

7.14. POST OFFICE

Though a Post and Telegraph office operates near the campus at Hazratbal, at one and a half kilometer distance, the Institute has taken step to get a Post Office established in the Campus itself for benefit of students.

8.0 ACHIEVEMENTS & INITIATIVES

The Institute continued its efforts during the year 2017-2018 towards evolving directions to further growth and dissemination of scientific and technological knowledge. Brief outline of the major achievements are presented at below:

Research and Development (R&D) Activities:

The various Departments and Centres continue to carry out the research and development work in their respective areas of specializations. During the year following remained the main contribution in the R&D field:

- i) **Ph.D.**
 - a) Awarded 18
 - b) Pursuing 247
 - c) Admitted 141 (2017-18)

- ii) **M.Phil**
 - a) Pursuing 01
 - b) Admitted -

Sponsored Research and Industrial Consultancy:

The various Departments and Centres of the Institute continue to work on sponsored research and industrial consultancy projects. During the year the work continued on 07 sponsored R &D projects amounting to about Rs.46.21 lacs.

A large number of consultancy assignments were also taken up during the year for an approximate amount of Rs.125.90 lacs.

Placement:

During the year under report the Institute succeeded in involving many companies and other agencies in the process of placement/trainings of the students and in some departments. In addition some students were appointed through off-campus selections and good number of students has gone for higher studies.

9.0. THE COUNCIL, BOG AND OTHER COMMITTEES

9.1. NIT COUNCIL:

(a)	Minister of Human Resource Development, Government of India.	Chairman
(b)	Secretary, Department of Secondary & Higher Education, Ministry of HRD, Government of India.	Member
(c)	Principal Adviser (Education), Planning Commission.	Member
(d)	Secretary, Department of Science & Technology, Government of India.	Member
(e)	Director General, Council of Scientific & Industrial Research, Government of India.	Member
(f)	Secretary, Department of Biotechnology, Government of India.	Member
(g)	Secretary, Atomic Energy, Government of India.	Member
(h)	Secretary, Department of Information Technology, Government of India.	Member
(i)	Secretary, Department of Space, Government of India.	Member
(j)	Special Secretary / Addl. Secretary / Educational Adviser (T), Department of Secondary & Higher Education, Ministry of HRD, Government of India.	Member
(k)	Chairman, University Grant Commission.	Member
(l)	Chairman, All India Council of Technical Education.	Member
(m)	Two Chairmen, Board of Governors of National Institutes of Technology (by rotation).	Members
(n)	Four Directors of the National Institutes of Technology (by rotation).	Members
(o)	One Director of Indian Institute of Technology (by rotation).	Member
(p)	One Director of Indian Institute of Management (by rotation).	Member
(q)	Two Secretaries of Higher / Technical Education from states where NITs are located (by rotation).	Members
(r)	Two persons from Industry nominated by the Central Government.	Members
(s)	Financial Adviser, Ministry of Human Resource Development, Government of India.	Member
(t)	Joint Secretary, (Technical Education), Joint Educational Adviser (Technical Education), Ministry of Human Resource Development Government of India.	Member- Secretary

9.2. BOARD OF GOVERNORS:

Chairman	Nomination under Section 11 of NIT Act, 2007 (29 of 2007) Clause (a)	1. Dr. M. J. Zarabi (Upto 23-11-2017) 2. Prof. Rakesh Sehgal (From 24-11-2017) Director, NIT Srinagar (J&K)
Ex-Officio	(b)	1. Prof. A. R. Dar (temporary) (upto 06-08-2017) 2. Prof. Manoj Singh Gaur (temporary) (upto 08-11-2017) 3. Prof. Rakesh Sehgal (from 09-11-2017) Director, National Institute of Technology Srinagar, Hazratbal, Kashmir-190006
<i>Two persons not below the rank of the Joint Secretary to the Government of India to be nominated by the Central Government from amongst persons dealing with technical education and finance</i>	(c)	Joint Secretary (NITs & DL), Ministry of Human Resource Development, Department of Secondary & Higher Education, Government of India, New Delhi
	(c)	Joint Secretary & FA, Ministry of Human Resource Development, Department of Secondary & Higher, Government of India, New Delhi.
<i>Two persons to be nominated by the Government of the State in which the Institute is situated, from amongst persons, who, in the opinion of that Government, are technologists or industrialists of repute</i>	(d)	Commissioner Secretary, Higher & Technical Education Dept., Government of Jammu and Kashmir, Civil Secretariat, Srinagar / Jammu.
	(d)	Mr. Sheikh Zubair Aslam, Hassan Sons Group, Srinagar Kashmir
<i>Two persons, at least one of whom shall be a woman, having special knowledge or practical experience in respect of education, engineering or science to be nominated by the Council</i>	(e)	Dr. Prema Ramchandran, Director, Nutrition Foundation of India, Delhi
	(e)	
<i>One Professor and one Assistant Professor or a Lecturer of the Institute to be nominated by the Senate</i>	(f)	Prof. Rajinder Ambardar, Metallurgical & Materials Engineering Department, National Institute of Technology Srinagar.
	(f)	Dr. Mohammad Hanief, Assistant Professor, Mechanical Engineering Department, NIT Srinagar
Member-Secretary	Section 18 Clause (2)	1. Prof. Fayaz Ahmad Mir, Registrar I/C,NIT, Srinagar. (upto 23-07-2017) 2. Prof. Mohammad Shafi Mir Registrar I/C,NIT, Srinagar. (From 24-07-2017)

