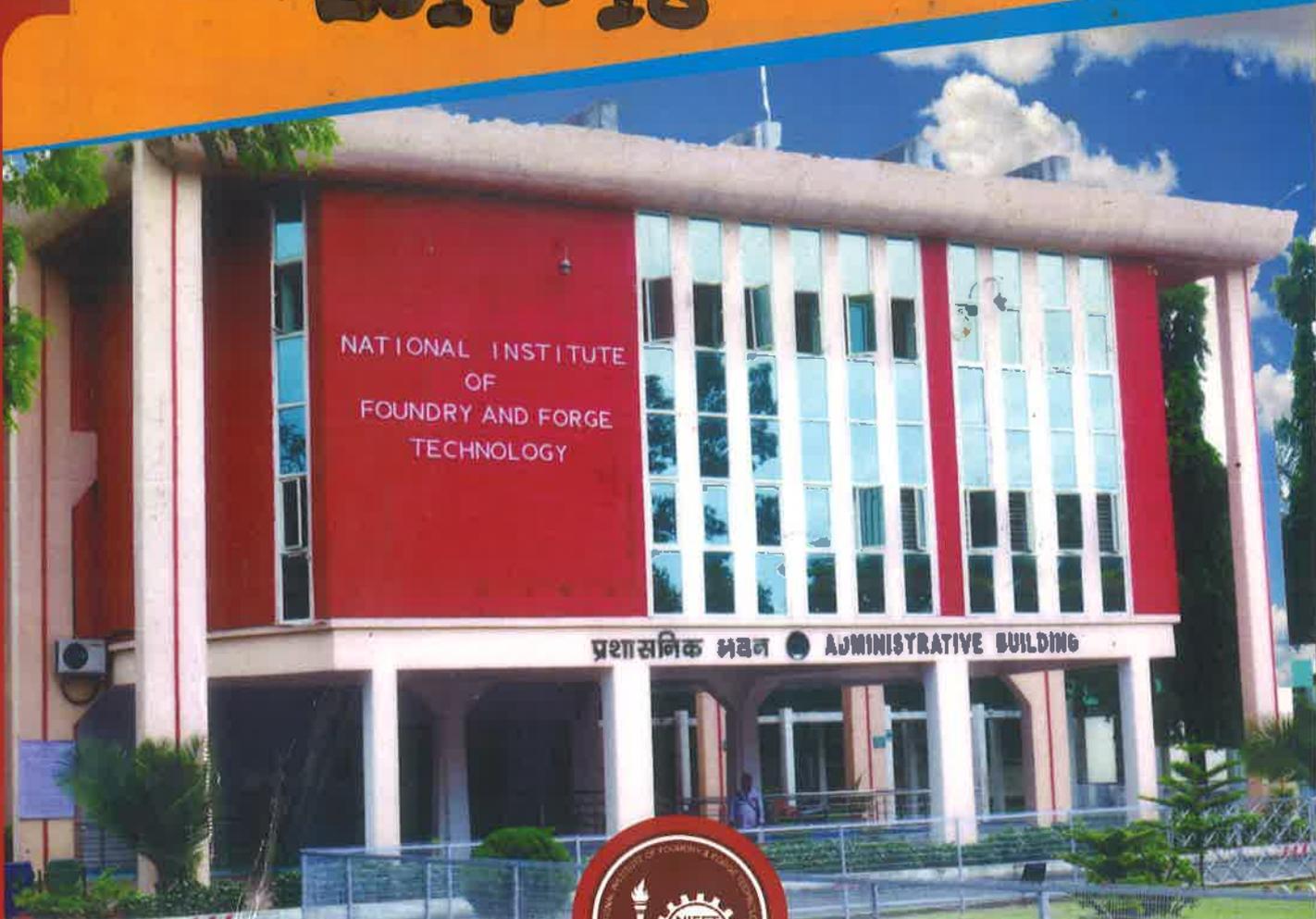


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**National Institute of Foundry and Forge Technology**

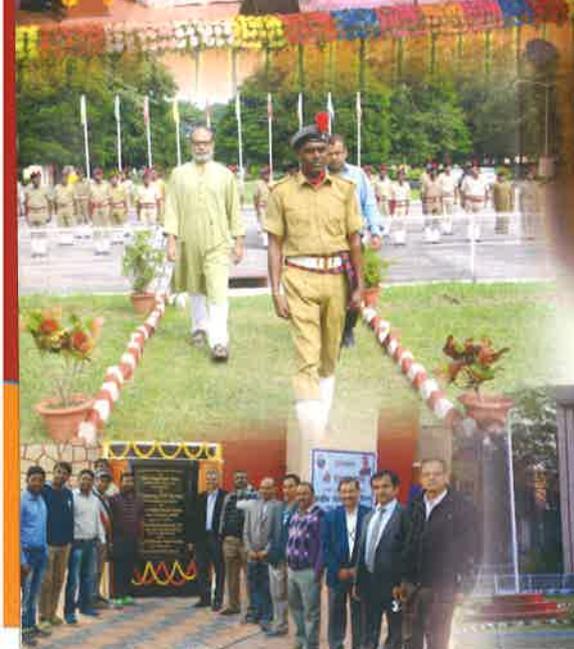
A Centrally Funded Technical Institute Under MHRD (Govt. of India)

HATIA, RANCHI-834003 (JHARKHAND), India

[www.nift.ac.in](http://www.nift.ac.in)



Inauguration of Lecture Hall  
by  
**Shri Raghubar Das**  
Hon'ble Chief Minister  
Jharkhand  
on  
13<sup>th</sup> January, 2018 (Thursday)  
In the August presence  
of  
**Shri Madhu Ranjan Kumar**  
Joint Secretary, MHRD  
Govt. of India  
**Shri Sunil Kumar Barnwal, IAS**  
Secretary to Chief Minister and Secretary  
Govt. of Jharkhand  
and  
**Professor Vamlesh Kumar Pandey**  
Vice-Chancellor  
Ranchi University, Ranchi

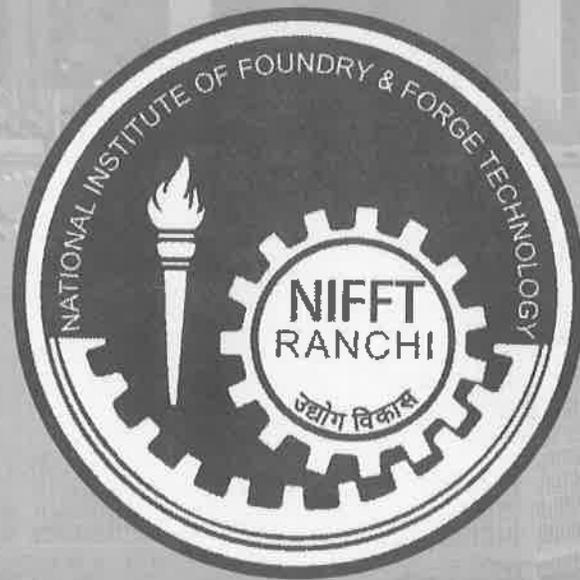


# ANNUAL REPORT

## 2017-18

NATIONAL INSTITUTE  
OF  
FOUNDRY AND FORGE  
TECHNOLOGY

ADMINISTRATIVE BUILDING



**NATIONAL INSTITUTE OF FOUNDRY & FORGE TECHNOLOGY**

A Centrally Funded Technical Institute Under MHRD (Govt. of India)  
Hatia, Ranchi - 834003 (Jharkhand), India

# ANNUAL REPORT

NATIONAL INSTITUTE  
OF  
FOUNDRY AND FORGE  
TECHNOLOGY

प्रशासनिक भवन ADMINISTRATIVE BUILDING



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## INCEPTION AND JOURNEY OF NIFFT

In 1962, the general guidelines of UNESCO (1962) proposed to support the establishment of some specialized institutes for development of technical education in relation to the education as a whole to serve the changing need of modern society. In 1964, AICTE in consultation with the representatives of Foundry and Forge Industries formulated a scheme for the establishment of Foundry and Forge Institute at Ranchi. During August-October, 1964, a Preparatory Allocation Mission constituted by the U. N. special fund visited India to examine the project on creation of the Institute. In their report, the Mission recommended in clear terms the establishment of the Institute and also made certain suggestion regarding the detail of the project. The Governing Council of the U. N. special fund approved the assistance to the scheme to the tune of U.S. \$ 8,43,400. NIFFT started as a training Institute in 1966 on 57 acre of land with 16707 sq.mt of construction area, two postgraduate diploma programs, 300 students and 20 sanctioned technical positions and 80 supporting staff. Over the years, the NIFFT has gained widespread recognition as an institution of distinction, particularly in Foundry and Forge technology. During the last two decades, the Institute has expanded its academic scope inspired by the demand of higher skills in industries. The institute at present offers Advanced Diploma, B.Tech, M.Tech and doctoral programs with the increased infrastructural capacity of 47431 sq.m, 773 number of students, 84 sanctioned faculty positions, 94 technical and supporting staff.

During the past two decades, the Institute introduced two B.Tech and four M.Tech programmes with the idea to encompass the allied domains of manufacturing with particular emphasis on the core structure of foundry and forge technology to cater to the emerging needs in the industries. The Institute has also continued, though on a low pace, doctoral research programmes since inception; there are at present 34 doctoral scholars. The infrastructural capacity and manpower were compatible with the requirement of the additional courses.

The ambiance of training, education and research evolved in the Institute over the years, has significantly improved the employability of the students at all the levels. Currently, a large segment of the alumni community of NIFFT is holding positions of leadership in different industries. Some of them are engaged in various research organizations and academic institutions of the country and abroad.

However, in recent times, the current young generation is gradually becoming disinclined to take up manufacturing as a career. This is particularly so for the brighter section of the student community, as it is perceived by most of them that manufacturing is a very traditional and conservative field. Research and Development related to manufacturing are considered to offer less intellectual challenge in comparison to the other domains.

The misconception has primarily originated from the fact that education and research in manufacturing remained mostly confined to the traditional lines without giving much attention to 'value addition'. To change the misconception, the gap between Traditional





and Advanced Manufacturing needs to be bridged up by judicious convergence of the advancing scientific and allied engineering principles, like computer and electronics engineering with manufacturing. Such convergence is the key requirement to attract the brilliant young minds to take up a career in manufacturing with passion.

Globally, advanced manufacturing is evolving as a multidisciplinary activity. Many areas like additive manufacturing, self-assembly, internet of things are becoming the keywords in futuristic manufacturing and are different from what we recognize as 'manufacturing today'.

In the given scenario of manufacturing competitiveness, NIFFT finds its role as the vanguard to pioneer and evolve advanced manufacturing engineering education and research in the country as a multidisciplinary area, involving basic science and allied engineering subjects.

In view of the demand of such new breed of talent in manufacturing technology, the area of expertise established at NIFFT during the past fifty years has received due priority with increasing stress on manufacturing sector for economic growth of the country.



## BOARD OF GOVERNORS

1.	<b>Shri Madhu Ranjan Kumar</b> Joint Secretary (DL&BP), Room No.122 B-C Ministry of Human Resource Development, Department of Higher Education, Govt.of India, Shastri Bhawan, New Delhi-110115	In-Chair
2.	<b>Smt. Darshana M. Dabral, JS &amp; FA</b> Ministry of Human Resource Development Department of Higher Education Government of India, New Delhi 110 115 Attended by Sri D. K. Singh Under Secretary, IFD, MHRD	Member
3.	<b>Professor Amol A Gokhale</b> Department of Mechanical Engineering Indian Institute of Technology, Bombay IIT Area, Powai, Mumbai, Maharashtra 400076	Member
4.	<b>Professor D. Ravi Kumar</b> Department of Mechanical Engineering Indian Institute of Technology, Delhi Hauz Khas New Delhi 110 016, India	Member
5.	<b>Professor M.K. Tiwari</b> Department of Industrial Engg. and Management Indian Institute of Technology (IIT) Kharagpur 721 302 (W.B)	Member
6.	<b>Professor S.B.Kumar</b> Dept.of MME, NIFFT, Hatia,Ranchi	Member
7.	<b>Professor Amitava Mandal</b> Dept. of ME NIFFT, Hatia, Ranchi-3	Member
8.	<b>Professor P P Chattopadhyay</b> Director NIFFT, Hatia, Ranchi-3	Member Secretary
9.	<b>Professor R.K. Ohdar</b> Prof. I/c Admin, NIFFT, Hatia, Ranchi-3 Invited Member	Invited Member



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## ADMINISTRATIVE AND FINANCE COMMITTEE

1	<b>Shri Madhu Ranjan Kumar</b> Joint Secretary (DL&BP) Room No.122 B-C Ministry of Human Resource Development, Department of Higher Education, Govt.of India, Shastri Bhawan, New Delhi-110115	In-Chair
2	<b>Smt. Darshana M. Dabral, JS &amp; FA</b> Ministry of Human Resource Development Department of Higher Education Government of India, New Delhi 110 115	Member
3	<b>Professor S.B.Kumar</b> Dept.of MME, NIFFT, Hatia,Ranchi	Member
4	<b>Professor Amitava Mandal</b> Dept. of ME NIFFT, Hatia, Ranchi-3	Member
5	<b>Professor P P Chattopadhyay</b> Director NIFFT, Hatia, Ranchi-3	Member Secretary
6	<b>Professor R.K. Ohdar</b> Prof. I/c Admin NIFFT, Hatia, Ranchi-3 Invited Member	Invited Member



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## STANDING BUILDING COMMITTEE

1	<b>Prof. Partha Protim Chattopadhyay</b> Director, NIFFT, Hatia, Ranchi - 834003	Chairman
2	<b>Shri Madhu Ranjan Kumar</b> Joint Secretary (DL&BP) Room No.122 B-C Ministry of Human Resource Development, Department of Higher Education, Govt. of India, Shastri Bhawan, New Delhi-110115	Member
3	<b>Dr. S.B.Kumar</b> Member, BoG Dept. of MME, NIFFT, Hatia, Ranchi-834003	Member
4	<b>Prof. Binod Kumar</b> Dean (Planning & Development) NIFFT, Hatia, Ranchi-834003	Member
5	<b>Mr. S Pandey</b> GM (Engg. & Estate) Mecon Limited, Doranda, Ranchi-834002	Member
6	<b>Mr. Janak Mahto</b> Director, NBCC,401,Mangal Tower, Old H.B.Road,Ranchi-1	Member
7	<b>Shri S. Bandyopadhyay</b> A.M, Electrical Engineer Heavy Engineering Corporation Limited Dhurwa, Ranchi-834004	Member
8.	<b>Professor Debasis Roy</b> Member Civil Construction and Maintenance Indian Institute of Technology Kharagpur Kharagpur, India -721302	Chairman
9	<b>Dr. K. Sudhakar Reddy</b> Professor & Head, Civil Engineering Department Indian Institute of Technology Kharagpur Kharagpur, West Bengal - 721 302	Member
10	<b>Executive Engineer (Elect.)</b> RCED, CPWD, Doranda, Ranchi - 02.	Spl. Invitee
11	<b>Executive Engineer (Civil)</b> RCD, CPWD, Doranda, Ranchi - 02.	Spl. Invitee
12	<b>Prof. R.K.Ohdar</b> Dept. of Forge Technology I/C Administration NIFFT, Hatia, Ranchi -3	Member Secretary



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## ACADEMIC COUNCIL

1.	Dr. P.P. Chattopadhyaya, Director, NIFFT, Ranchi	Chairman
2.	Vice Chancellor Ranchi University, or His Nominee	Member
3.	Dean, Faculty of Science, Ranchi University, Ranchi	Member
4.	Controller of Examination, Ranchi University, Ranchi	Member
5.	Sri Atul Saxena, GM & In charge RDCIS, SAIL, Ranchi	Member
6.	Sri Deepak Dokania, Director, BMC Metalcast Ltd, Jamshedpur	Member
7.	Prof. M.K. Agrawal, Dept. of Metallurgical & Materials Engineering, NIT, Jamshedpur	Member
8.	Dr. T. Venugopalan, Chief Technical Officer, TATA Steel, Jamshedpur	Member
9.	Dr. D. Mukherjee, Steel Chair Professor	Invited Member
10.	Professor S.R. Kumar HOD (DASH)	Member
11.	Dr. Amitesh Kumar HOD (Foundry Tech.)	Member
12.	Professor A.K. Singh, NIFFT, Ranchi	Member
13.	Professor K.K. Singh, NIFFT, Ranchi	Member
14.	Professor Nandita Gupta, NIFFT, Ranchi	Member
15.	Dr Manoj Kumar, HOD (Forge Tech.)	Member
16.	Professor P. Talukdar, NIFFT, Ranchi	Member
17.	Professor R.K. Ohdar, NIFFT, Ranchi	Member
18.	Dr. Vijay Toppo HOD (ME)	Member
19.	Professor Sanjay Kumar, NIFFT, Ranchi	Member
20.	Professor A. Mondal, NIFFT, Ranchi	Member
21.	Professor A.K. Pathak, NIFFT, Ranchi	Member
22.	Dr. G. Das HOD (MME)	Member
23.	Professor B.K. Chakraborty, NIFFT, Ranchi	Member
24.	Professor S.B. Kumar, NIFFT, Ranchi	Member
25.	Professor B. Kumar, NIFFT, Ranchi	Member
26.	Professor N.K. Singh, Dean Academic, NIFFT, Ranchi	Member Secretary



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## DEPARTMENT OF FOUNDRY TECHNOLOGY



### About Department:

Foundry Technology Department came into existence in 1966 at the time of inception of Institute. Department offers Advanced Diploma Course(ADC) in Foundry Technology and jointly M.Tech in Foundry-Forge Technology Foundry Technology Department provides technological support as consultancy, trouble shooting work, development of latest technology, outreach programme like refresher courses, unit based programme in the premises of institute as well as at the sight of industry and research to Foundry and allied industries. In order to be competent with the present situation of cutting edge technology, Foundry Department has geared up noticeably and capable in establishing latest areas research in Foundry Technology.

### FACULTY:

1.	<b>Dr. A. K. Singh</b> B.E. (Mech.), L.L.B., M.Tech. (Foundry- Forge Tech), Ph. D , LMIIM, FIE	Professor
2.	<b>Dr. K. K. Singh</b> B. Sc. Engg. (Met.), M. Tech. (Met. Engg.), Ph.D. (IIT Kanpur), LMIFO, LMIIM, FM Institution of Engineers	Professor
3.	<b>Dr. Nandita Gupta</b> B. E. Mechanical, Ph.D, MIIF, LMIIM, FIE	Professor
4.	<b>Dr. Amitesh Kumar</b> B. E. (Met. Engg.), M. Tech. (Foundry- Forge Tech.), Ph.D. LMIIM, MIIF, MSAE	Associate Professor & HoD

### DEPARTMENTAL ACTIVITIES:

#### Academic Activities:

Number of subjects offered by the department:

M.Tech.	08
B. Tech:	08
ADC :	11

Faculty members of the department were involved in guiding Seminars and Projects of M. Tech., B. Tech., and Advanced Diploma Course besides their normal classes for long term courses. Doctoral & Post Doctoral Programmes here are 5 Ph. D. scholars were in 2017-18

#### Consultancy:

Consultancy " Preparation of Detail Project Report for common Facility Center for Bauripur Surgical Cluster, Kolkata, W.B.; Taken by Dr. A. K. Singh, Dr. K. K. Singh and Dr. Amitesh Kumar. The consultancy charge of Rs. 15.0Lacks(Undergoing).

#### Seminar/Conference/Presentation:

1. Sandeep Yadav, Nandita Gupta, "Ablation Casting Process-An Emerging Process for NonFerrous Alloys" International Conference on Latest Concept in Science,

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Technology Management and Humanities (ICLCSTMH-2017) NITTTR, National Institute of Technical Teachers Training and Research, Chandigarh, India, 2nd April 2017 (ISSN-2394-3386) Paper Published

2. N.Gupta, P. Chetanya, S.K.Sen, B.K.Singh "Friction Stir Welding a solid state Welding Process in Al alloy of 2xxx series over fusion welding"32nd National Convention of Production Engineers and National Seminar on "Improving Competitiveness in Manufacturing- Make in India to Made in India, 27-28 May 2017 CET, SAIL Ranchi - 834004"
3. N.Gupta, S.K.Sen, "Effect of Heat Treatment Parameters on the Carbide Spheroidization of 0.48% Carbon Steels" An National Conference on "Advance material manufacturing and Metereology (NCAMM-2018), Diamond Jublee celebration at CSIR, CMERI, Feb 16-17, 2018 Durgapur.
4. Nadeem Bhatt, D.M. Afzal and Kamlesh Kumar Singh; Effect of inoculation and nodularization treatment temperature on Recalescence and eutectic under- Colling temperature in spheroidal graphite cast iron: International Journal of cast metals research (Taylor and Francis), held on 25th Jan, 2018 at N.I.T. Srinagar.

#### **Publications:**

1. **A. K. Singh, Bageesh Bihari**, "Synthesis and characterization of hybrid reinforced metal matrix composites"presented a paper in ICMMME 2018 at Kuala Lumpur, Malaysia, March 17-19, 2018.
2. **Amitesh Kumar**, "Modeling and Experimental Validation of Deformation of Al-33Cu Droplet during Impingement on a Substrate" presented a paper in ICMMME 2018 at Kuala Lumpur, Malaysia, March 17-19, 2018.
3. **Nandita Gupta, Sandeep Yadav** "Ablation Process an emerging Process for nonferrous alloys" International Conference on latest concept in science, Technology Management and Humanities (ICLCSTMH-2017)"NITTTR"National Institute of Teachers Training and Research, Chandigarh, India 2nd April 2017(Published in IJETSR, April 2017,ISSN 2394-3386) Paper Published.
4. **Nandita Gupta, P.Chaitanya, S.K.Sen, B.K.Singh** "Friction Stir Welding a Solid State Welding Process in Al alloy of 2xxx series over fusion welding"32nd National Convention of Production Engineers and National Seminar on "Improving competitiveness in Manufacturing-Make in India to Made in India" 27-28 May 2017 CET, SAIL Ranchi-834004.
5. P. Vijayanand, Amitesh Kumar, K. R. Vijaya Kumar, A. Vinod, P. Kumaran, and S. Arungalai Vendan, (2017), Characterizations of plasma sprayed composite coatings over 1020 mild steel, Journal of Mechanical Science and Technology 31 (10) (2017) 4747-4754
6. P.Vijayanand,Amitesh Kumar, K. R. Vijaya Kumar, Nazir Hussain, P.Kumaran and S. Arungalai Vendan,(2017), Influence of Carbon Nanotube Reinforced TiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub> Coating Mixture on AISI 1020 Surface Performance, Rasayan J. Chem., 10(2), 652-664. ISSN: 0974-1496 |

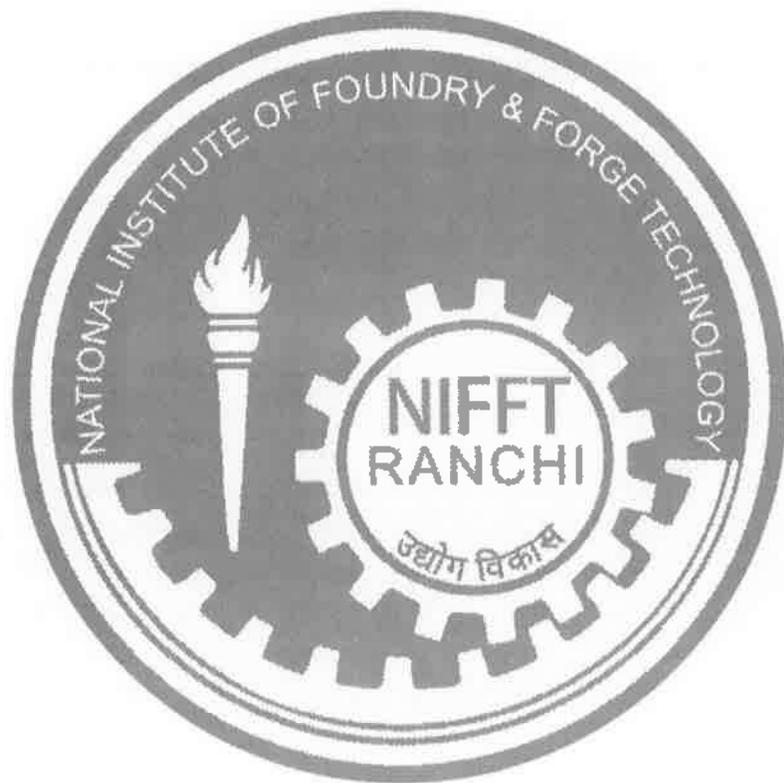
## Administrative Activities:

1.	Dr. K. K. Singh	Chairman, Students Gymkhana, NIFFT from 17th Dec, 2013 Chairman, Swachcha Bharat Abhiyan, NIFFT, from 24th Sep., 2014
2.	Dr. A. K. Singh	Chairman, NIFFT Alumni Association(N.A.A.) Chairman, Printing Committee.
3.	Dr. Nandita Gupta	Member Gymkhana Committee, NIFFT Member M.Tech Course Coordination Committee
4.	Dr. Amitesh Kumar	HoD, Hostel Warden Member of Library Building

## Achievements

Dr. K. K. Singh and Dr. Amitesh Kumar is Institute nominee as committee member of BIS, New Delhi.





## DEPARTMENT OF FORGE TECHNOLOGY

Department of Forge Technology was created in 1966 in which Advanced Diploma Courses (ADC), in Forge Technology was offered to provide trained manpower in the primary metal processing industries. In 1985, M Tech program was introduced with the specialization of foundry and forge technology. Subsequently in 1991, two B Tech programs, one in Metallurgical and Materials Engineering and other in Manufacturing, were introduced to reinforce the core framework of forging technology. In order to be competent with the present situation, the department grew noticeably and established new areas of research in forging technology. The department is having competent and highly qualified faculty members.

### FACULTY:

1	<b>Dr. P. Talukdar</b> B.E. (Met.), M.E. (Met. Engg.), Ph.D. (Jadavpur University)	Professor
2	<b>Dr. N. K. Singh,</b> B.Sc. Engg. (Mech.), M. Tech. (Foundry & Forge Tech.), Ph.D. (Ranchi University)	Professor
3	<b>Dr. R. K. Ohdar</b> B.E. (Ind. Engg.), M. Tech. (Foundry & Forge Tech.), Ph.D. (IIT Kharagpur)	Professor
4	<b>Dr. Manoj Kumar</b> B.Sc. Engg. (Mech.), M. Tech. (Foundry & Forge Tech.) Ph.D. (IIT Kanpur)	Associate Professor & HoD
5	<b>Mr. Vineet Chak</b> M. Tech (IIT Roorkee)	Assistant Professor
6	<b>Mr. Ajit Kumar Pramanik</b> M. Tech (IIT Roorkee), Ph.D (Jadavpur University)	Assistant Professor

### ACTIVITIES

#### Academic Activities:

Number of subjects offered by the department:

Name of Course	No. of Subjects Offered
B. Tech. Course (ME & MME)	8
M. Tech. Course (Foundry-Forge & Mfg. Engg.)	5
A.D.C. (Foundry Tech. & Forge Tech.)	9

#### Consultancy:

A Special course on FOUNDRY AND FORGE TECHNOLOGY that was conducted at NIFFT Ranchi for Naval Dockyard Mumbai India participants from 17-7-2017 to 28-7-2017 (Two weeks). Course Director was Dr Manoj Kumar (Associate Professor).





### **Seminar/Conference/Presentation:**

1. Badremanir Kauser, Vikas Upadhyay, Vineet Chak, Faisal Hasan "Moisture Absorption Behavior and Mechanical Properties of Banana Fiber Reinforced Fly Ash /Epoxy Composites" International conference on Energy, Materials and Information Technology, Dec., 23-24 2017 at Amity university Ranchi.
2. Vineet Chak, Himadri Chattopadhyay, Md. Mahfooz Alam "Counter gravity casting-potentials and challenges -A review" NCAMMMM, Feb 16-17, 2018 at CMERI Durgapur.
3. A K Pramanick, G M Reddy and T K Pal, "Effect of retained austenite on Ballistic Performance of developed weld metals in armour steel plate joints" 5th International Congress of the International Institute of Welding, December 7 - 9, 2017, Chennai Trade Centre Nandambakkam, Chennai.
4. K. Sen, A. K. Pramanick, P. Talukdar, S. K. Dhua, Shreya Shah, D. Mukherjee, S. Mishra, "Trend in production of reinforcement steel bars and their properties" Asia steel International conference 2018 on February 6-9, 2018 organized by The Indian Institute of Metals & TATA Steel Ltd. with the Chinese Society for Metals, the Korean Institute of Metals and Materials and the Iron and Steel Institute of Japan at Bhubaneswar, Odisha, India.
5. Dr N K Singh attended and presented paper "Rapid Tooling Road to Rapid Manufacturing" at International Conf on Industrial Engg and Engg Management (IEEM 2017) held at Singapore from 10-13th Dec 2017.

### **Publications:**

1. Nikhil Yadav, Vineet Chak, Yashvin Gupta, Dharmanshu Singh Sodha "Investigating the Effect of Different Process Parameters on Defects in A713 Aluminium Alloy Castings Produced by Investment Casting Process" International Journal of Engineering Technology Science and Research, ISSN 2394 - 3386 Volume 5, Issue 4 April 2018
2. Md. Israr Equbal, R.K.Ohdar, P.Talukdar and Debasis Mukherjee, "Hot forging behavior of medium carbon and micro-alloyed steel: a comparative study" Int. J. Microstructure and Materials Properties, Vol. 12, Nos. ½, 2017 page 1-11

### **Ph.D Completed/Continuing in the Department:**

1. Mr. M. Sivadasan, a regular Ph.D. Student of the Department of Forge Technology, NIFFT, Hatia, Ranchi is working in the area of "Rapid Tooling for Precision Castings through Fused Deposition Modelling Process" under the guidance of Dr. N. K. Singh, Professor, Forge Technology Department, NIFFT, Hatia, Ranchi-834003.
2. Mr Abhisek Kumar a regular Ph.D student of the Department of Forge Tech is working in the area of Multidirectional Forging under the guidance of Dr. Manoj Kumar.
3. Mr Sushant Rath, Sr. Manager (FR), RDCIS, SAIL, Ranchi-834002 a part-time Ph.D. Student of the Faculty of Engineering, Ranchi University, Ranchi is working in the area of "Development of Mathematical-Artificial Neural Network hybrid auto-adaptive

intelligent model for prediction of Roll force and mechanical properties during hot rolling of flat steel products" under the guidance of Dr. P. Talukdar, Professor, Forge Technology Department, NIFFT, Hatia, Ranchi-834003.

4. Mr Amar Kumar, Assistant Professor, BIT Mesra, Ext Centre- Lalpur, Ranchi-834002 a part-time Ph.D. Student of the Faculty of Engineering, Ranchi University, Ranchi is working in the area of "optimization of Parameters Influencing Energy Conservation in Power Sector Using Soft Computing Techniques" under the guidance of Dr. R. K. Ohdar, Professor, Forge Technology Department, NIFFT, Hatia, Ranchi-834003 and Dr Umesh Prasad, Assistant Professor, Department of Computer Science, BIT Mesra, Ext Centre- Lalpur, Ranchi-834002.
5. Mr Anuj Kumar a regular Ph.D student of the Department of Forge Tech is working in the area of Cold Forging under the guidance of Dr. NK Singh and Dr R K Ohdar
6. Mr M Prithviraj a regular Ph.D student of the Department of Forge Technology is working in the area of Forging Die Life Improvement under the guidance of Dr. Manoj Kumar and Dr Ajit Kumar Pramanick.





## DEPARTMENT OF MANUFACTURING ENGINEERING

Department established in 1985 as Production Engineering Department, and was renamed as Department of Manufacturing Engineering in 1991. The department started the M. Tech. (Manufacturing Engineering) programme in 1991, followed by the B. Tech. (Manufacturing Engineering) programme in 1992 and PhD programme in 2006. The degrees pertaining to all programmes are awarded by Ranchi University, Ranchi. Further, the department is in the process of starting a B. Tech. programme in Mechanical Engineering from the academic year 2018-19.

The department attracts a diverse set of talented students. The curriculum designed is suitable for overall development of Knowledge which helps the students to become industrial and academic leaders. Apart from learning the basic technical concepts, the students are open to avail various elective courses. The department has some finer facilities matching with the best technical institutes in India, to train the undergraduate and postgraduate students, and to enable them to handle the ever challenging needs of technical excellence in all areas of manufacturing engineering. The department has the following laboratories: computer, CAD/CAM/CAE, FMS, metrology, machining, pattern shop and welding. Some new laboratories, such as fluid mechanics and mechanics of solids, etc. are under development.

### FACULTY

1	<b>Dr. Sanjay Kumar</b> B.Tech. (Met.), M.E.(Mech.),Ph.D., MIIF	Professor
2	<b>Dr. A. Mandal</b> B.Tech. (Mech.), M.Tech.(Prod.),Ph.D., MIIW	Professor
3	<b>Dr. A. K. Pathak</b> B.Sc.Engg.(Mech.), M.Tech.(Mech.),Ph.D., MIIW, MISTE, MIIM	Professor
4	<b>Dr. K. K. Verma</b> M.Sc. (Maths.), M.Phil. (Applied Maths.), MIIF	Associate Professor
5	<b>Dr. Vijay Toppo</b> B.Sc.Engg.(Mech.), M.Tech.(Mfg.Engg.), PhD, MIIM, MIIF	Associate Professor & HoD
6	<b>Dr. G. Rajamohan</b> B.E.(Mech.),M.E.(Mfg.Tech.),PhD, MIE	Associate Professor
7	<b>Dr. A. K. Sood</b> B.E.(Mech.),M.E.(Design.), Ph.D	Associate Professor
8	<b>Dr. V.M.S. Hussain</b> B.E.(Mech.),M.E.(Prod.), MIIF, Ph.D	Assistant Professor
9	<b>Dr. Ratnakar Das</b> AMIE (Mech.), M.E. (Prod.), Ph.D. (M.E.)	Assistant Professor
10	<b>Dr. Sambit Kumar Parida</b> B.E. (Mech.), M.Tech.(M.E.), Ph.D.	Assistant Professor
11	<b>Mr. Anand Mohan Murmu</b> B.Tech. (Prod.), M.Tech. (Mfg.Sc. & Engg.)	Assistant Professor
12	<b>Mr. Subrato Kumar Soren</b> B.E. (Mech.), M.E. (Thermal Engg.)	Assistant Professor





## ACTIVITIES

### Academic Activities:

Number of subjects offered by the department:

NAME	No. of subjects covered
B.Tech. (M.E.&M.M.E.)	30
M.Tech. Courses (F.F.T.&M.E.)	12
A.D.C.(Foundry Tech. & Forge Tech.)	03

### CONSULTANCY:

#### Seminar/Conference:

- 1) Rajamohan, G. (2017), "Isoparametric lines-based sampling for measurement of freeform surfaces", International Conference on Precision Engineering (COPEN10), IIT Madras.
- 2) Shamama Anwar and G. Rajamohan (2018), "A rough sets based edge detector and its performance evaluation", International Journal of Engineering Sciences & Emerging Technologies, Vol. 10, No. 3, pp. 58-68.
1. 2nd International Conference on Advancements in Aeromechanical Materials for Manufacturing (ICAAMM2018), MLR Institute of Technology, Hyderabad.
2. National Conference on Advances in Mechanical Engineering and Nanotechnology (NCAMENT2018), University College of Engineering, Osmania University, Hyderabad.

#### Publications:

1. Md. Equbal, R.K. Ohdar, Azhar Equbal and A.K. Sood, "Grey based Taguchi Method for optimization of hot forging of connecting rod", International Journal of Manufacturing Research, Vol. 11 (1), (2016), pp. 89-109.
2. Ankush Kalia and A.K. Sood, "Multi Objective QEA for optimization of EDM process parameters", International Journal of Advance Studies in Computer Science and Engineering, vol. 5 (6), (2016).
3. Md. Equbal and A.K. Sood, "Investigation of material removal rate of EDM process: A response surface methodology approach", International Journal of Mechanical and Mechatronics Engineering, vol. 11 (4), (2017), pp. 856-861.
4. Saroj Kumar Padhi, Ranjeet Kumar Sahu, A.K. Sood, S.S. Mahapatra et al., "Optimization of fused deposition modelling process parameters using fuzzy inference system coupled with Taguchi philosophy", Advances in Manufacturing, vol. 5 (3), (2017), pp. 231-242.
5. Azhar Equbal, Abdul Razzaq Ansari, Md. Asif Equbal and A.K. Sood, "Optimization of



process parameters of FDM part for minimizing its dimensional inaccuracy," International Journal of Mechanical and Production Engineering Research and Development, Vol. 7(2), (2107), pp. 57-66.

6. Azhar Equbal, Md Israr Equbal, Md Asif Equbal and A.K. Sood, "A Comparative Study on Electroplating of FDM Parts," International Journal of Technology, Vol. 8 (5), (2017), pp. 930- 938.
7. M. Karmuhilan, A.K. Sood, "Intelligent process model for bead geometry prediction in WAAM," Materials today: Proceedings, Vol. 5, (2018), pp. 24005-24013.

### **Chapter published in the books:**

1. Azhar Equbal, A.K. Sood, "An insight on current and imminent research issues in EDM ", Book title: Non-Conventional Machining in Modern Manufacturing Systems. editor (s): Kumar, Kaushik, Kumari, Nisha, Davim, J. Paulo, Publisher: IGI Global, International Publisher of Information Science and Technology Research, ISBN: 15225-61617.

### **Ph.D Completed/Continuing in the Department:**

- 1) Ms. Shamama Anwar successfully defended her PhD Thesis entitled "Intelligent algorithms for vision-based human action recognition" on October 9, 2017. This research was carried out by Ms. Shamama Anwar under the guidance of Dr. G. Rajamohan.
- 2) Mr. Krishna Kumar Verma submitted his PhD Thesis entitled "Computer-aided design of freeform surfaces using sparse and dense measurement data". This research was carried out by Mr. Verma under the joint guidance of Dr. G. Rajamohan and Dr. Amitava Mandal
- 3) Degree awarded to Md. Azhar Equbal. Name of supervisor Dr. A.K. Sood, Topic: An Investigation on the Feasibility of FDM Process for EDM Electrode Manufacturing

### **ACHIEVEMENTS:**

#### **Course attended :**

Dr. G. Rajamohan had attended Indo-Australian workshop on advances in materials and additive manufacturing, IIT Madras, Deakin-IIT Madras centre of excellence in advanced materials and manufacturing.

#### **Journal Papers Review**

Dr. G. Rajamohan reviewed 8 papers for International Journal of Advanced Manufacturing Technology and 1 paper for Chinese Journal of Mechanical Engineering.





## DEPARTMENT OF MATERIALS AND METALLURGICAL ENGINEERING

Materials and Metallurgical Engineering Department established in 1998, the department has been emerged as powerhouse for academics, scientific research and cutting edge technologies. With time, the department grew noticeably and established new areas of research and teaching in materials engineering, while retaining its strength in traditional areas in metallurgy. The department attracts highly qualified faculty members and by virtue of its infrastructure and research environment. The department is actively pursuing research by inviting experts from many nearby industries such as Tata Steels, Usha Martin, Research Institute like RDCIS, SAIL, and NML etc. Reasonable number of consultancy projects is being carried out by the department.