9.4. SENATE:

Chairman		1. Prof. A. R. Dar (temporary) (upto 06-08-2017) 2. Prof. Manoj Singh Gaur (temporary) (upto 08-11-2017) 3. Prof. Rakesh Sehgal (from 09-11-2017) Director, National Institute of Technology Srinagar, Hazratbal, Kashmir-190006
<i>Three persons, one of whom shall be a woman, not being employees of the Institute to be nominated by the Chairperson in consultation with the Director, from amongst educationists of repute, one each from the field of Science, Engineering and Humanities</i>	1	Prof. Mehraj-ud-Din, Vice-Chancellor, Central University of Kashmir, Srinagar (J&K)
	2	Prof. S. K. Koul, Professor, Centre for Applied Research in Electronics (CARE), Indian Institute of Technology, Hauz Khas, New Delhi.
	3	Prof. Azra Nahid Kamili, Dean Biological Sciences & HOD, Environmental Sciences, University of Kashmir
One person to be nominated from the Industry		Mr. Deepak Bhasin, B-134, Naraina Vihar, New Delhi.
Institute alumnus		Er. Mufti Musharib Gul General Manager, BSNL Srinagar
<i>The Professors appointed or recognized as such by the Institute for the purpose of imparting instructions in the Institute.</i>	1	All Professors
Such other members of the staff as may be laid down in the Statutes	1	All Dean, HoDs, Associate Deans, Controller of Examination, Co-ordinator 1 st & 2 nd Semester, Chairman Library Committee, Librarian and DPE.
Secretary		1. Prof. Fayaz Ahmad Mir, Registrar I/C,NIT, Srinagar. (upto 23-07-2017) 2. Prof. Mohammad Shafi Mir Registrar I/C,NIT, Srinagar. (From 24-07-2017)

9.5. BUILDING AND WORKS COMMITTEE

Chairman		1. Prof. A. R. Dar (temporary) (upto 06-08-2017) 2. Prof. Manoj Singh Gaur (temporary) (upto 08-11-2017) 3. Prof. Rakesh Sehgal (from 09-11-2017) Director, National Institute of Technology Srinagar, Hazratbal, Kashmir-190006
<u>Members:</u> Nominated by MHRD and IFD New Delhi	1	Director OR Deputy Secretary (NITs), MHRD, Department of Secondary & Higher Education, Government of India, New Delhi – 110 001.
	2.	Representative of * Integrated Finance Division (IFD)
One person nominated by the Board of Governors		Syed Shuja Hussain, Former Chief Engineer (Civil) PWD J&K Government R/o:Al-Manzir, Rajbagh, Srinagar
Dean, Planning & Development		Prof. Javed Ahmad Bhat, Civil Engineering Department, NIT Srinagar
Nominee of the CPWD / State PWD	1	Mr. Dhiraj Kumar , Superintendent Engineer (Civil), CPWD, Chandigarh.
	2	Shri Prabhakar Kumar Verma, Chief Architect, CPWD, Chandigarh
	3	Prof. Bashir Ahmad Mir, Associate Dean, P&D, NIT Srinagar
	4	Shri Rajiv Sao, Superintendent Engineer, CPWD Chandigarh
	5	Executive Engineer (Civil), CPWD, Srinagar.
	6	Er. Aijaz Ahmad Khan, Executive Engineer, Electric Division 4th Srinagar.
Secretary		1. Prof. Fayaz Ahmad Mir, Registrar I/C,NIT, Srinagar. (upto 23-07-2017) 2. Prof. Mohammad Shafi Mir Registrar I/C,NIT, Srinagar. (From 24-07-2017)

The meetings of the above statutory committees were conducted as detailed below:

NAME OF STATUTORY COMMITTEE	DATE OF THE MEETING
SENATE	1. 27-12-2017
BUILDING WORKS COMMITTEE	1. 01-11-2017
FINANCE COMMITTEE	1. 21-11-2017 2. 14-03-2018
BOARD OF GOVERNORS	3. 19-06-2017 4. 21-11-2017 5. 14-03-2018