### FACULTY

1	<b>Dr. B. K. Chakrabarti</b> M. Sc (Chemistry), Ph. D	Professor
2	<b>Dr. S. B. Kumar,</b> B.Sc. Engg.(Met.), M. Sc. Engg.(Met), Ph. D	Professor
3	<b>Dr. B. Kumar</b> B. Sc. Engg. (Met), M. Tech (Met), Ph. D	Professor
4	<b>Mr. Banshidhar Mallik</b> B.Sc. Engg. (Mech.), M. Tech.(FFT)	Associate Professor
5	<b>Dr. Ghanshyam Das</b> B.Sc. Engg. (Met.), Ph. D	Associate Professor & HoD
6	<b>Dr. D. Roy</b> M. Tech (Met.), Ph. D	Assistant Professor
7	<b>Dr. Chinmoy Chattopadhyay</b> PhD (IIT, Kanpur)	Assistant Professor
8	<b>Dr. Ratnesh Kumar Gupta</b> PhD (Brown University, USA)	Assistant Professor
9	<b>Dr. Renu Kumari</b> PhD( IIT Kharagpur)	Assistant Professor
10	<b>Mr. K. Sikdar</b> M.Tech.(IIT Kanpur)	Assistant Professor

The Department of Materials and Metallurgical Engineering has been dedicated in inculcating its students to make them world class engineers, creating outstanding research environment and giving the nation a direction for tomorrow in the materials and Metallurgical engineering sectors. The faculty members, students and staffs have been continuously annoying their best to incorporate their contribution in the mentioned activities. Some of the salient achievements are listed as follows;





## Journal/Conference Publications:

1. Nidhi Khobragade, Binod Kumar, Supriya Bera, Debdas Roy, "Studies on graphene reinforced Cu base composites prepared by two step thermal processing method" *Materials Today proceedings*, Volume 4, Issue 8 2017, Pages 8045-8051.
2. Jince P. Mathew, Binod Kumar, A.K. Pathak and Razaullah Khan, Study of corrosion behavior of TIG and MIG welded joints of FSS (AIS 430) in different environments, *international Journal of innovative research in science, engineering and technology*, 6 3 (2017), 3270-3285
3. Dr. Ghanshyam Das, Ganauri Das, Sunil Kr Choudhary, "Corrosion mechanism of thermomechanical treated steel rebar responsible for durability", Full paper published in tnnual ehe proceeding of 1stInternatinol Conference on Durability of Building and Infrastructures (DuraBI), 10-12 January 2018, Miri, Malasiya.
4. Dr. Ghanshyam Das, attended a short term course on "Research Methodology in Technical education", NITTR Kolkata, 3-7 July 2017, MHRD Government of India.
5. Dr. Ghanshyam Das, A technical paper entitled "Mathematical modeling of structure property correlation of high strength TMT structural steel bar" presented in National conference on Mathematical modeling in science and technology on Feb 17-18, 2018 at Govt. Polytechnic Ranchi sponsored by Jharkhand council on science and technology.
6. Viranshu Kumar, Ratnesh Kumar Gupta, Ghanshyam Das, A technical paper entitled "Effect of deformation on corrosion behavior of austenitic stainless steel: A review" published in *International Journal of Recent Scientific Research* Jan 2018.
7. Anjani Kumar Singh, Ghanshyam Das, A technical paper entitled "Impedance behavior of thermo-mechanically treated bar in SPS and with addition of 3.5% Sodium", presented in International conference of O.P. Jindal University, Raigarh, 2017.
8. Anjani Kumar Singh, Ghanshyam Das, "Impedance analysis of TMT bar in simulated concrete pore solution, 2nd International Conference on Mechanical and Manufacturing Engineering" presented in international conference (ICMME-2017) 6-7, April 2017, SCSVM, Kanchipuram, Tamilnadu.
9. Anjani Kumar Singh, Ghanshyam Das, "Electrochemical study of TMT steel in two different media", International Conference, November, Goa, IIM NMD ATM Nov 2017,
10. Ghanshyam Das, A technical paper entitled "Electrochemical impedance measurement of TMT bar in simulated concrete pore solution", presented in National conference on Advances in Environment Friendly Technology & Their Management 29-30 April, 2017, Government Women's Polytechnic, Ranchi.
11. Dr. Ghanshyam Das, Best technical paper awarded by IIM Ranchi Chapter, May 2017 at Mecon community Hall, Ranchi, on the topic entitled "Migration of chloride ion in the pore solution of reinforced concrete steel bar.
12. Koushik Sikdar, Somraj Chakravarty, Debdas Roy, Ronald O. Scattergood, Carl C.



- Koch, "Synthesis and characterization of an in situ consolidated nanocrystalline Cu<sub>88</sub>Al<sub>11.5</sub>Y<sub>0.5</sub> alloy" *Journal of Alloy and Compounds*, 717 (2017) 219- 225.
13. SomrajChakravarty, KoushikSikdar,, DebdasRoy, Carl.C.Koch " Grain Size Stabilization and Strengthening of Cryomilled Nanostructured Cu-12at. % Al alloy" *Journal of Alloy and Compounds*, Volume 716, Pages 197-203.
  14. Somraj Chakravarty, Koushik Sikdar, DebdasRoy "Stabilization of nanocrystalline Cu by Al addition" *Materials Characterization* 128(2017)189-194.
  15. S. Kumar, S. Rajpal, S. K. Sharma, D. Roy, S. R. Kumar " Effect of Zn Concentration on the Structural, Morphological and Optical Properties of ternary ZnCdS Nanocrystalline thin films" *Digest Journal of Nanomaterials and Biostructures* Vol. 12, No. 2, April - June 2017, p. 339 - 347.
  16. Subhajit Mitra , Debdas Roy , Santanu Banerjee , Tanmay Bhattacharyya , P. P. Chattopadhyay "Effect of Boron on the Manufacturing Process and Final Properties of Ductile Iron Pipes (DI Pipes)" *Ironmaking and Steelmaking: Processes, Products and Applications* (Accepted 2017).
  17. Anumeha Mishra, Nidhi Khobragade, Koushik Sikdar, Subhabrata Chakraborty, Sashi Bhusan Kumar, Debdas Roy. "Study of Mechanical and Tribological Properties of Nano-Mica Dispersed Hydroxyapatite based Composites for Biomedical Applications" *Advances in Materials Science and Engineering* Volume 2017, Article ID 9814624, 9 pages.
  18. S. Kumar, S. Rajpal , S. K. Sharma, D. Roy, S. R. Kumar, " Effect of Annealing on the Surface And Optical Properties of ZnCdS Nanocrystalline thin Films" *Chalcogenide Letters* Vol. 14, No. 1, January 2017, p. 17 - 23.
  19. Subhranshu Chatterjee, Jaya Sarkar, Amitava Basu Mallick, Debdas Roy, Pritam Deb "Effect of anodizing Medium on The Morphology and Photoluminescent Property of Porous Alumina Film" *GSTF Journal of Engineering Technology (JET)* Vol.4 No.2, March 2017.
  20. C. Chattopadhyay, Anil Prasad and B.S. Murty. "Phase prediction in High Entropy Alloys - a kinetic approach". *Acta Materialia*, 2018, 153 pp 214-225.
  21. Attended International Symposium on High Entropy Materials organised jointly by University of Hyderabad and IIT Herabad during 12-13 March 2017 at Hyderabad.

#### **Ph D submitted/awarded**

1. Mr. Sangram Hembrom Jointly Guided Dr D Roy with Prof B.N Roy (BIT, Sindhri, Dhanbad) (Degree Awarded 15th September 2017)
2. Mr. Suresh Kumar Jointly Guided by Dr D Roy with Prof S.R.Kumar (NIFT) and Prof S.K.Sharma ( IIT (ISM), Dhanbad)(Degree Awarded 23 march 2018)
3. Mr. Anjani Kumar Singh Guided by Dr. Ghanshyam Das submitted his thesis for the award of Ph.D degree.



## M.Tech (MSE) students awarded under the guidance of

### 1. Dr. Ghanshyam Das

S.N.	Name	Batch	Topic	Status
1.	Aman Manohar Palkar	2015-2017	Corrosion behavior of Al7075 T6 alloy under different annealing conditions.	Awarded
2.	Nitesh Kumar Sinha	2015-2017	Effect of tempering temperature on the corrosion behavior of austenitic stainless steel 304	Awarded
3.	Rohit Kumar Tiwari	2015-2017	Corrosion comparison in galvanized and non galvanized steel	Awarded
4.	Sunil Kumar Durgam	2015-2017	Impact of mechanical properties on corrosion behavior of TMT steel bar	Awarded

### 2. Dr. Chinmoy Chottopadhyay

S.N.	Name	Batch	Topic	Status
1.	Mr. Ashish Rai	2015-2017	Development of Graphene Based Copper Reinforced Composites by Spark Plasma Sintering	Awarded
2.	Mr. Sandeep Kumar Gupta	2015-2017	Synthesis and Characterization of Graphene Dispersed Duralumin (Al-4.5% Cu) Processed by Mechanical Alloying	Awarded

### 3. Dr. Ratnesh Gupta

S.N.	Name	Batch	Topic	Status
1.	Priyabrata Maji	2015-2017	Processing and characterization of low carbon SAE 1008 steel for wire rod application	Awarded
2.	IshwariNarain Choudhary	2015-2017	Study of process technology & effect of rolling parameters on quality of IS 1786:2008 Fe500S rebars	Awarded
3.	Rohit Kumar Mandal	2015-2017	Effect of heat treatment on corrosion behavior of ASS 304 in mild acidic medium	Awarded

## Achievement of the MME Department



### Graduate Aptitude Test In Engineering 2018



### Results of Metallurgy & Materials engineering

Batch 2014-2018



**Rishabh Kumar**  
AIR 5



**Ashutosh Kr.**  
AIR 8



**Manoj Kumar**  
AIR 9



**Dilshaad Hassan**  
AIR 14



**Sunil Bhagtani**  
AIR 53



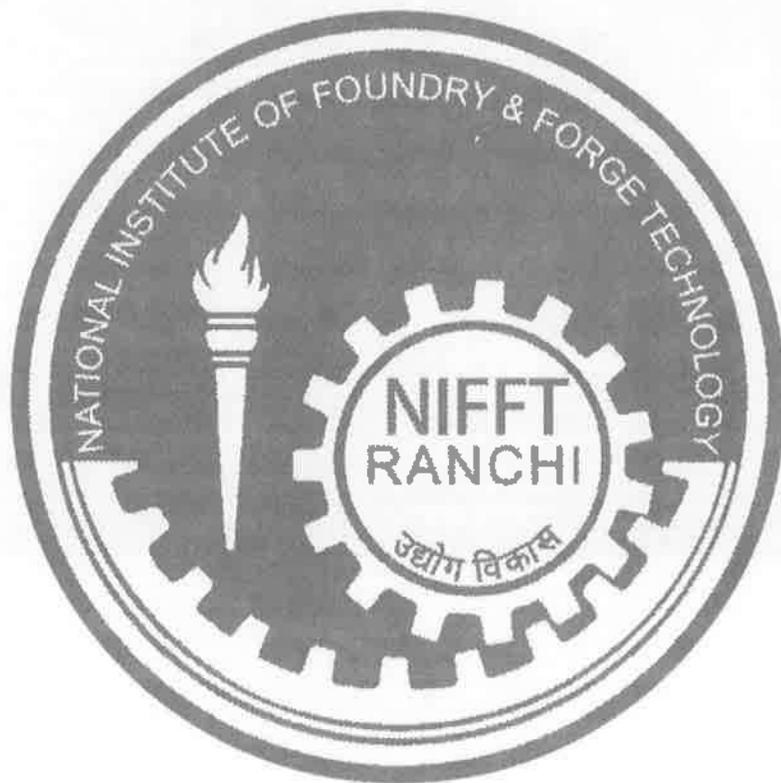
**Gopal Kumar**  
AIR 91



**Himanshu Kr.**  
AIR 100

NATIONAL INSTITUTE OF FOUNDRY AND FORGE TECHNOLOGY  
HATIA, RANCHI - 834003

*Annual Report 2017 - 18*



## DEPARTMENT OF APPLIED SCIENCES AND HUMANITIES

The department is an integral part of the Institution and it is ready to meet any responsibility assigned it to facilitate the progress of different courses. The department comprises the following Subjects Physics, Chemistry, Mathematics, Environmental Engineering, Electrical Engineering, Electronics Engineering and Humanities.

The department provides excellent laboratory facilities for both under graduate and post graduate students. It provides wide spectrum of Digital Electronics, Analog Electronics, Microprocessor, Control system, Electrical Machine, Electronics, Physics, Chemistry, Instrumentation, etc, laboratories. Apart from these students are offered different projects. The technical and general staff of this department is very helpful to conduct the routine practical of UG & PG programs. The department has started two years full time course in M.Tech (Environmental Engineering) in 2007 to cater the specific requirement of industries. The syllabus of the course has been designed to full fill the requirement of industries. The department is supporting the UG courses of the Institute offering a compulsory subject in environmental engineering. The department is having various equipments required for courses like water pollution, air pollution, noise pollution, etc. It also serves the post graduate students of Environmental Engineering to augment the research and consultancy facilities in this emerging field.

1	<b>Dr. S. R. Kumar</b> M. Sc. (Phy.), Ph. D. (Materials Science)	Professor & HoD
2	<b>Dr. Anil Kumar</b> M. Sc. (Chem.); M. Tech. (Surface Sc. And Engg.); Ph. D (Engg.) in Metallurgy and Materials Engineering	Associate Professor
3	<b>Ms. Sujata Gupta</b> MA (English)	Assistant Professor
4	<b>Ms. Madhu Kumari</b> B.Sc. Engg. (E & C), M. Tech. (IT)	Assistant Professor
5	<b>Dr. Partha Sarathi Mondal</b> M.Sc. (Physics), Ph. D (Physics)	Assistant Professor
6	<b>Dr. Vikash Kumar Gupta</b> B.Tech. (EEE), M. Tech. (Electrical Engg.) & Ph.D (Electrical Engineering)	Assistant Professor
7	<b>Dr. Subhankar Basu</b> M.Sc.(Applied Geology), M. Tech. (Environmental Engineering) Ph. D (Bioscience Engg.)	Assistant Professor

### ACTIVITIES

#### A. Academic Activities

- (i) The Department of Applied Sciences & Humanities (DASH) assists all the normal activities related to B.Tech., M.Tech. and ADC Programme.





(ii) DASH offers M.Tech. programme in Environmental Engineering.

**B. Offers Doctoral Programme.**

**C. Research and Development Activities**

**Doctoral Programme**

1. Mr. Suresh Kumar has completed his doctoral degree on "Development of ZnCdS Nanocrystalline Thin Film using Chemical Bath Deposition" from IIT (ISM) Dhanbad under the supervision of Dr.S.R.Kumar.
2. Mr.ShashikantRajpal is carrying out his doctoral programme under the supervision of Dr.S.R.Kumar. He is working on the topic entitled "Development of Nanocrystalline Semiconducting Thin Film for Device Applications."
3. Ms.SudeshnaSurbhi is carrying out her doctoral programme under the supervision of Dr.S.R.Kumar. She is working on the topic entitled "Synthesis and Characterisation of CdTe Thin Film in Non Aqueous Medium."

**Project Topic for M. Tech. (Environmental Engineering)**

1. Mr. Abhijin S L has completed his project entitled " Reuse of Township Domestic Waste Water for Industrial Purpose" in June 2018 under Dr. S. R. Kumar.
2. Mr. Sumit Kumar Jha has completed his project entitled" Environmental Impact Assessment Report of Kandla Port" in June 2018 under Dr. S. R. Kumar.
3. Mr. Abhishek Prasad has completed his project entitled " Study and Analysis of Colour Removal of Textile Effluent and Coke -Oven by Product Plant" in June 2018 under Dr. S. R. Kumar
4. Mr. Nitin Ranjan has completed his project entitled "UTILIZATION OF CORIADER BIOMASS ASH IN BRICK MAKING" under Mrs. Madhu Kumari.
5. Mr. Siddharth has completed his project entitled entitled " AN OVERVIEW OF SOCIAL RISK DUE TO GAS PIPELINE" under Mrs. Madhu Kumari.
6. Ms. Priyanka Kumari has completed her project entitled "SURFACE WATER QUALITY ANALYSIS IN Ranchi" under Mrs. Madhu Kumari.
7. Mr. Jit Prosad Ghosh has completed his project entitled " Coated Ceramic membrane for Reducing Fouling in Sewage Treatment" under Dr. S. Basu .
8. Mr. Kumar Suraj has completed his project entitled "Air Quality Impact Prediction for an Opencast Mine" under Dr .S. Basu.
9. Mr. Rakesh Kumar Nayak has completed his project entitled "Municipal Wastewater Treatment Using Submerged An MBR Equipped with Ceramic Membrane" under Dr.S. Basu.
10. Mr. Abhishek Kumar has completed his project entitled "Assessment and

### Paper Published in National and International Journals

1. Suresh Kumar, Shashikant Rajpal, S.K.Sharma, D.Roy, S.R.Kumar, "Effect of Zn Concentration on the Structural, Morphological and Optical Properties of Ternary ZnCdS Nanocrystalline Thin Films", Digest Journal of Nanomaterials and Biostructure, Vol. 12, No. 2, April - June 2017, p. 339 - 347.
2. Shashikant Rajpal, S.R. Kumar "Effect of Annealing on Nanocrystalline ZnO Thin Film Developed by Electrodeposition Method", , Materials Today: Proceeding, Elsevier Materials Today: Proceedings 4 (2017) 3754-3759 .
3. Shashikant Rajpal, S.R.Kumar, "Development of Electrodeposited ZnTe Thin Films in Non-aqueous Medium", Journal of Nanoelectronics and Optoelectronics, 13-2, 2018, 190-194.
4. Madhu Kumai, P.K. Singh "Impacts of solar power in India: A review", International Journal of Research and Review. E-ISSN: 2349-9788, Vol-4, Issue-5, May-2017
5. Kaushik A., Basu S.\*, Raturi S., V.S. Batra, M. Balakrishnan, "Recovery of antioxidants from sugarcane molasses distillery wastewater and its effect on biomethanation", J Water Process Engg., 2018, 25, 205-211 (SCI, Impact factor: 1.43)
6. Kaushik, A.; Basu\*, S., Singh, K.; Batra, V. S.; Balakrishnan, M. "Activated carbon from sugarcane bagasse ash for melanoidins recovery". J Environ. Manage, 2017, 200, 29. (SCI, Impact factor: 4.01).
7. Basu\*, S.; Balakrishnan, M. Polyamide thin film composite membranes containing ZIF-8 for the separation of pharmaceutical compounds from aqueous streams", Sep. Purif. Technol., 2017, 179, 118. (SCI, Impact factor: 3.359).
8. Korenak, J.; Basu, S.; Balakrishnan, M.; Hélix-Nielsen, C.; Petrinic, I. "Forward osmosis in wastewater treatment processes. Acta Chim", Slov. 2017, 64, 83. (SCI, Impact factor: 1.0).

### Seminar/symposium attended

Shashikant Rajpal, S.R.Kumar "Effect of Mg Concentration on the Structural, Morphological and Optical Properties of Ternary ZnMgO Nanocrystalline Thin Films" , International Conference on Energy, Materials and Information Technology, 23-24 Dec 2017, Amity University Ranchi, Jharkhand.

N. Singh, S. Basu, M. Balakrishnan "Laccase immobilized on acetone silanized alumina supports for industrial wastewater treatment", 6th International Conference on Ecotoxicology & Environmental Sciences (ICEES-2018) 19-21 Feb, 2018, Netaji Subhas Inst. Technol., Delhi.

S.Basu International Conference on Water Resource Management 11-12 Jan 2018, CSIR-CGCRI, Kolkata.





Partha Sarathi Mondal and Dipten Bhattacharya, "Orbital order-Disorder Transition in Doped Perovskite Manganites: Influence of Intrinsic Octahedral-site distortion" National Symposium On Advances In Functional And Exotic Materials (29 AGM of MRSI), 14-16, February 2018, organized by Materials Research Society of India-Trichy Chapter, Tiruchirapalli, Tamilnadu.

### Invited Talk

1. S. Basu had delivered a talk entitled "Nanomaterials for Environmental Applications" Two day Workshop on Recently Developed Materials (RDM-2018) 23-24Feb, 2018, B.A. College of Engg. Technol., Jamshedpur (Invited Talk).
2. Dr. Partha SarathiMondal had delivered a talk entitled "Transport Properties of Ultrathin Transition Metal Oxides Films" Conference: Recently Developed Materials (RDM-2018), 23-24 February, 2018 , organized by Jharkhand Council on Science and Technology and B.A. College of Engineering and Technology, Jamshedpur

### Administrative Assignment

- Dr. S. R. Kumar is Chairman Purchase Committee
- Dr. S. R. Kumar is member Library Committee
- Ms. Madhu Kumari is chairman of Roof Top Solar installation
- Ms. Madhu Kumari is In-charge Electronics Lab
- Ms. Madhu Kumari is In-charge Instrumentation Lab
- Ms. Madhu Kumari is In-charge Microprocessor Lab
- Ms. Madhu Kumari is In-charge EPABX
- Dr. Partha Sarathi Mondal is member Purchase Committee
- Dr. S. Basu is Member Secretary of ILC
- Dr. S. Basu is Member of Campus Maintenance Committee
- Dr. S. Basu is Member of Roof Top Solar installation
- Dr. S. Basu is Member of Unniyan Bharat Abhiyan
- Dr. S. Basu is Faculty incharge of Env. Engg Lab

# ACADEMIC ACTIVITIES

## Regular Activities of Academic Section

All the regular activities of Academic Section such as conducting semester examinations, publishing of results have been carried out as per schedule. Classes of First semester M.Tech-2017, B.Tech -2017 and ADC 2017 had been started on 1st August 2017, 27th July 2017, and 1st Aug, 2017 respectively.

### Admission 2017

#### 1. PhD. Programme

Admission of Ph.D students were undertaken through written test & interview, conducted by respective department.

<u>Department</u>	<u>No. of seats</u>	<u>No. of seats filled</u>
1. Metallurgy and Material Engineering	1	1

#### 2. M.Tech -Admission through CCMT-2017

<u>Branch</u>	<u>No. of seats</u>	<u>No. of seats filled</u>
1. Manufacturing Engineering	28	26
2. Foundry-Forge Technology	28	26
3. Environmental Engineering	28	20
4. Material Science & Engineering	28	25

#### 3. B.Tech -Admission through JoSSA-2017

<u>Branch</u>	<u>No. of seats</u>	<u>No. of seats filled</u>
Manufacturing Engineering	60	20
Metallurgy and Materials Engineering	60	58

#### 4. ADC

Admission through written test conducted by NIFFT

<u>Branch</u>	<u>No. of seats</u>	<u>No. of seats filled</u>
Foundry Technology	46	46
Forge Technology	46	39

### Students passed out in 2017

#### 1. M.Tech (2015-17)

<u>Branch</u>	<u>No. of students passed out</u>
1. Manufacturing Engineering	20
2. Foundry-Forge Technology	22
3. Environmental Engineering	11
4. Material Science & Engineering	15

#### 2. B.Tech (2013-17)

<u>Branch</u>	<u>No. of students passed out</u>
Manufacturing Engineering	75
Metallurgy and Materials Engineering	57

#### 3. 43rd ADC

<u>Branch</u>	<u>No. of students passed out</u>
Foundry Technology	44
Forge Technology	





## M. Tech Projects for 2017-18 FOUNDRY-FORGE TECHNOLOGY

Sl. No.	Roll No	Name of the Student's	Project Title	Name of Guide
1	FF16M01	Mr. Rahul Kumar	Developing Modular Sheet Metal Casing Box Sturdy Design for Lithium Battery as a Retrofit Component to Support Battery	Dr. A. K. Singh
2	FF16M02	Mr. Alok Kumar	FEM Analysis of Deformation Process of Nb-Microalloyed Steel	Dr. Manoj Kumar
3	FF16M03	Mr. Lalan Kumar	Optimization of Induction Hardening Parameters Parameters for Center Plate By Taguchi Method	Mr. A.K. Pramanick
4	FF16M04	Mr. Arun Kumar	Impact of Trace Element (Nb) on Wear Resistance, Strength and Rigidity of Grey & Nodular Cast Iron	Mr. A.K. Pramanick
5	FF16M06	Mr. Aamir Sohail	Optimisation of Forging Die Design for Rail Locomotive Wheel	Dr. A. K. Singh
6	FF16M07	Mr. Varun Chaturvedi	Development of Fine Pearlite Microstructure in Rail Steel & Study Its Mechanical Properties	Dr. Amitesh Kumar
7	FF16M08	Mr. Braj Kishor	Study on Control of Leakage Problem in Hydraulic Housing Casting	Dr. Manoj Kumar
8	FF16M09	Mr. Paras Nath Yadav	Optimization of Forging Process Parameter of Automotive Component Universal Cross Joint	Dr. R.K. Ohdar
9	FF16M10	Mr. Rajnish Kr. Singh	Optimization of Die Design and Material Utilisation of Shift Fork	Dr. N.K. Singh
10	FF16M11	Mr. Rahul Sen	Heat Treatment of High Pressure Die Cast Parts for Structural Application of Aluminium Castings	Dr. K.K. Singh
11	FF16M12	Mr. Shashank Kulshrestha	Design of Forging Dies for Low Stress Rail Coach Wheel	Dr. A. K. Singh
12	FF16M13	Mr. Anirudh Kumar	Directional Solidification in GDC Dies Through Cooling and Heating Design in Aluminum Die Casting	Dr. K.K. Singh
13	FF16M15	Mr. Santosh Kumar	Yielding and Deformation Behaviour of AISI 4340 Steel in Hot Compression	Dr. P. Talukdar
14	FF16M16	Mr. Gaurav Saha	Developing In-House Design of Forged Components for E-Bike with Integrated Balancing	Dr. Nandita Gupta
15	FF16M17	Mr. Vivek Kumar	Optimization of The Process Parameters of Forging of Pitman Arm	Dr. R.K. Ohdar
16	FF16M18	Mr. Nishant Kumar	Development of New Heat Treatment Cycle for WD-70-BD Component for Improving Productivity	Mr. Vineet Chak
17	FF16M19	Mr. Rupak Kumar	Development & Characterisation of Metal Matrix Composite Through Hot Compression	Mr. A.K. Pramanick
18	FF16M20	Md. Mahfooz Alam	Comparative Study of Traditional and Counter Gravity Casting Technique	Mr. Vineet Chak
19	FF16M21	Mr. Kundan Kumar	Die Design Optimization and Die Stress Analysis of Supporting Arm by Simulation	Dr. N.K. Singh
20	FF16M22	Mr. Abhijeet Kumar	Finite Element Method (FEM) Based Computer Simulation Study of Plate Rolling (On High Phosphorus Steel)	Dr. Nandita Gupta
21	FF16M23	Mr. Korada Venkata Ramana	Development of Hydraulic Components by High Pressure Molding	Dr. Amitesh Kumar

## Manufacturing Engineering



Sl. No.	Roll No	Name of the Student's	Project Title	Name of Guide
1	ME16M01	Mr. Shubham Sinha	2D Finite Element Based Simulation of Laser Metal Additive Manufacturing Process Synthesis and	Dr. A. K. Sood
2	ME16M02	Mr. Pranav Ranjan	Characterisation of Al/Sic Composite by Ultrasonic Casting Technique	Mr. Subrato Kr. Soren
3	ME16M03	Mr. Shiva Agarwal	Numerical & Experimental Analysis of Adhesion Failure in Adhesive Bonded Joint (SLJ)	Dr. S.K. Parida
4	ME16M04	Mr. Alok Kumar Singh	Industrial Waste Utilization for Making Construction Constituents and Optimization of Strength	Dr. A. Mondal
5	ME16M05	Mr. Mayank Verma	Stress-Strength Interference Theory Based Reliability Estimation For Friction Stir Welding Of Aa7050	Dr. V.M.S. Hussian
6	ME16M06	Mr. Shambhu Kumar	Microstructure and Mechanical Properties Evaluation of YSZ and ZrO <sub>2</sub> Laser Cladding on Pure Ti -alloy(Grade-2)	Mr. A.M. Murmu
7	ME16M07	Mr. Chandramoney Kumar	Experimental Investigation of Effect of Argon+ Hydrogen as a Shielding Gas in Mig Welding of Austenitic Stainless Steel	Dr. A.K. Pathak
8	ME16M08	Ms. Shalinee Sourabh	Computer Aided Die Design of An Upsetting Machine and Verification Using Fem	Dr. Sanjay Kumar
9	ME16M10	Mr. Shubham Tyagi	Die Design- Parameter Optimization and Selection of Proper Billet Size	Dr. A. Mondal
10	ME16M11	Mr. Nitin Singh	Surface Integrity Evaluation of AISI 4340 Steel in Milling Process	Dr. Ratnakar Das
11	ME16M12	Mr. Sree Harsha Choutapalli	Sampling Strategy for Verification of Geometrical Tolerance on Freeform Surfaces	Dr. G. Rajamohan
12	ME16M13	Mr. Sourabh Jha	Development and Characterization of Al alloy/TiO <sub>2</sub> Particulate Reinforced Metal Matrix Composites	Dr. Vijay Toppo
13	ME16M14	Mr. Madhav Kumar	Tribological Behaviour of Al alloy/TiO <sub>2</sub> Nano Size Particulate Reinforced Metal Matrix Composites	Dr. Vijay Toppo
14	ME16M16	Ms. Neha Choudhary	Simulation of compression of ring (Ring Compression Test) under different conditions and its experimental validation	Dr. Sanjay Kumar
15	ME16M17	Mr. Ravi Kumar	Experimental Investigation on the Electric Discharge Machining of AISI 4340 Steel	Dr. Ratnakar Das
16	ME16M18	Mr. Saurabh Soni	Microstructure and Mechanical Properties Evaluation of YSZ and ZrO <sub>2</sub> Laser Cladding on Ti6Al4V (Grade 5)	Mr. A.M. Murmu
17	ME16M19	Md. Saquib Bin Reyaz	Design, Development of Automated SMAW Setup and Weldment Analysis in Wet and Dry Working Environment	Dr. S.K. Parida
18	ME16M20	Mr. Surya Narayan Ravi	Study of Friction Stir Welding of Al/Al <sub>2</sub> O <sub>3</sub> Nano Composites	Mr. Subrato Kr. Soren
19	ME16M21	Mr. Rajat	Reliability Modeling For Rotor Systems Subjected To Bearing Faults	Dr. V.M.S. Hussian
20	ME16M22	Mr. Nitesh Kumar	Determination Of Part Build Orientation In Additive Manufacturing Process By Minimizing Volumetric Error And Support Structure Requirement	Dr. A.K. Sood

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## Materials Science & Engineering

Sl. No.	Roll No	Name of the Student's	Project Title	Name of Guide
1	MM16M01	Mr. Hrishiraj Misra	Development Of Mullite Nano-Fibers By Electro-spinning Method.	Mr. B. Mallik Dr. P.S. Mondal
2	MM16M02	Mr. Ishwari Narain Choudhary	Study Of Process Technology & Effect Of Rolling Parameters On Quality Of IS 1786 Fe500S Rebars.	Dr. Ratnesh Kr. Gupta
3	MM16M03	Mr. Pramod Kumar	Study on the Effect of Heat Treatment on Microstructure evaluation and Mechanical Properties of 0.6% Carbon Steel	Dr. Renu Kumari
4	MM16M04	Mr. Ranjeet Kumar	Corrosion Behavior Of Al-7075 Bar In 3.5 Weight % NaCl Solution.	Dr. G. Das
5	MM16M05	Mr. Abhishek Kumar Pathak	Study On the Thermal Oxidation Behaviour Of Magnesium Alloys.	Dr. Renu Kumari
6	MM16M06	Mr. Rohit Kumar Mandal	Effect Of Heat Treatment On Corrosion Behavior Of 304 Austenitic Stainless Steel In Mild Acidic Medium.	Dr. Ratnesh Kr. Gupta
7	MM16M07	Mr. Alanka Chandra Sekhar	Study Of The Anti Corrosive Coating On Steel Plate By Sol-Gel Deposition	Mr. A.K. Pramanick Prof. B. Kumar
8	MM16M09	Mr. Ashish Kumar	Corrosion Behavior Of Mg AZ31b Alloy In 3.5 Weight % NaCl Solution	Dr. G. Das
9	MM16M10	Mr. Hrishikesh Deka	Characterization Of Plasma TIG Welded Automotive Steels	Prof. B. Kumar Mr. A.K. Pramanick
10	MM16M11	Mr. Rahul Bagala	Cu Based Composite Design For Wear Resistance Application	Dr. D. Roy Mr. Kousik Sikdar
11	MM16M13	Mr. Sumantra Chowdhury	Development of KNN Piezoelectric Ceramic Wafer	Dr. D. Roy Dr. P.S. Mondal
12	MM16M14	Mr. Kamal Bahadur Yadav	Study On the Alkaline Heat Treated Magnesium Alloy	Dr. Renu Kumari
13	MM16M16	Mr. Priyabrata Maji	Processing And Characterization Of Low Carbon SAE 1008 Steel For Wire Rod Application	Dr. Ratnesh Kr. Gupta
14	MM16M17	Mr. Sumit Kumar	Corrosion Behavior Of Tmt Eqr Fe600 and Fe550D Rebar In 3.5 Weight % NaCl Solution.	Dr. G. Das
15	MM16M18	Mr. Akhilesh Kr. Rai	Development of Al Based Nano Composite	Dr. D. Roy

## ENVIRONMENTAL ENGINEERING

Sl. No.	Roll No	Name of the Student's	Project Title	Name of Guide
1	AS16M01	Mr. Abhijin S L	Reuse Of Domestic Township Waste Water For Industrial Purpose	Dr. S.R. Kumar
2	AS16M02	Mr. Sumit Kumar Jha	Environmental Impact Assessment Of Kandla Port	Dr. S.R. Kumar
3	AS16M03	Mr. Abhishek Prasad	Status And Analysis Of Color Removal Of Textile Effluent And Coke-Oven By Product Plant	Dr. S.R. Kumar
4	AS16M04	Mr. Tushar Kumar	Correlation Between Soil Physical Characteristics And Ground Water Availability Local Houses Structure With Cropping Pattern In And Around Coal Mining Area Of Jharkhand State	Dr. Anil Kumar
5	AS16M07	Mr. Jit Prosad Ghosh	Coated Ceramic Membranes For Reduced Fouling In Sewage Treatment	Dr. S. Basu
6	AS16M08	Mr. Rakesh Kumar Nayak	Operation Of Anmbr Equipped With Ceramic Membranes	Dr. S. Basu
7	AS16M09	Mr. Vinay Yadav	Design Of Dust Extraction Type Air Pollution Control System With Energy Efficient Features	Mrs. Madhu Kumari
8	AS16M12	Mr. Navin Kumar	Status And Challenges Of Municipal Solid Waste Management Of Ranchi	Mrs. Madhu Kumari
9	AS16M13	Mr. Anoop Kr. Sharma	Water Pollution Study Of Subarnarekha River	Dr. Anil Kumar
10	AS16M14	Mr. Rishav Kr. Gupta	Consequence Analysis Comparison For Natural Gas Pipeline	Mrs. Madhu Kumari
11	AS16M16	Mr. Abhishek Kumar	Assessment And Management Of Air Quality Of Dhanbad Township	Dr. S. Basu
12	AS16M17	Mr. Kumar Suraj	Air Quality Impact Prediction for an Opencast Mine	Dr. S. Basu
13	AS16M18	Mr. Prem Kumar	Analysis And Detection Of Fluoride Content Of Contaminated Water From Industries, Surface And Sub Surface Water Bodies And Its Mitigation Using Cheap Adsorbent Like Fly Ash.	Dr. Anil Kumar



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## M. TECH SEMINAR FOR 2017-18 FOUNDRY-FORGE TECHNOLOGY

Sl. No.	Roll No	Name of the Student's	Project Title	Name of Guide
1	FF16M01	Mr. Rahul Kumar	Sheet metal forming for automotive component	Dr. A. K. Singh
2	FF16M02	Mr. Alok Kumar	Recent developments in die manufacturing	Dr. Manoj Kumar
3	FF16M03	Mr. Lalan Kumar	Induction hardening of medium carbon steel	Mr. A.K. Pramanick
4	FF16M04	Mr. Arun Kumar	To study the effect of micro alloying on cast iron	Mr. A.K. Pramanick
5	FF16M06	Mr. Aamir Sohail	Continuous Casting	Dr. A. K. Singh
6	FF16M07	Mr. Varun Chaturvedi	Solid state joining of metals	Dr. Amitesh Kumar
7	FF16M08	Mr. Braj Kishor	3D: Printing challenges to casting & forging	Dr. Manoj Kumar
8	FF16M09	Mr. Paras Nath Yadav	Net shape forging process	Dr. R.K. Ohdar
9	FF16M10	Mr. Rajnish Kr. Singh	Orbital forging and its applications	Dr. N.K. Singh
11	FF16M12	Mr. Shashank Kulshrestha	Die Casting	Dr. A. K. Singh
12	FF16M13	Mr. Anirudh Kumar	3D Printing of casting	Dr. K.K. Singh
13	FF16M15	Mr. Santosh Kumar	Hot deformation behaviour of high strength steel	Dr. P. Talukdar
14	FF16M16	Mr. Gaurav Saha	Creep forming an overview	Dr. Nandita Gupta
15	FF16M17	Mr. Vivek Kumar	Selection of forging die materials	Dr. R.K. Ohdar
16	FF16M18	Mr. Nishant Kumar	Heat Treatment of forged micro alloyed steels	Mr. Vineet Chak
17	FF16M19	Mr. Rupak Kumar	Yielding behaviour of metal matrix composite under hot compression	Mr. A.K. Pramanick
18	FF16M20	Md. Mahfooz Alam	Casting of lighter materials and its alloys	Mr. Vineet Chak
19	FF16M21	Mr. Kundan Kumar	Hot isostatic pressing and its application	Dr. N.K. Singh
20	FF16M22	Mr. Abhijeet Kumar	SQUEEZE FORMING	Dr. Nandita Gupta
21	FF16M23	Mr. Korada Venkata Ramana	Manufacturing technique & production of micro-alloyed steels	Dr. Amitesh Kumar

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# MANUFACTURING ENGINEERING



Sl. No.	Roll No	Name of the Student's	Project Title	Name of Guide
1	ME16M01	Mr. Shubham Sinha	Cryogenic machining	Dr. A. K. Sood
2	ME16M02	Mr. Pranav Ranjan	An overview of magnetic particle inspection for detecting defects in materials	Mr. Subrato Kr. Soren
3	ME16M03	Mr. Shiva Agarwal	Fracture analysis of adhesive bonded joint	Dr. S.K. Parida
4	ME16M04	Mr. Alok Kumar Singh	Application of by product waste of power plant	Dr. A. Mondal
5	ME16M05	Mr. Mayank Verma	Current trend and future of sequential micro machining process on a single point cutting tool	Dr. V.M.S. Hussain
6	ME16M06	Mr. Shambhu Kumar	Improve the materials absorption of light and enhance the laser tube bending process utilizing laser softening heat treatment	Mr. A.M. Murmu
7	ME16M07	Mr. Chandramoney Kumar	Use of activated flux in tig welding process	DR. A.K. Pathak
8	ME16M08	Ms. Shalinee Sourabh	Recent practices in cloud manufacturing	Dr. Sanjay Kumar
9	ME16M10	Mr. Shubham Tyagi	Electric discharge machining of insulating ceramics	Dr. A. Mondal
10	ME16M11	Mr. Nitin Singh	Challenging issues in machining of aerospace material	Dr. Ratnakar Das
11	ME16M12	Mr. Sree Harsha Choutapalli	Reconfigurable Manufacturing Systems	Dr. G. Rajamohan
12	ME16M13	Mr. Sourabh Jha	Additive Manufacturing	Dr. Vijay Toppo
13	ME16M14	Mr. Madhav Kumar	Lean Manufacturing	Dr. Vijay Toppo
14	ME16M16	Ms. Neha Choudhary	Additive manufacturing: Application and advancements	Dr. Sanjay Kumar
15	ME16M17	Mr. Ravi Kumar	Green Manufacturing/Environmentally friendly machining	Dr. Ratnakar Das
16	ME16M18	Mr. Saurabh Soni	Nd-YAG laser cutting of sheet materials	Mr. A.M. Murmu
17	ME16M19	Md. Saquib Bin Reyaz	Underwater welding	Dr. S.K. Parida
18	ME16M20	Mr. Surya Narayan Ravi	Study of ultrasonic testing for detection of defects in materials	Mr. Subrato Kr. Soren
19	ME16M21	Mr. Rajat	Reverse engineering and its application in manufacturing sector	Dr. V.M.S. Hussain
20	ME16M22	Mr. Nitesh Kumar	magnetic float polishing	Dr. A.K. Sood

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## MATERIALS SCIENCE & ENGINEERING

Sl. No.	Roll No	Name of the Student's	Project Title	Name of Guide
1	MM16M01	Mr. Hrishiraj Misra	Electrospun ceramic nano-fibers and nano-composites	Mr. B. Mallik Dr. P.S. Mondal
2	MM16M02	Mr. Ishwari Narain Choudhary	Intergranular corrosion behaviour of Austenitic stainless steel	Dr. Ratnesh Kr. Gupta
3	MM16M03	Mr. Pramod Kumar	Heat Treatment of Steel	Dr. Renu Kumari
5	MM16M05	Mr. Abhishek Kumar Pathak	Thermal spraying in surface engineering	Dr. Renu Kumari
6	MM16M06	Mr. Rohit Kr. Mandal	Effect of heat treatment on corrosion behaviour of 304 Austenitic stainless steel in mild acid medium	Dr. Ratnesh Kr. Gupta
7	MM16M07	Mr. Alanka Chandra Sekhar	X-Ray Crystallography	Prof. B. Kumar
8	MM16M09	Mr. Ashish Kumar	Method to prepare carbon fiber and its applications.	Dr. G. Das
9	MM16M10	Mr. Hrishikesh Deka	Study of weld decoy in stainless steel	Prof. B. Kumar
10	MM16M11	Mr. Rahul Bagala	Study on Cu based composite for electrical application	Dr. D. Roy
11	MM16M13	Mr. Sumantra Chowdhury	Lead-free piezoceramic materials	Dr. D. Roy Dr. P.S. Mondal
12	MM16M14	Mr. Kamal Bahadur Yadav	Laser in surface engineering	Dr. Renu Kumari
13	MM16M16	Mr. Priyabrata Maji	Heat treatment of low carbon steel	Dr. Ratnesh Kr. Gupta
14	MM16M17	Mr. Sumit Kumar	Characterization of fracture behavior of pipeline steel.	Dr. G. Das
15	MM16M18	Mr. Akhilesh Kr. Rai	Studies on metal matrix composites (MMCs) for automobile applications.	Dr. D. Roy

## ENVIRONMENTAL ENGINEERING

Sl. No.	Roll No	Name of the Student's	Project Title	Name of Guide
1	AS16M01	Mr. Abhijin S L	Air Pollution and its effect on human health	Dr. S.R. Kumar
4	AS16M04	Mr. Tushar Kumar	Effect of mining on ground water	Dr. Anil Kumar
5	AS16M07	Mr. Jit Prosad Ghosh	Municipal waste water treatment with ceramic membranes	Dr. S. Basu
6	AS16M08	Mr. Rakesh Kr. Nayak	Anaerobic membrane bioreactor (AnMBR) for waste water treatment	Dr. S. Basu
9	AS16M13	Mr. Anoop Kr. Sharma	Waste water production in India and the prospect of tertiary treatment regarding eutrophication	Dr. Anil Kumar
11	AS16M16	Mr. Abhishek Kumar	Urban air quality management of cities	Dr. S. Basu
12	AS16M17	Mr. Kumar Suraj	Application of AERMOD modeling system for environmental impact assessment	Dr. S. Basu
13	AS16M18	Mr. Prem Kumar	Biological Nutrient removal	Dr. Anil Kumar

## B. Tech. Project 2017-18 MANUFACTURING ENGINEERING



Sl. No.	Roll No	Name of Student	Title of the Project	Guide Name
1	01/14 62/12	Mr. Daida Vinay Kr. Golla Karthik	Experimental and analytical determination stress-strim behavior of smantstructures having egethe poisions ratio	Dr. S. K. Parida
2	02/14 08/14	Mr. Shubham Sonal Mr. Ashuttosh Tiwari	BIG. DATA: Survey, Technologies, opportunities and challenges.	Dr. K. K. Verma
3	05/14 09/14	Ms. Kumari Puja Mr. Apurv Anand Krishna	Effect of hardring tempering and stress relieve annealing on forged micro - alloyed 38Mnsivs5 steel	Dr. P. Talukdar
4	03/14 07/14	Mr. Mayank Kumar Mr. Shivam Kr. Singh	Supply chain management in manufacturing companies.	Dr. R. K. Ohdar
5	11/14 54/14	Mr. Shubhendu Mr. Manish Kumar	Effect of Nb& V on microstructure & properties of gray iron casting.	Dr. Amitesh Kumar
6	13/14 29/14	Mr. Faizul Haque Mr. Rana Nikhil Kr. Singh	Forging die design and simulation of automotive component for material saving.	Dr. Manoj Kumar
7	14/14 55/14	Mr. Prasshant Dwivedi Mr. Aman Malav	Effect of coating thickness on evaporated pattern cating and study it structural properties	Dr. K. K. Singh
8	15/14	Mr. Harshit Agrawal	Optization of die design parameters for single theaw crankshaft	Dr. N. K. Singh
9	17/14 10/14	Mr. Ankit Kr. Gupta Mr. Shashwat Shubham	Application of Taguchi method for optimizing turning process under various machining parameters	Dr. K. K. Verma
10	19/14 21/14	Mr. Arpit Kr. Tiwari Mr. Abhimanyu Chauhan	Forging die design and simulation of automotive component	Dr. Manoj Kumar
11	20/14 40/14	Ms. Asmita Singh Mr. Siddharth Chakraborty	Evolution and defragmentation of ergonomics with reference to productivity in manufacturing sector	Dr. Sujata Smriti Gupta
12	22/14 28/14	Mr. Mano Lingam V Ms. Apeksha Modi	A study on the effect of process parameter on the mechanical properties of 3D printed ABS composite	Mr. Ratnakar Das
13	23/14 50/14	Mr. Nitish Kumar Mr. Saurabh Sitanshu	Industrial hazard & safety measures in steel industry.	Mr. Anand Mohan Murnu
14	24/14 44/14	Mr. Sumit Kumar Mr. Gaurav Shivhare	Application of solar power in rural & urban areas	Dr. Madhu Kumari
15	27/14 52/14	Mr. Divakar Kumar Mr. Deepak Kumar	Energy in manufacturing Industry conservation	Dr. Madhu Kumari
16	30/14 32/14	Mr. Deepak Kr. Saw Mr. Ashwin Kumar	Application of lean manufacturing in foundries industries	Dr. Amitesh Kumar
17	31/14 42/13	Ms. Sarojani Kumari Ms. Malika Rani Horo	Forging behaviour of medium carbon steel	Dr. R. K. Ohdar
18	34/14	Mr. Aadarsh Das	High Performance Work System (HPWS) at Salad Days	Dr. Sujata Smriti Gupta

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Sl. No.	Roll No	Name of Student	Title of the Project	Guide Name
19	36/14	Mr. Devesh Gaurav	Analysis and Design of Brand marketing for consumer engagement and reteation	Dr. Sujata Smriti Gupta
20	37/14	Mr. Ayush Sinha	Optimization for die design parameter for single throao crontshaft	Dr. N. K. Singh
21	39/14 45/14	Mr. Saket Kumar Mr. Thakur Durgesh Nath Singh	Forging design and simulation of automotive component to improve yield.	Dr. Manoj Kumar
22	41/14 46/14	Ms. Nidhi Kumari Ms. Anuradha	Current lean manufacturing strategies adopted by Indian industries	Mr. A.M. Murmu
23	43/14	Mr. Satish Kumar	Crypto currency block chain technology and their application in financial sector	Dr. Sujata Smriti Gupta
24	47/14 49/14	Mr. Abhishek Kumar Mr. Shashikant Kumar	Investment casting process	Dr. Madhu Kumari
25	48/14 56/14	Mr. Vishal Kumar Mr. Kundan Kumar	Effect of niobium on structure & properties of ductile iron casting	Dr. Amitesh Kumar
26	53/14 61/14	Mr. Devraj Mr. Ravi Bhaskar	Study of friction stir welding with aluminium alloys.	Mr. Subrato Kr. Soren
27	57/14 59/14	Mr. Pujari Chinna Peddaah Mr. B. R. Naveen	Manufacturing systems management	Dr. S. K. Parida
28	60/14 58/14	Mr. Harijana Vinnu Mr. Chandragade Sudhakar	Development of a computer ctegreted tool force neasursery system	Dr. S. K. Parida
29	63/14 25/25	Ms. Sapna Ahirwar Ms. Bulbul Kumari	Numerical simulation of thermal diode for heat sealeng	Dr. S. K. Parida
30	64/14 65/14	Mr. B. Prem Kumar Mr. Pargunan P	Evaluation of roundness error using coordinate dater	Dr. G. Rajamohan
31	67/14 35/14	Mr. Rajneesh Kumar Mr. Sonu Kumar	Comparative study of different type of forging process ( hot die forging, cold die forging, warm forging )	Dr. R. K. Ohdar
32	68/14 26/14	Ms. Ahuja Bharti Ms. Viibha Yadav	Modeling of impact of molten droplet on substrate	Dr. S. K. Parida
33	69/14 70/14	Mr. Anand Kerketta Mr. Amol Abhishek Tete	Industrial hazard & safety measures in petro chemical industries	Mr. A. M. Murmu
34	65/12 72/12	Mr. Ajit Kumar Mr. Dilkhush Meena	To study different types of gate providing different pressure and dual time for sodium silent boundent sand.	Dr. Nandita Gupta
35	72/14	Mr. Aditya Saurav Doraiburu	Optimisation of die design porametion for & Drive shaft.	Dr. N. K. Singh
36	28/13	Mr. Shubham Sharma	Study of degassing of Al Casting using salt	Dr. Amitesh Kumar

# METALLURGY & MATERIALS ENGINEERING



Sl. No.	Roll No	Name of Student	Title of the Project	Guide Name
1	73/14 102/14	Mr. Arunav Ghar Mr. Rajeev Shankar	Characterisation of anorphous alloy dispersed aluminium matrix composite	Dr. D. Roy
2	74/14 107/14	Mr. Nikhil Suresh Mr. Faiz Ali	Technology need assessment for energy efficient Iron & Steel Plant	Dr. P.P. Chattopadhyay
3	75/14 76/14	Mr. Sourabh Jain Mr. P.V.S. Chaithanya	Effect of inoculants on structure & properties of ADI	Dr. Anil Kr. Singh
4	77/14 104/14	Mr. Himanshu Kumar Mr. Abhishek Kumar	Study of mechanical behaviour of austempered ductile iron	Dr. A.K. Pramanick
5	78/14 101/14	Mr. Raghunath Jha Mr. Chandan Kumar	Degradation mechanism of API - grade steel in CO <sub>2</sub> environment.	Dr. G. Das
6	80/14 100/14	Ms. Avantika Gupta Ms. Anamika Kumari Bhaskar	Characterization of austempered ductile iron	Dr. B. Kumar
7	81/14 92/14	Mr. Vikash Kr. Sahu Mr. Sumit Kr. Mishra	Stress corrosion cracking of X80 pipeline steel under various CO <sub>2</sub> concentration	Dr. G. Das
8	84/14	Mr. Raashid Khan	A study on mechanical properties of heat treated forged AISI - 4340 steel	Dr. P. Talukdar
9	85/14	Mr. Nazish Kamal	A study on mechanical properties of heat treated forged AISI - 1040 steel	Dr. P. Talukdar
10	86/14	Ms. Priya Singh	Modelling & simulation of casting processes	Dr. Nandita Gupta
11	87/14 95/12	Mr. Keepak Kr. Singh Mr. Ritesh Ranjan	Effect of inoculation on nodularity & nodule count of SG iron.	Dr. Amitesh Kumar
12	88/14 121/14	Mr. Shahbaz Alam Ms. Sonalika Ahirwar	Synthesis and characterisation of copper based nano composites	Dr. D. Roy
13	89/14 109/14	Mr. Manoj Kumar Mr. Raj Kr. Yadav	Study of Microstructure and Mechanical Properties of 316LN Stainless Steel	Dr. R. K. Gupta
14	90/14 110/14	Ms. Jyoti Kumari Ms. Alisha Kumari	study of the effect of microalloying elements on high strength steel and advanced high strength steel	Dr. B. Kumar
15	91/14 96/14	Mr. Ashutosh Kumar Mr. Rishabh Kumar	Pitting corrosion of pipeline steel in dilute HCO <sub>3</sub> -3 solution with chloride ions.	Dr. G. Das
16	93/14	Mr. Jitendra Barnwal	A study on mechanical properties of heat treated forged AISI - 1040 steel	Dr. P. Talukdar
17	94/14 83/14	Mr. Satish Kr. Mehta Mr. Gopal Kumar	Study of microstructure and mechanical property of 304L Stainless steel	Dr. R. K. Gupta
18	95/14 123/14	Mr. A. Jaya Minish Mr. Ch. Harsha vardhan	Heat treatment of low alloy casting steel	Dr. A. K. Pramanick
19	97/14 98/14	Mr. Mantosh Mandal Mr. Raushan Kumar	Development of W dispersed Cu composite for electrical application.	Dr. D. Roy
20	99/14 126/14	Mr. Archit Raj Mr. Ritesh Kumar Ranjan	Microstructure and property evaluation of welded zone	Dr. Renu Kumari
21	103/14 120/14	Mr. Vikky Kumar Mr. Rahul Kumar	Heat treatment of low carbon steel	Dr. Renu Kumari

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Sl. No.	Roll No	Name of Student	Title of the Project	Guide Name
22	106/14 119/14	Mr. Dilshad Hassan Mr. Ayan Mandal	Study of Microstructure evolution & Properties in SAE 52100 Steel	Dr. P.P. Chattopadhyaa
23	108/14 131/14	Mr. Munesh Rathor Mr. J. Abhilash Nayak	Effect of cu addition on structure properties of grey cast iron	Dr. K. K. Singh
24	111/14 128/12	Mr. N. Harikrishna Mr. P. Venkata Ramana	Corrosion behaviour of mg - az91 alloy used for aerospace e automobiles	Dr. G. Das
25	113/14 116/14	Mr. Sunil Bhagtani Mr. vaibhav Mishra	Devlopment of cu craphene nanocomposits by high pressure sinteeng	Dr. D. Roy
26	114/14 82/14	Mr. Akshay Kumar Mr. Anant Kishore	study of microstructure and mechanical properties of 304 Stainless steel	Dr. R. K. Gupta
27	115/14	Mr. Aman Kumar Jha	Modelling & simulation of casting processes	Dr. Nandita Gupta
28	117/14 118/14	Mr. Rohit tiwari Shrikant Kumar	Heat treatment of medium carbon steel	Dr. Renu Kumari
29	122/14 127/14	Mr. Shashi Bhushan Rajak Mr. Sushil Kumar Ram	Study of microstructure of aluminium base nano - composite produced by stirr casting technique	Dr. B. Mallik
30	125/14 75/13	Mr. Srirama Kiran Mr. Pawar Laxman	Study of mechanical properties of aluminium base nano - composites produced by stirc casting technique	Dr. B. Mallick
31	128/14 132/14	Ms. Deola Soren Mr. Nitesh Kr. Sah	Study of mechanical poropertics of aluminium alloy produced by stir casting technique	Dr. B. Mallick
32	129/14	Mr. Keloth Naresh	A study on mechanical properties of heat treated forged AISI 4340 steel.	Dr. P. Talukdar
33	130/14	Mr. Umit Kumar	Optimization for die design parameter for " drive shaft"	Dr. N.K. Singh

**B. Tech. Seminar 2017-18**  
**METALLURGY & MATERIALS ENGINEERING**

Sl. No.	Roll No	Name of the Student's	Project Title	Name of Guide
1	73/14	Mr. Arunav Ghar	Electroslag refining of steel	Dr. D. Roy
2	74/14	Mr. Nikhil Suresh	Friction Stir Welding	Dr. P.P. Chattopadhyay
3	75/14	Mr. Sourabh Jain	Study on ductile iron	Dr. Anil Kr. Singh
4	76/14	Mr. P.V.S. Chaithanya	Study on austempered ductile iron	Dr. Anil Kr. Singh
5	77/14	Mr. Himanshu Kumar	Physical and high temperature characterization of blast furnace raw materials	Dr. B. Kumar
6	78/14	Mr. Raghunath Jha	Mg- alloy - light materials used in aerospace & automobile.	Dr. G. Das
7	80/14	Ms. Avantika Gupta	Aluminium based composites	Dr. B. Kumar
8	81/14	Mr. Vikash Kr. Sahu	Effect of sulphur on corrosion of steel	Dr. G. Das
9	82/14	Mr. Anant Kishor	Non - destructive testing & its application	Dr. R. K. Gupta
10	83/14	Mr. Gopal Kumar	Effect of sulphur(s) on corrosion pipe line steel	Dr. R. K. Gupta
11	84/14	Mr. Raashid Khan	Die materials in forgings	Dr. P. Talukdar
12	85/14	Mr. Nazish Kamal	Laser - beam hardening	Dr. P. Talukdar
13	86/14	Ms. Priya Singh	Advances in electric arc furnace steelmaking technologies using cheaper input materials less energy ( prospects & challenges)	Dr. Nandita Gupta
14	87/14	Mr. Deepak Kr. Singh	Manufacturing and application of austempered ductile iron.	Dr. Amitesh Kumar
15	88/14	Mr. Shahbaz Alam	Non - destructive testing defects analysis by x - ray radiography	Dr. D. Roy
16	89/14	Mr. Manoj Kumar	Effect of surpuer (s) on pipe line steel	Dr. R. K. Gupta
17	90/14	Ms. Jyoti Kumari	Micromechanism of fracture behaviour in intermetallics	Dr. B. Kumar
18	91/14	Mr. Ashutosh Kumar	Biocompatibility of mg - alloy sith human body.	Dr. G. Das
19	92/14	Mr. Sumit Kr. Mishra	Nano coating to present correasion on steel substrate.	Dr. G. Das
20	93/14	Mr. Jitendra Barnwal	Carbo nitriding	Dr. P. Talukdar
21	94/14	Mr. Satish Kr. Mehta	Study of grain growth of high 'mn' twip steel various % of cold reductions	Dr. R. K. Gupta
22	95/14	Mr. A. Jaya Manish	Study the effect of heat treatment in tool steel.	Dr. A. K. Pramanick
23	96/14	Mr. Rishabh Kumar	Corrosion study of AL 7075 alloy used in aerospace	Dr. G. Das
24	97/14	Mr. Mantosh Mandal	Advanced high strength steel ( 3rd generator )	Dr. D. Roy
25	98/14	Mr. Raushan Kumar	Call for modelling of basic oxygen furnace ( steel making )	Dr. D. Roy
26	99/14	Mr. Archit Raj	Hydrogen cracking in welding metallurgy	Dr. Renu Kumari
27	100/14	Ms. Avantika Gupta	Alternate to blast fumace finex process of iron making.	Dr. B. Kumar
28	101/14	Mr. Chandan Kumar	Inlibitr effects on prevention of pipeline steel corrosion	Dr. D. Das



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Sl. No.	Roll No	Name of the Student's	Project Title	Name of Guide
29	102/14	Mr. Rajeev Shankar	Aluminium killed DQ steel	Dr. D. Roy
30	103/14	Mr. Vikky Kumar	Corrosion fundamentals and minimization ( steel )	Dr. Renu Kumari
31	104/14	Mr. Abhishek Kumar	Study of LD slag processing and its utilisation in iron making	Dr. B. Kumar
32	106/14	Mr. Dilshad Hassan	deformation induced transformation of austenite	Dr. P.P. Chattopadhyay
33	107/14	Mr. Faiz Ali	Microstructure Property correlation in medium Mn-Steel	Dr. P.P. Chattopadhyay
34	108/14	Mr. Munesh Rathor	Development in production of alloy grey cast iron	Dr. K. K. Singh
35	109/14	Mr. Raj Kumar Yadav	Cathodic protection of underground pipe	Dr. R. K. Gupta
36	110/14	Ms. Alisha Kumari	High temperature oxidation behaviour of Ni - based superalloys.	Dr. B. Kumar
37	111/14	Mr. Nagur Hari Krishna	Bio medical application of mg - alloy	Dr. G. Das
38	113/14	Mr. Sunil Bhagtani	Development of CRGO steels	Dr. D. Roy
39	114/14	Mr. Akshay Kumar	Slags properties and its utilization	Dr. R. K. Gupta
40	115/14	Mr. Aman Kumar Jha	Automotive components from cast iron - melting practice & defects ( Specifications & Applications)	Dr. Nandita Gupta
41	116/14	Mr. Vaibhav Mishra	Development of carbide free nanostructured baentic steel and its future applications	Dr. D. Roy
42	117/14	Mr. Rohit Tiwari	Study of defects in piston rings	Dr. Renu Kumari
43	118/14	Mr. Shrikant Kumar	Extraction of aluminium	Dr. Renu Kumari
44	119/14	Mr. Ayan Mandal	Study of Microstructure evolution & Properties in SAE 52100 Steel	Dr. P.P. Chattopadhyay
45	120/14	Mr. Rahul Kumar	Steel melting in electric are furnace	Dr. Renu Kumari
46	121/14	Ms. Sonalika Ahirwar	Analysis of various defect by using magnetic particle testing	Dr. D. Roy
47	122/14	Mr. Shashi Bhusham Rajak	Desulphurisation of liquid steel in low carbon grade	Dr. B. Mallik
48	123/14	Mr. Challa Harsha Vardhan	Study the effect of heat treatment in cast steel	Dr. A. K. Pramanick
49	125/14	Mr. Srirama Kiran	Recent advancement in x - ray diffraction method	Dr. B. Mallik
50	126/14	Mr. Ritesh Kr. Ranjan	Steel making through electric arc furnace	Dr. Renu Kumari
51	127/15	Mr. Sushil Kr. Ram	Eddy current brake	Dr. B. Mallik
52	128/14	Ms. Deola Soren	Analysis of various defect by using ultrasonic technique	Dr. B. Mallik
53	129/14	Mr. Keloth Naresh	Induction - beam hardening	Dr. P. Talukdar
54	130/14	Mr. Umit Kumar	Die making process	Dr. N. K. Singh
55	131/14	Mr. J. Abhilash Nayak	Corex process	Dr. K. K. Singh
56	132/14	Mr. Nitesh Kumar Sah	Composite materials for aerospace application	Dr. B. Mallik
57	75/13	Mr. Pawar Laxman	Casting defect analysis by using ultrasonic technique	Dr. B. Mallik
58	95/12	Mr. Ritesh Ranjan	Manufacturing and application of compacted grey iron ( CGI)	Dr. Amitesh Kumar
59	128/12	Mr. P. Venkata Ramana	Mg - alloy light material used for body implantation	Dr. D. Das

## 44<sup>th</sup> ADC FOUNDRY TECHNOLOGY LIST OF PROJECT AND SEMINAR



Sl. No.	Roll No.	Students Name	Title of the project	Title of Seminar	Guide Name
1	44101	Ms. Khushboo	Production and properties evaluation of grey cast iron	Study on type and application of malleable cast iron	Dr. A.K. Singh
2	44102	Mr. Subhankar Dhar	Effect of variation of Cu in Al on microstructure & mechanical properties	Morphology of Gray Cast Iron	Dr. Amitesh Kumar
3	44103	Mr. Aditya Kr. Singh	Effect of inoculant on structure & properties of gray cast iron	Reclamation of sand	Dr. Amitesh Kumar
4	44104	Mr. Abhishek Kr.	Study on variation of manganese percentage on structure & properties of gray cast iron	Advancement in Austempered ductile iron	Dr. Amitesh Kumar Pandey
5	44105	Mr. Biswajit Roy	Effect of core material diameter and surrounding thickness on metal solidification	The effect of component of slag on quality of steel particularly phosphorous concentration	Dr. Nandita Gupta
6	44106	Mr. Prince Kr. Dubey	Study on variation of manganese percentage on structure & properties of gray cast iron	Application of stainless steel in surgical instruments	Dr. Amitesh Kumar
7	44107	Mr. Sandip Gope	The effect of mechanical mould vibration on the characteristics of Al-si casting alloys	Computer added differential thermal analysis of spheroidal ad compacted graphete C.I.	Dr. Nandita Gupta
8	44108	Mr. Devendra Kumar	Study on variation of manganese percentage on structure & properties of gray cast iron	Manufacturing technique and application of compacted graphite iron	Dr. Amitesh Kumar
9	44109	Mr. Bapi Garai	Effect of copper variation of structure and properties of gray cast iron	Counter grasing casting process & its application	Dr. Amitesh Kumar
10	44110	Mr. Anirban Ghosh	Study of microstructure & properties of high chromium cast iron	Manufacturing & application of headfield steel	Dr. Amitesh Kumar
11	44111	Mr. Raushan Kumar	Effect of copper addition on structure and properties of aluminium alloy die cast.	Al alloys & their application	Dr. A.K. Singh
12	44112	Mr. Satyaranjan Pattanayak	Study of microstructure & properties of high chromium cast iron	Rheo Casting	Dr. Amitesh Kumar
13	44113	Mr. Ritesh Chakraborty	Effect of core material diameter and surrounding thickness on metal solidification	Enhancement of mechanical & metallurgical quality of nano composite Al casting	Dr. Nandita Gupta

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Sl. No.	Roll No.	Students Name	Title of the project	Title of Seminar	Guide Name
14	44114	Mr. Shivam Pandey	Effect of inoculant on structure & properties of gray cast iron	Comparison study of investment casting & evaporative pattern casting	Dr. Amitesh Kumar
15	44115	Mr. Tarun Hazra	Effect of variation of Cu in Al on microstructure & mechanical properties	Twin roll strip casting	Dr. Amitesh Kumar
16	44116	Mr. Asit Pal	Effect of copper variation of structure and properties of gray cast iron	Application of Rapid prototyping	Dr. Amitesh Kumar
17	44117	Mr. Shibu Dey	Effect of copper variation of structure and properties of gray cast iron	Metal injection mulding	Dr. Amitesh Kumar
18	44118	Mr. Sourabh Kumar Mahto	Effect of copper addition on structure and propertigs of aluminium alloy die cast.	Automotive N.F. Components	Dr. A.K. Singh
19	44119	Mr. Sagar Hela	The effect of mechanical mould vibration on the characterisics of Al-si casting alloys	The effect of casting design on melt entry velocity	Dr. Nandita Gupta
20	44120	Mr. Sanjay Pal	Effect of variation of Cu in Al on microstructure & mechanical properties	Spray forming	Dr. Amitesh Kumar
21	44121	Mr. Dibyendu Das	Study of microstructure and property of high ci cast iron	Sabety measures in foundry industry	Dr. Amitesh Kumar
22	44122	Mr. Pranov Kr. Roy	Effect of inoculant on structure & properties of gray cast iron	Manufacturing & application of Bainitic steel	Dr. Amitesh Kumar
23	44123	Mr. Atanu Nandi	Effect of ph (Acid demand value) of green sand on quality of casting with gating design	Non ferrous casting-meet control and effect on quality of casting (Al, Cu, Mg)	Dr. Nandita Gupta
24	44124	Mr. Sukumar Giri	Production and Characterisation on S.G. Iron	Study on steel casting A computer added	Dr. A.K. Singh Dr. Nandita Gupta
25	44125	Mr. Rabindra Nath Majee	The effect of mechanical mould vibration on the characterisics of Al-si casting alloys	system for melt quality evaluation based on solidification process of ductile iron	
26	44126	Ms. Rina Paul	Production and Characterisation on S.G. Iron	Study on Gray Iron casting	Dr. A.K. Singh
27	44127	Mr. Ravi Kumar	Effect of innoculation in gray iron casting	Study on maleable iron	Dr. A.K. Singh
28	44128	Mr. Rishav Kr. Jha	Production and properties evaluation of grey cast iron	Study on type and application on iron casting	Dr. A.K. Singh
29	44129	Mr. Anup Kumar	Production and properties evaluation of grey cast iron	Study on type and application of S.G. cast iron	Dr. A.K. Singh
30	44130	Mr. Souvick Munian	Production and Charecterisation S.G. Iron	Study on ferrous casting	Dr. A.K. Singh



Sl. No.	Roll No.	Students Name	Title of the project	Title of Seminar	Guide Name
31	44131	Mr. Veer Pratap Chauhan	Effect of inoculation in gray iron casting	Study on S.G. Iron	Dr. A.K. Singh
32	44132	Mr. Bijay Mahato	Production and properties evaluation alloyed steel casting	Study of micro alloyed steel	Dr. A.K. Singh
33	44133	Mr. Basudew Mahato	Effect of copper addition on structure and properties of aluminium alloy die cast.	Common Engg. Alloys	Dr. A.K. Singh
34	44134	Mr. Kamlesh Kumar Mahto	Effect of Cu addition on structure properties of Al-Si alloy	Mg-alloy melting and casting practice	Dr. K.K. Singh
35	44135	Mr. Ravi Kumar	Effect of Mg addition on structure properties of Al-Si alloy	Al-alloy wheel in automobile (Recent development)	Dr. K.K. Singh
36	44136	Mr. Rohan Kumar	Production and properties evaluation of grey cast iron	Study on types and application of white cast iron	Dr. A.K. Singh
37	44137	Mr. Suraj Mondal	Production and properties evaluation alloyed steel casting	Study on HSLA steel	Dr. A.K. Singh
38	44138	Mr. Abhiram Mahto	Effect of Cu addition on structure properties of Al-Si alloy	Zn- alloy melting and casting practice	Dr. K.K. Singh
39	44139	Mr. Ganes Ray	Effect of inoculation in gray iron casting	Study of ductile iron	Dr. A.K. Singh
40	44140	Mr. Ramesh Pashi	Effect of pH (Acid demand value) of green sand on quality of casting with gating design	Effect of gating design & methoding on good quality casting	Dr. Nandita Gupta
41	44141	Mr. Kajal Mondal	Effect of Mg addition on structure properties of Al-Si alloy	Ti-alloy for aero-space application	Dr. K.K. Singh
42	44142	Mr. Samrat Sarkar	Effect of pH (Acid demand value) of green sand on quality of casting with gating design	Vacuum molding a study in comparison to conventional moulding	Dr. Nandita Gupta
43	44143	Mr. Vijay Jerai	Effect of Cu addition on structure properties of Al-Si alloy	Austempered ductile iron : future materials	Dr. K.K. Singh
45	44145	Mr. Shankar Murmu	Effect of Mg addition on structure properties of Al-Si alloy	Cu-alloy melting and casting practice	Dr. K.K. Singh
46	44146	Mr. Vibhaw Toppo	Effect of Cu addition on structure properties of Al-Si alloy	Al alloy melting and casting practice	Dr. K.K. Singh



## 44th ADC FORGE TECHNOLOGY LIST OF PROJECT AND SEMINAR

Sl. No.	Roll No.	Students Name	Title of the project	Title of Seminar	Guide Name
1	44201	Mr. Niaj Ahmed	Effect of change in forging process on the mechanical properties of material	Forging defects and its remedies	Mr. Vineet Chak
2	44202	Mr. Rupesh Ranjan			
3	44203	Ms. Puja Kumari	Controlling the dropout of billet	Isothermal Forgings	Dr. N.K. Singh
4	44204	Mr. Surajit Roy	Study the forgeability behaviour of medium carbon steel	Forging lubricants	Dr. R.K. Ohdar
5	44205	Mr. SK Maidul Hossain	Study the forgeability behaviour of medium carbon steel	Isothermal forging process an overview	Dr. R.K. Ohdar
6	44206	Mr. Shubham Kumar	Heat Treatment of En24 steek followed by forging	Forging of aluminium alloys	Dr. P. Talukdar
7	44207	Mr. Vikash Kumar	Heat Treatment of En24 steek followed by forging	Forging defects and its remedies	Dr. P. Talukdar
8	44208	Mr. Ashish Kumar	Control Plan & rejection control of crown wheel	Defect & remedies in crown wheel	Dr. N.K. Singh
9	44209	Mr. Suraj Kumar	Effect of change in forging process on the mechanical properties of material	Automation in forging Industries	Mr. Vineet Chak
10	44210	Mr. Prabin Kr. Sahu	Heat Treatment of En8 Steel followed by forging deformation	Forging through reduce roller	Dr. P. Talukdar
11	44211	Mr. Ashish Kr. Gupta	Control Plan & rejection control of crown wheel	Weight estimation of crown wheel	Dr. N.K. Singh
12	44212	Mr. Tasnim Ansari	Heat Treatment of En8 Steel followed by forging deformation	Heat Treatment of forging dies	Dr. P. Talukdar
13	44213	Mr. Shahbaj Alam	Heat Treatment of En8 Steel followed by forging deformation	Laser Hardening	Dr. P. Talukdar
14	44214	Mr. Ram Prasad Mahato	Forgeability test of carbon steel	Press forging v/s Hammer forging	Mr. Vineet Chak
15	44215	Mr. Kunal Kumar	Effect of change in forging process on the mechanical properties of material	Lubricants for forging	Mr. Vineet Chak
16	44216	Mr. Parmanjan Kr. Chauhan	Control Plan & rejection control of crown wheel	Inspection and quality control in crown wheel	Dr. N.K. Singh
17	44217	Mr. Chandan Kumar	Forging behaviour of aliminium alloy	Die material selection	Dr. R.K. Ohdar
18	44218	Mr. Sudhansu Ahir	A study of forging behaviour of EN8 steel	Forging of Copper alloys	Dr. P. Talukdar



Sl. No.	Roll No.	Students Name	Title of the project	Title of Seminar	Guide Name
19	44219	Mr. Amit Kr. Mehra	Forging behaviour of aluminium alloy	Powder forging overview	Dr. R.K. Ohdar
20	44220	Mr. Bipin Kumar	Forging behaviour of Al-alloy	Liquid forging Process.	Dr. R.K. Ohdar
21	44221	Mr. Pintu Choudhury	Effect of strain rate and forging temperature on mechanical properties of medium carbon steel	Recent development in ingot for open die forging	Dr. Manoj Kumar
22	44222	Mr. Milon Mondal	A study of forging behaviour of en8 steel	Forging of crank shaft	Dr. P. Talukdar
23	44223	Mr. Abhishek Mehrotra	Warm forgibility of medium carbon steel.	Recent trends in billet heating for forging	Dr. Manoj Kumar
25	44225	Mr. Abhimanyu Kumar Singh	Controlling the dropout of billet	Recent development in closed die forging	Dr. N.K. Singh
26	44226	Mr. Triparno Nag	Effect of strain rate and forging temperature on mechanical properties of medium carbon steel	Cross wedge rolling	Dr. Manoj Kumar
27	44227	Mr. Sudip Pal	Heat Treatment of En8 Steel followed by forging deformation	Carbo nitriding	Dr. P. Talukdar
28	44228	Mr. Amit Singh	Warm forgibility of medium carbon steel	Precision forging of automotive components	Dr. Manoj Kumar
29	44229	Mr. Bablu Maji	A study of forging behaviour of en8 steel	Powder forging	Dr. P. Talukdar
30	44230	Mr. Pallab Maiti	Study the forgeability behaviour of medium carbon steel	Flashless forging process and overview	Dr. R.K. Ohdar
31	44231	Mr. Satish Kumar	Controlling the dropout of billet	Automation in forging Industries	Dr. N.K. Singh
32	44232	Mr. Srikanta Sarkar	Effect of strain rate and forging temperature on mechanical properties of medium carbon steel	Induction billet heating for forging	Dr. Manoj Kumar
33	44233	Mr. Sachin Kumar	Heat treatment of en24 followed by forging	Roll forging	Dr. P. Talukdar
34	44234	Mr. Vivekanand Kr.	A study of forging behaviour of en24 steel	Flashless forging	Dr. P. Talukdar
35	44235	Mr. Manoranjan Kumar Mahto	A study of forging behaviour of en24 steel	Forging lubricants	Dr. P. Talukdar
36	44236	Mr. Rampravesh Kr.	Warm forgibility of medium carbon steel	Warm forging of automotive components	Dr. Manoj Kumar
37	44237	Mr. Rajnish Kumar	A study of forging behaviour of en24 steel	Assembly of forging equipment	Dr. P. Talukdar
38	44238	Mr. Rahul Kachhap	Forge ability test of carbon steel	Selection criteria for forging equipments	Mr. Vineet Chak



## GENERAL ADMINISTRATION



### RETIREMENT

Sl. No.	Name	Designation	Date of Retirement
1.	Mr. Baha Oraon	Mazdoor	31.05.2017
2.	Mr. T.N. Parthasarathy	Stenographer	31.07.2017
3.	Mr. Vinod Kumar	Stenographer	30.11.2017
4.	Mr. Pushkar Chattopadhyay	Sr. Technical Assistant	31.01.2018

### RESIGNATION

1.	Mr. Rajneesh Mishra	Asst. Registrar	18/01/2018
2.	Mr. S. S. Akhtar	Dy. Registrar	18/03/2018

### STAFF STRENGTH AS ON 31.03.2018

Director	01
Professor	13
Associate Professor	09
Assistant Professor	17
Sr. Medical Officer	01
Librarian Sr.	01
Assistant Registrar	02
Assistant Superintendent Workshop	01
Hindi Officer	01
Sr. Technical Assistant	03
Assistant	04
Upper Division Clerk	04
LDC/Typist	01
Technician Gr. "A"	01
Technician Gr. "B"	05
Driver	01
Peon	04
Mali	01
Laboratory Attendant	05
Sweeper	01
Cook	02
<b>Total :</b>	<b>79</b>

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# LIBRARY AND DOCUMENTATION CENTRE

## Existing Facilities:

The Library and Documentation Centre of NIFFT rendering valuable services to the Institute and Users it has 51310 reading materials (Books, Journals, Standards, Transparencies, Slides, Video Cassettes and Microfilms etc.)

The Library is kept open from 09:00 AM to 10:00 PM on all Monday to Saturday & Sunday 09:00 A.M to 05:30 P.M. The Centre provides Reading Facilities, Borrowing Facilities, References Services, Reprography Services, Inter Library Loan Binding and Audio - Visual Facilities to its users. The Library has the following users viz, faculties, students and staff of the Institute and provides sitting space to about 100 people at a time.

## New Services:

1. Library is providing online access to e-resources through Elsevier B.V

- (i) **Science Direct Two Subjects :-**

- # Engineering

- # Material Science

2. Centre Subscribed 65 nos. Print Journals

3. **New Addition :-** The centre added 430 Books during the period

4. **Service Towards Refresher Course**

Documentation bulletin were provided on following topics for Refresher Course.

- (i) Technology of heat treatment

- (ii) Cupola Melting

- (iii) Technology of Gray & SG Iron Casting

5. Renovation work of library building has been completed.



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## NIFFT HOSTEL

Residential facilities are provided to students in four boys' hostels and one girls' hostel. The detail about each hostel is provided below.

1. Nirala Chatrawas
2. Homi J Bhaba Chatrawas
3. M. Visveshwaraya Chatrawas
4. Jagdish Chandra Bose Chatrawas
5. Kalpana Chawla Chatrawas

Name Room	Hostel's Warden	Type of Hostel	Accommodation Types of
Nirala Chatrawas	Dr. Debdas Roy	Boys	150 Double/triple
H.J.B. Chatrawas	Mr. Vineet Chak	Boys	300 Double
M.V. Chatrawas	Dr. Ratnakar Das Pramanick	Boys	176 Single
J.C. Bose Chatrawas	Mr. Ajit Kumar	Boys	240 Single
Kalpana Chawla Single/double/triple Chatrawas	Dr. Partha Sarathi Mondal	Girls	100





## INDUSTRIAL LIAISON CELL

### Committee Members

FACULTY MEMBERS	
<b>Dr. Kamlesh Kumar Singh</b> Professor Dept. of Foundry Technology	Chairman
<b>Dr. Mohamed Shafiullah Hussain V</b> Assistant Professor Dept. of Manufacturing Engineering	Member
<b>Dr. Subhankar Basu</b> Assistant Professor Dept. of Applied Science and Humanities Secretary	Member
<b>Dr. Chinmoy Chattopadhyay</b> Assistant Professor Dept. of Materials and Metallurgy	Member
<b>Mr. Vineet Chak</b> Assistant Professor Dept. of Forge Technology	Member

STUDENT COORDINATOR	
Sumit Mishra	B. Tech. (MME)
Faizul Haque	B. Tech. (ME)
Ashish Gupta	ADC.
Braj Kishor	M.Tech

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## Placement Report



### Average and Maximum Salary for ADC , B.Tech and M.Tech Students

course (Branch)	Average Salary (Pa)	Maximum Salary(Pa)
ADC (Foundry Technology )	Rs 2.5Lakhs	Rs 3.36 Lakhs
ADC (Forge Technology )	Rs 2.5 Lakhs	Rs 3.36 Lakhs
B.Tech (Material & Metallurgical Engg.)	Rs 4.75 Lakhs	Rs 7.95 Lakhs
B.Tech (Manufacturing Engineering)	Rs 4.75 Lakhs	Rs 12 Lakhs
M.TechRs. 4.5 Lakhs	Rs 6 Lakhs	

### Placement status of Students(passed out in 2018)

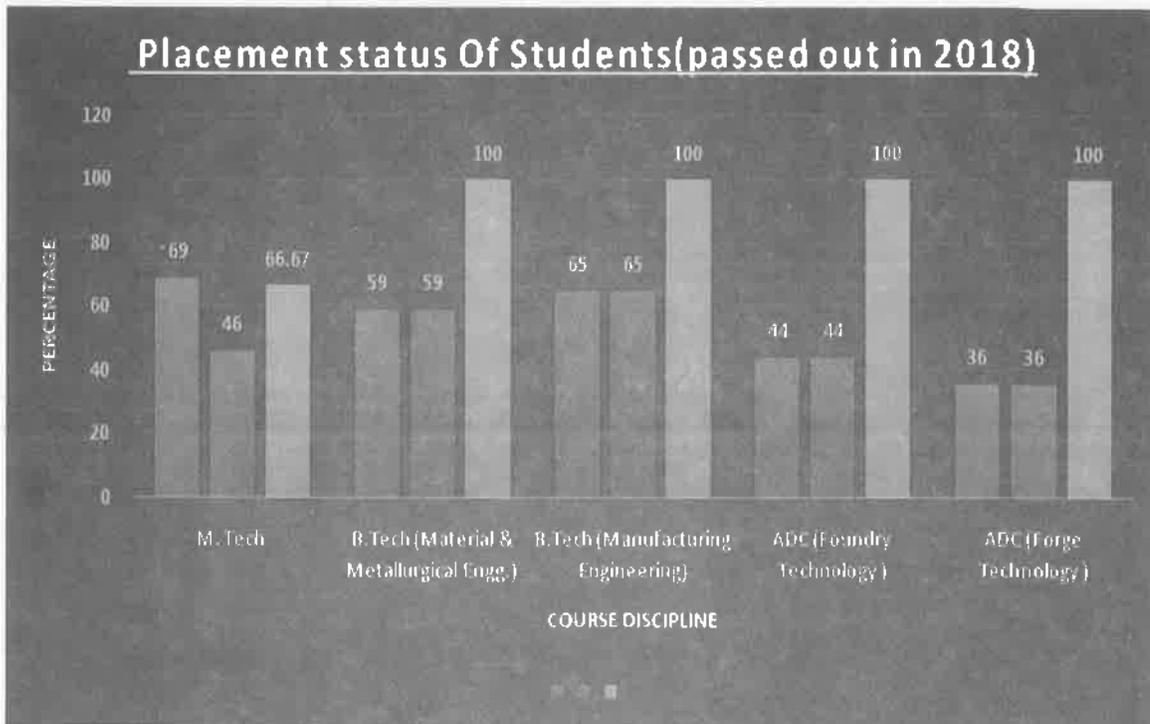
Course (Branch)	Total strength	No of Selected Students	% of selected Students
ADC (Foundry Technology )	44	44	100
ADC (Forge Technology )	36	36	100
B.Tech (Material & Metallurgical Engg.)	59	59	100
B.Tech (Manufacturing Engineering)	65	65	100
M. Tech	69	43	66.67
	<b>273</b>	<b>246</b>	

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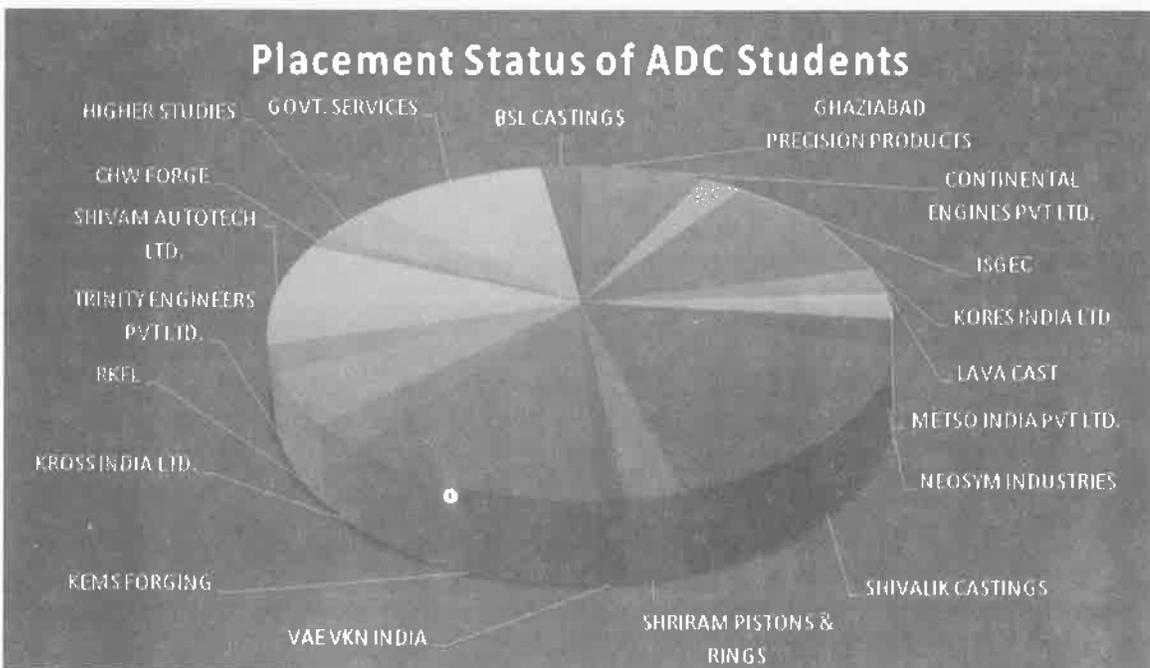
## BRANCH WISE REPORT

### Placement status Of Students(passed out in 2018)



### ADC (2018 PASS OUT BATCH)

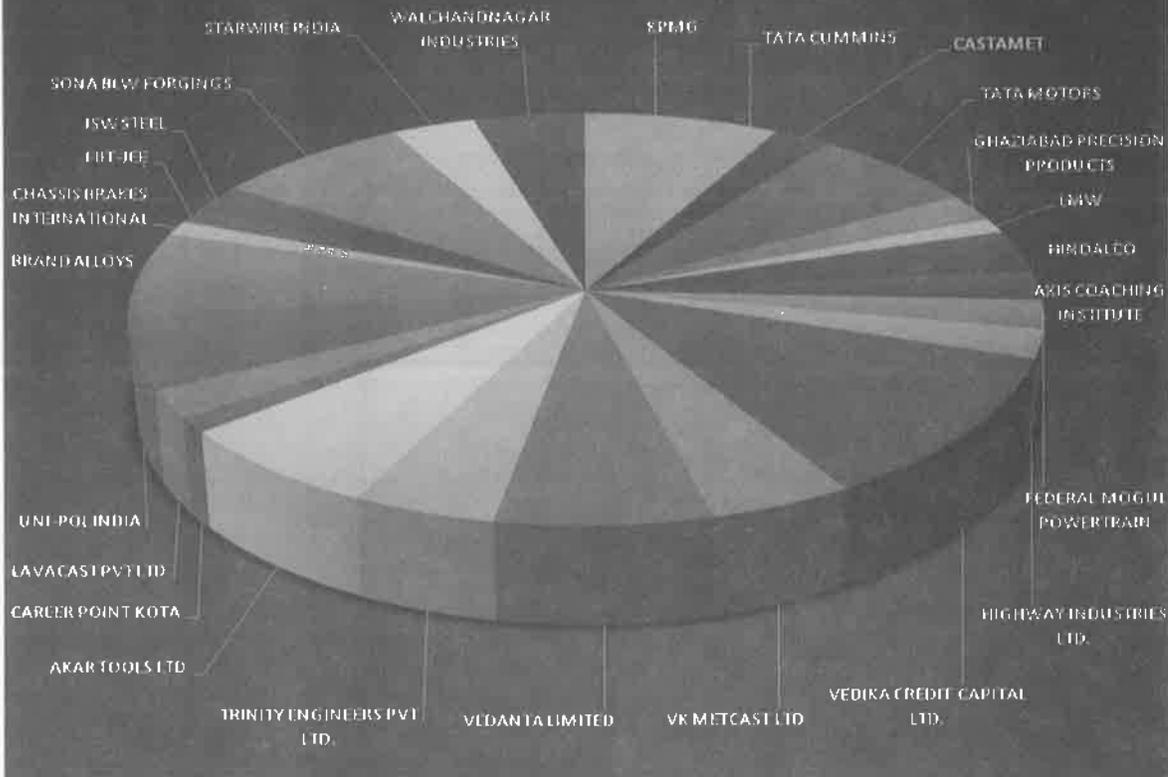
#### Placement Status of ADC Students



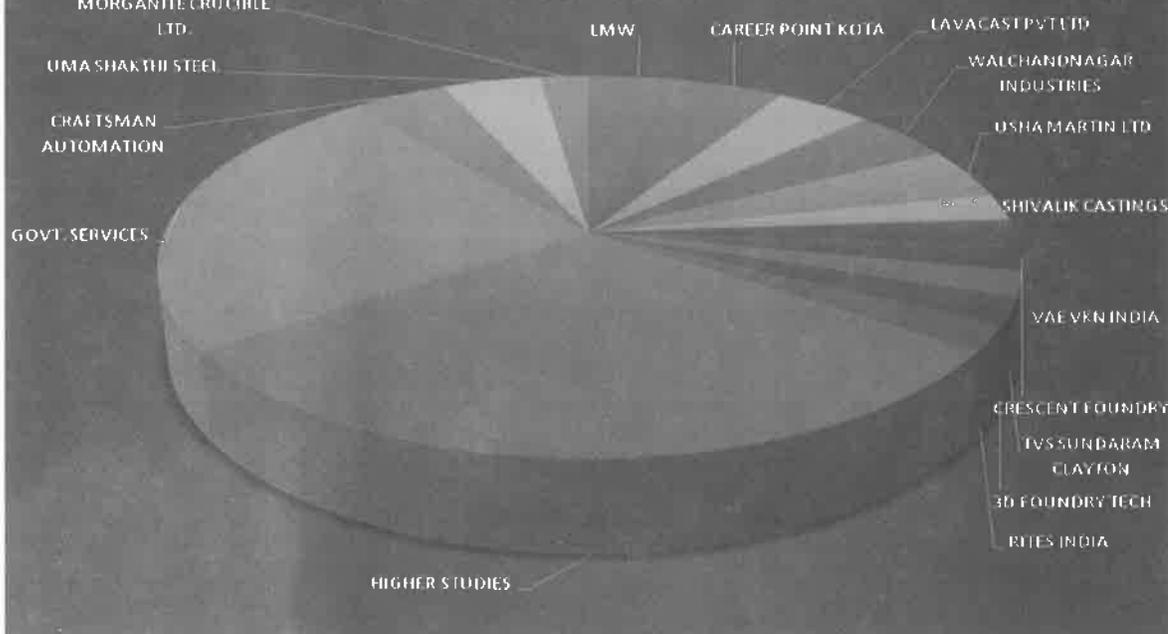
## B. TECH. (2018 PASS OUT BATCH)



### Placement status of B.Tech Student



### Placement Status of M. Tech



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## PLACEMENT 2017-18

Sl. No.	COMPANY	B.TECH		ADVANCED DIPLOMA		M.TECH.			
		HIGHEST PAY - 12.0 LPA		HIGHEST PAY - 3.36 LPA		HIGHEST PAY - 6.0 LPA			
		AVERAGE PAY - 4.75 LPA		AVERAGE PAY - 2.5 LPA		AVERAGE PAY - 4.5 LPA			
		ME (65)	MME (59)	FOUNDRY (44)	FORGE (36)	FFT (21)	ME (20)	EE (13)	MME (15)
1	KPMG	5	1	-	-	-	-	-	-
2	TATA CUMMINS	2	-	-	-	-	-	-	-
3	CASTAMET	-	2	-	-	-	-	-	-
4	TATA MOTORS	3	3	-	-	-	-	-	-
5	GHAZIABAD PRECISION PRODUCTS	2	-	2	-	-	-	-	-
6	LMW	1	-	-	-	2	-	-	-
7	HINDALCO	-	3	-	-	-	-	-	-
8	AXIS COACHING INSTITUTE	1	1	-	-	-	-	-	-
9	FEDERAL MOGUL POWERTRAIN	-	2	-	-	-	-	-	-
10	HIGHWAY INDUSTRIES LTD.	2	-	-	-	-	-	-	-
11	VEDIKA CREDIT CAPITAL LTD.	8	2	-	-	-	-	-	-
12	VK METCAST LTD	3	1	-	-	-	-	-	-
13	VEDANTA LIMITED	2	4	-	-	-	-	-	-
14	TRINITY ENGINEERS PVT. LTD.	3	1	-	-	-	-	-	-
15	AKAR TOOLS LTD	3	3	-	-	-	-	-	-
16	CAREER POINT KOTA	-	1	-	-	-	2	-	-
17	LAVACAST PVT LTD	2	-	-	-	1	1	-	-
18	UNI-POL INDIA	3	2	-	-	-	-	-	-
19	BRAND ALLOYS	2	4	-	-	-	-	-	-
20	CHASSIS BRAKES INTERNATIONAL	1	-	-	-	-	-	-	-
21	FIIT-JEE	1	-	-	-	-	-	-	-
22	ISW STEEL	-	2	-	-	-	-	-	-
23	SONA BLW FORGINGS	3	4	-	-	-	-	-	-
24	STARWIRE INDIA	-	3	-	-	-	-	-	-
25	WALCHANDNAGAR INDUSTRIES	1	3	-	-	2	-	-	-
26	USHA MARTIN LTD.	-	1	-	-	1	-	-	1
27	CONTINENTAL ENGINES PVT. LTD.	-	-	3	-	-	-	-	-
28	ISGEC	-	-	2	-	-	-	-	-
29	KORES INDIA LTD.	-	-	9	-	-	-	-	-
30	LAVA CAST	-	-	2	-	-	-	-	-
31	METSO INDIA PVT LTD.	-	-	2	-	-	-	-	-
32	NEOSYM INDUSTRIES	-	-	2	-	-	-	-	-
33	SHIVALIK CASTINGS	-	-	13	-	1	-	-	-
34	SHRIRAM PISTONS & RINGS	-	-	2	-	-	-	-	-
35	VAE VKN INDIA	-	-	1	-	-	1	-	-
36	KEMS FORGING	-	-	-	9	-	-	-	-
37	KROSS INDIA LTD.	-	-	-	2	-	-	-	-
38	RKFL	-	-	-	4	-	-	-	-
39	TRINITY ENGINEERS PVT LTD.	-	-	-	2	-	-	-	-
40	SHIVAM AUTOTECH LTD.	1	-	-	8	-	-	-	-
41	CHW FORGE	-	-	-	2	-	-	-	-
42	CRESCENT FOUNDRY	-	-	-	-	1	-	-	-
43	TVS SUNDARAM CLAYTON	-	-	-	-	1	-	-	-
44	3D FOUNDRY TECH	-	-	-	-	1	-	-	-

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Sl. No.	COMPANY	B.TECH		ADVANCED DIPLOMA		M.TECH.			
		AVERAGE PAY - 4.75 LPA		AVERAGE PAY - 2.5 LPA		AVERAGE PAY - 4.5 LPA			
		ME (65)	MME (59)	FOUNDRY (44)	FORGE (36)	FFT (21)	ME (20)	EE (13)	MME (15)
45	BITES INDIA	-	-	-	-	-	-	1	
46	HIGHER STUDIES	12	10	-	3	5	2	3	
47	GOVT. SERVICES	-	-	4	5	1	5	2	
48	MAHLE INTERNATIONAL	-	-	-	-	-	-	-	
49	KNORR BREMSE	-	-	-	-	-	-	-	-
50	MORGAN ADVANCED MATERIALS	1	-	-	-	-	-	-	-
51	CRAFTSMAN AUTOMATION	-	1	-	-	2	-	-	-
52	MULTITECH AUTO LTD.	-	1	-	-	-	-	-	-
53	UMA SHAKTHI STEEL	1	-	-	-	2	-	-	-
54	MORGANITE CRUCIBLE LTD.	-	-	-	-	1	-	-	-
55	HI-TECH GEARS	2	4	-	-	-	-	-	-
56	BSL CASTINGS	-	-	2	-	-	-	-	-
	STUDENT'S PLACED	65/65	59/59	44/44	36/36	21/21	11/20	06/13	08/15
	PLACEMENT PERCENTAGE	100%	100%	100%	100%	100%	55%	46%	54%

### COMPANIES VISITED (2017-2018)

Kpmg	Tata Motors	Jsw Steel
Tata Cummins	Hindalco	Vedanta Limited
Castamet	Federal Mogul Powertrain	Shriram Pistons & Rings
Metso India Pvt Ltd.	Highway Industries Ltd.	Mahle International
Ghaziabad Precision Products	Vedika Credit Capital Ltd.	Knorr Bremse
Lmw	Vk Metcast Ltd	Morgan Advanced Materials
Rkfl	Lavacast Pvt Ltd	Craftsman Automation
Trinity Engineers Pvt Ltd.	Uni-pol India	Multitech Auto Ltd.
Shivam Autotech Ltd.	Brand Alloys	Uma Shakthi Steel
Chw Forge	Chassis Brakes International	Morganite Crucible Ltd.
Crescent Foundry	Neosym Industries	Hi-tech Gears
Tvs Sundaram Clayton	Shivalik Castings	Kems Forging
3d Foundry Tech	Vae Vkn India	Kross India Ltd.
Rites India	Akar Tools Ltd	Continental Engines Pvt Ltd.
Fiit-jee	Sona Blw Forgings	Isgec
Career Point Kota	Starwire India	Kores India Ltd
Axis Coaching Institute	Walchandnagar Industries	Lava Cast
Trinity Engineers Pvt Ltd.	Usha Martin Ltd	



## TRAINING REPORT

Courses	Training duration
ADC	( 45 + 45 ) Days
B. Tech.	30 Days
M. Tech.	30 Days

TRAINING 2017-18									
Sl. No.	COMPANY	B.TECH		ADVANCED DIPLOMA		M.TECH.			
		AVERAGE PAY - 4.75 LPA		AVERAGE PAY - 2.5 LPA		AVERAGE PAY - 4.5 LPA			
		ME (65)	MME (59)	FOUNDRY (44)	FORGE (36)	FFT (21)	ME (20)	EE (13)	MME (15)
1	TATA MOTORS	29		44		2	5		
2	TATA STEEL	1	33						
3	BHEL	8	7	44	36				
4	MIDHANI		6						
5	HEC	15	7			16	13		6
6	USHA MARTIN					1			
7	SAIL					1			7
8	ENDURANCE TECH					1			
9	NTPC						1		
10	BHILAI STEEL PLANT						1		
11	RKFL				36				
12	TATA METALIKS	2							
13	TATA HITACHI	2							
14	TML DRIVEUNES	1							
15	MARUTI SUZUKI	1							
16	FEDERAL MOGUL	2	1						
17	FORD MOTORS	1							
18	BOKARO STEEL	1							

TRAINING 2017-18									
Sl. No.	COMPANY	B.TECH		ADVANCED DIPLOMA		M.TECH.			
		AVERAGE PAY - 4.75 LPA		AVERAGE PAY - 2.5 LPA		AVERAGE PAY - 4.5 LPA			
		ME (65)	MME (59)	FOUNDRY (44)	FORGE (36)	FFT (21)	ME (20)	EE (13)	MME (15)
19	ERNST & YOUNG	1							
20	HYDRECO HYDRAULICS	1							
21	ASHOK LEYLAND		2						
22	ISWP		2						
23	NML		1						2
24	IISCO BURNPUR								
25	JHARKHAND STATE POLLUTION CONTROL BOARD						13		

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# NIFFT STUDENTS' GYMKHANA

NATIONAL INSTITUTE OF FOUNDRY AND FORGE TECHNOLOGY, RANCHI

Following were the events that took place in the session 2017-18 by NIFFT Students' Gymkhana :-

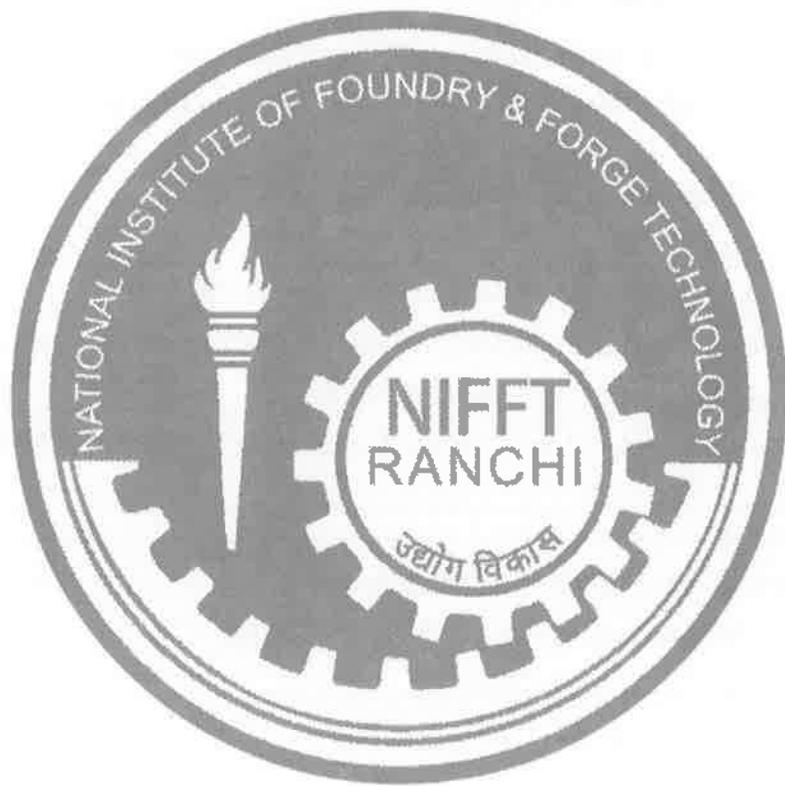
1. Swachhta Pakhwada (1st September 2017 to 15th September 2017)
2. Hindi Diwas (14th September 2017)
3. Vigilance Awareness Week (30th October 2017 to 4th November 2017)
4. Rashtriya Ekta Diwas (31st October 2017)
5. UMEED (25th November 2017 to 26th November 2017)
6. Constitution Day (26th November 2017)
7. Inter and Intra hostel Tournaments (4th January 2018 to 26th January 2018)
8. Workshop on Robotics and Embedded Systems (27th January 2018 to 28th January 2018)
9. JINKS Pranav 2k18 (24th February 2018 to 26th February 2018)
10. Exhibition on Mini Industry (24th February 2018)
11. Blood Donation Camp (24th February 2018 to 25th February 2018)
12. Awareness Programme on Female Foeticide (27th January 2018 to 16th February 2018)
13. NIFFT Primer League (5th April 2018 to 14th April 2018)
14. 12th Pranav Priyadarshi Memorial Intra Sports Tournament (21st April 2018 to 29th April 2018)
15. Chitrika (19th May 2018)
16. Sadbhavna Tournament (22nd July 2018 to 28th July 2018)
17. Independence Day Celebration at Kartavya (15th August 2018)
18. World Photography Day (19th August 2018)
19. Orientation Programme for Freshers (23rd August 2018)
20. Hindi Diwas (14th September 2018)

Following are the achievements of NIFFT Students' Gymkhana in 2017-18:-

1. Runner Up in Vajra, Chetan Devraj Memorial Inter Sports Tournament, Birla Institute of Technology, Mesra (CRICKET).
2. Runner Up in Thirkan, JINKS Pranav 2k18 (ANAGHA- Dance & Drama Club).
3. 46th Position in Mega ATV Championship 2018, Nasik (The NIFFT Racing).
4. Runner Up in Khelotsav, Central University of Jharkhand (FOOTBALL).
5. Initiation of the Literary club of NIFFT, Wordsmith (Students' Gymkhana Core Committee).
6. Development and Inauguration of College Gym (Students' Gymkhana Core Committee).



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## HINDI CELL

Hindi Cell of the Institute is working in accordance with official language policy of Govt. of India and annual programme issued there under. The activities of Hindi Cell during the years were as follows:

- 1) Hindi workshop was organized for employees.
- 2) English-Hindi Dictionary was successfully published .
- 3) Day today translation work & other work related to O.L was performed by Hindi Cell.
- 4) The Institute has regular representation in the meetings of TOLIC
- 5) Hindi Officer contributed in the follows Committees :-
  - Printing Committee
  - Annual Report Committee
  - Committee on sexual Harrasment against women
  - Committee for selection of Gender champion
  - Acting as Asstt. Public Information officer
  - In-charge Administration.

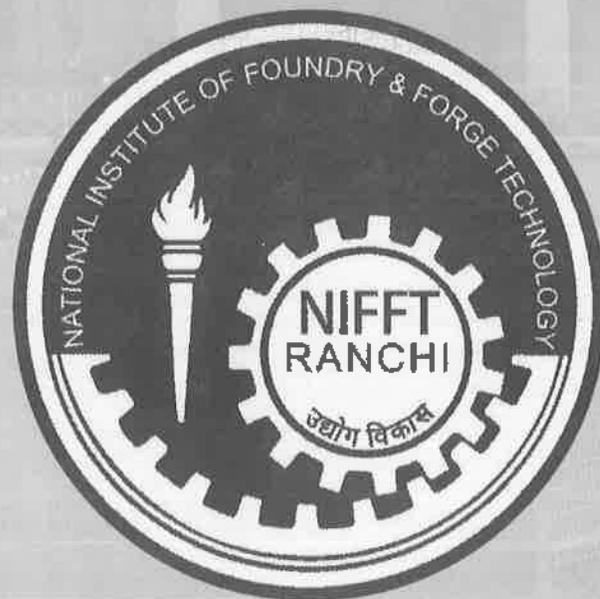


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# **NATIONAL INSTITUTE OF FOUNDRY & FORGE TECHNOLOGY**

**A Centrally Funded Technical Institute Under MHRD (Govt. of India)  
HATIA, RANCHI - 834003 (JHAKHAND), INDIA**



## **ANNUAL ACCOUNTS**

**FOR THE FINANCIAL YEAR 2017-18**



# NATIONAL INSTITUTE OF FOUNDRY AND FORGE TECHNOLOGY

A Centrally Funded Technical Institute under MHRD

(Govt. of India)

HATIA, RANCHI 834003 JHARKHAND



## ANNUAL ACCOUNTS FOR THE FINANCIAL YEAR 2017-18

(As per Revised Formats of Financial Statements for Central Higher Educational Institutions)

Audited by:  
M/s R. Shah & Co.  
(Chartered Accountants)  
Ranchi



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**NATIONAL INSTITUTE OF FOUNDRY AND FORGE TECHNOLOGY**  
**ANNUAL ACCOUNTS FOR THE FINANCIAL YEAR 2017-18**

**CONTENT**

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# NATIONAL INSTITUTE OF FOUNDRY AND FORGE TECHNOLOGY

HATIA, RANCHI-834003

BALANCE SHEET AS ON 31st MARCH, 2018

SOURCES OF FUNDS		Schedule	Current Year 2017-18	Previous Year 2016-17
CORPUS/CAPITAL FUND		1	1,02,18,11,821.67	91,12,87,931.66
CURRENT LIABILITIES		2	2,28,42,121.20	2,17,72,036.20
<b>TOTAL</b>			<b>1,04,46,53,942.87</b>	<b>93,30,59,967.86</b>
APPLICATION OF FUNDS		Schedule	Current Year 2017-18	Previous Year 2016-17
FIXED ASSETS		3		
a) Tangible Assets			14,63,24,883.31	14,54,01,495.00
b) Capital work-In-Progress			12,55,61,369.00	9,08,86,571.00
c) Intangible Assets			68,76,656.60	15,23,267.00
<b>CURRENT ASSETS</b>		4	<b>11,29,70,209.90</b>	<b>7,27,22,499.33</b>
<b>LOANS, ADVANCES &amp; DEPOSITS</b>		5	<b>65,29,20,824.06</b>	<b>62,25,26,135.53</b>
<b>TOTAL</b>			<b>1,04,46,53,942.87</b>	<b>93,30,59,967.86</b>

AS INTERNAL AUDITOR

For: M/s R. Shah & CO. (CHARTERED ACCOUNTANTS)

CA. Neetu JeJani (PARTNER)

MEMBERSHIP NO.: 406561

PLACE : RANCHI

DATE: 14/03/2018



*Neetu JeJani*  
Asset-Registrar-Accounts

13/03/2018

Consultant-Audit

Prof./c (Admin)

Director





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## SCHEDULE - 1 - CORPUS/CAPITAL FUND

Particulars	Current Year	Previous Year
<b>Balance at the beginning of the year</b>	<b>91,12,87,931.66</b>	<b>93,65,32,018.96</b>
<b>Add: Contributions towards Corpus/Capital fund</b>	-	-
<b>Add: Grants from UGC, Govt. of India, state Government to the extent utilised for capital expenditure</b>	-	-
<b>Add: Assets Purchased out of Earmarked Funds</b>	-	-
<b>Add: Assets Purchased out of Sponsored Projects, where ownership vests in the institution</b>	-	-
<b>Add: Capital Grants received from Ministry of Human Resource Development (Govt. of India)</b>	<b>10,00,00,000.00</b>	<b>3,00,00,000.00</b>
<b>Add: Assets Donated / Gifts Received</b>	-	-
<b>Add: Others Additions (Building appreciation)</b>	<b>2,51,71,416.98</b>	-
<b>Less: Others Deduction (Custom Duty paid during the FY 2016-17 for SERB Project new)</b>	<b>(1,47,453.00)</b>	-
<b>Add: Excess of Income over Expenditure transferred from the Income &amp; Expenditure Account</b>	-	-
<b>TOTAL</b>	<b>1,03,63,11,895.64</b>	<b>96,65,32,018.96</b>
<b>Deduct: Deficit transferred from Income &amp; Expenditure Account</b>	<b>(1,45,00,073.97)</b>	<b>(5,52,44,087.30)</b>
<b>Balance at the year end</b>	<b>1,02,18,11,821.67</b>	<b>91,12,87,931.66</b>



**SCHEDULE - 2 - CURRENT LIABILITIES**

CURRENT LIABILITIES		Current Year	Previous Years
<b>1</b>	<b>Deposit From Staff</b>	11,47,108.00	11,17,947.00
<b>2</b>	<b>Deposit From Student</b>		
<b>a</b>	Caution Money	65,54,003.50	78,62,803.50
<b>b</b>	Unclaimed fees	2,53,550.00	2,53,550.00
<b>3</b>	<b>Deposit-Others</b>		
<b>a</b>	Earnest Money	51,36,841.00	14,35,841.00
<b>b</b>	Security Deposit	1,74,738.30	1,74,738.30
<b>4</b>	<b>Statutory Liabilities</b>		
<b>a</b>	LIC Premium	6,698.40	6,698.40
<b>b</b>	TDS U/s 192A	1,890.00	75,490.00
<b>c</b>	TDS U/s 194C	39,870.00	18,411.00
<b>d</b>	TDS U/s 194J (dr. Balance)	(9,051.00)	741.00
<b>e</b>	GPF Deduction from Salary	60,710.00	-
<b>f</b>	Employees Loan Repayment	19,607.00	58,907.00
<b>g</b>	Professional Tax on Salary	41,488.00	40,488.00
<b>5</b>	<b>Other Current Liability</b>		
<b>a</b>	Receipt against Sponsored Projects	31,55,923.00	32,22,572.00
<b>b</b>	Receipt against Sponsored Fellowship & Scholarship	12,53,413.00	48,64,613.00
<b>c</b>	<b>Other Liabilities</b>	<b>FY 2017-18</b>	<b>FY 2016-17</b>
<b>a</b>	Account Payable/ Receivable	2,23,441.00	2,23,441.00
<b>b</b>	AICTE	1,40,000.00	1,40,000.00
<b>c</b>	Grant From CBSE Board	50,000.00	50,000.00
<b>d</b>	M/s Total Library Solution	92,784.00	92,784.00
<b>e</b>	NIFFT Alumni Association	3,42,500.00	2,47,000.00
<b>f</b>	Expenses Payable (Provision for FY)	41,56,607.00	18,67,011.00
<b>g</b>	Amount Payable to Mos(Chair Prof. Fund)	-	19,000.00
		<b>2,28,42,121.20</b>	<b>2,17,72,036.20</b>



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**SCHEDULE - 2(a) - SPONSORED PROJECTS**

Sr. No.	Name of the Project	Opening Balance		Receipts	Total	Expenditure	Closing Balance	
		Credit 3	Debit 4				Credit 8	Debit 9
1	Chair Professor-Ministry of Steel	-	-	22,99,615	22,99,615	22,99,615	-	-
2	Consultancy-Tata Steel Ltd.	3,75,000	-	4,59,500	8,34,500	5,62,500	2,72,000	-
3	Direct Admission of Students Abroad(DASA)	1,28,175	-	-	1,28,175	-	1,28,175	-
4	Project-Board of Research in Nuclear Science(BRNS)	16,39,363	-	-	16,39,363	-	16,39,363	-
5	Project-Science and Engineering Research Board(Old)	1,80,450	-	-	1,80,450	-	1,80,450	-
6	Project-Science & Engineering Research Board(New)	8,80,880	-	2,67,765	11,48,645	9,15,272	2,33,373	-
7	Technical Education Quality Improvement Programme	18,704	-	-	18,704	-	18,704	-
8	Buriapur Surgical Cluster, MSME (West Bengal)	-	-	7,50,000	7,50,000	78,842	6,71,158	-
9	Naval Dockyard Mumbai Publication	-	-	2,94,000	2,94,000	2,81,300	12,700	-
10	Petroleum conservation Research Association	-	-	90,000	90,000	90,000	-	-
	<b>Total</b>	<b>32,22,572</b>	<b>-</b>	<b>41,60,880</b>	<b>73,83,452</b>	<b>42,27,529</b>	<b>31,55,923</b>	<b>-</b>

**SCHEDULE - 2(b) - SPONSORED FELLOWSHIP AND SCHOLARSHIPS**

Sr. No.	Name of the Project	Opening Balance		Receipts	Total	Expenditure	Closing Balance	
		Credit 3	Debit 4				Credit 8	Debit 9
1	Govt. of India SC/ST Scholarship	33,93,000	-	64,52,200	98,45,200	94,35,600	4,09,600	-
2	Ministry of Steel Scholarship	-	-	12,00,000	12,00,000	12,00,000	-	-
3	Scholarship-Ministry of Tribal Affairs	-	-	7,70,000	7,70,000	7,70,000	-	-
4	Shivam Autotech Ltd. Scholarship	5,76,000	-	-	5,76,000	5,76,000	-	-
5	S N Sinha Memorial Scholarship	8,90,613	-	5,000	10,000	-	10,000	-
6	State Scholarship for Students	-	-	6,26,820	15,17,433	6,83,620	8,33,813	-
7	Supra SAE Sponsorship	-	-	50,000	50,000	50,000	-	-
	<b>Total</b>	<b>48,64,613</b>	<b>-</b>	<b>91,04,020</b>	<b>1,39,58,633</b>	<b>1,27,15,220</b>	<b>12,53,413</b>	<b>-</b>



SCHEDULE - 3 FIXED ASSETS (O.B)

Sl. No	Assets Heads	Rate of Depreciation (%)	Gross Block		Depreciation for the Year			Net Block		
			Opening Balance 01.04.2017	Additions	Closing Balance	Depreciation Opening Balance	Depreciation for the Year	Total Depreciation	As on 31.03.2018	As on 31.03.2017
			4	5	6	7	8	9-7+8	10-11-8	11
1	Land	0%	-	-	-	-	-	-	-	-
2	Site Development	0%	-	-	-	-	-	-	-	-
3	Buildings	2%	16,65,43,001.73	-	16,65,43,001.73	8,13,78,555.17	(2,51,71,416.98)	5,62,07,138.19	11,03,35,863.54	8,51,64,446.56
4	Roads & Bridges	2%	-	-	-	-	-	-	-	-
5	Tube wells & Water Supply	2%	-	-	-	-	-	-	-	-
6	Sewrage & Drainage	2%	-	-	-	-	-	-	-	-
7	Electrical installation and Equipment	5%	12,25,28,261.97	-	12,25,28,261.97	9,22,96,649.43	1,31,22,463.49	10,54,19,112.92	1,70,86,854.32	3,02,09,817.81
8	Plant & Machinery	5%	-	-	-	-	-	-	-	-
9	Scientific & Laboratory Equipment	8%	-	-	-	-	-	-	-	-
10	Office Equipment	7.5%	15,41,790.36	-	15,41,790.36	15,41,790.36	-	15,41,790.36	-	-
11	Audio Visual Equipment	7.5%	-	-	-	-	-	-	-	-
12	Computers & Peripherals	20%	-	-	-	-	-	-	-	-
13	Furniture, Fixtures & Fittings	7.5%	2,24,07,743.89	-	2,24,07,743.89	1,27,48,556.10	72,84,397.36	2,00,32,953.46	23,68,743.08	96,53,140.44
14	Vehicles	10%	18,35,719.00	-	18,35,719.00	18,35,719.00	-	18,35,719.00	-	-
15	Lib. Books & Scientific Journals	10%	10,05,24,632.58	-	10,05,24,632.58	8,76,16,820.29	72,32,228.72	9,48,49,049.01	48,53,947.47	1,20,86,176.19
16	Small Value Assets	100%	-	-	-	-	-	-	-	-
17	Equipment UNESCO AID	-	24,97,217.00	-	24,97,217.00	24,97,217.00	-	24,97,217.00	-	-
	<b>Total (A)</b>		<b>41,78,78,366.53</b>	-	<b>41,78,78,366.53</b>	<b>27,99,15,307.35</b>	<b>2,76,39,089.57</b>	<b>28,23,82,979.94</b>	<b>13,46,45,408.41</b>	<b>13,71,13,081.00</b>

17 Capital work in Progress (B) - - - - -

Sl. No	Intangible Assets	Rate of Depreciation (%)	Gross Block		Depreciation for the Year			Net Block		
			Opening Balance 01.04.2017	Additions	Closing Balance	Depreciation Opening Balance	Depreciation for the Year	Total Depreciation	As on 31.03.2018	As on 31.03.2017
18	Computer Software	40%	-	-	-	-	-	-	-	-
19	E-Journals	40%	-	-	-	-	-	-	-	-
20	Patents	9 Years	-	-	-	-	-	-	-	-
	<b>Total (C)</b>		-	-	-	-	-	-	-	-

**Grand Total (A+B+C)** 41,78,78,366.53 - 41,78,78,366.53 27,99,15,307.35 2,76,39,089.57 28,23,82,979.94 13,46,45,408.41 13,71,13,081.00

Note- Appreciation on building (cell 8.3) transferred to schedule 1 i.e. Corpus Fund/ Capital Fund



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**SCHEDULE - 3A - PLAN FIXED ASSETS**

Sl. No	Assets Heads	Rate of Depreciation (%)	Gross Block		Depreciation for the Year			Net Block		
			O.B. As on 01.04.2017	Additions	Closing Balance	Depreciation OB	Depreciation for the Year	Total Depreciation	As on 31.03.2018	As on 31.03.2017
1	2	3	4	5	6-4+5	7	8	9=7+8	10=11+5-8	11
1	Land	0%	-	-	-	-	-	-	-	-
2	Site Development	0%	-	-	-	-	-	-	-	-
3	Buildings	2%	-	-	-	-	-	-	-	-
4	Roads & Bridges	2%	-	-	-	-	-	-	-	-
5	Tube wells & Water Supply	2%	-	-	-	-	-	-	-	-
6	Sewage & Drainage	2%	-	-	-	-	-	-	-	-
7	Electrical Installation and Equipment	5%	-	-	-	-	-	-	-	-
8	Plant & Machinery	5%	5,08,871.00	3,31,775.00	8,40,646.00	33,980.00	44,846.85	78,826.85	7,61,819.15	4,74,891.00
9	Scientific & Laboratory Equipment	8%	5,26,775.00	4,17,147.00	9,43,922.00	29,600.00	94,061.76	1,23,661.76	8,20,260.24	4,97,175.00
10	Office Equipment	7.5%	88,800.00	1,20,905.00	2,09,705.00	10,235.00	16,017.25	26,252.25	1,83,452.75	78,565.00
11	Audio Visual Equipment	7.5%	98,060.00	3,45,200.00	4,43,260.00	14,158.00	33,795.50	47,953.50	3,95,306.50	83,902.00
12	Computers & Peripherals	20%	11,38,499.00	14,22,870.00	25,61,369.00	1,40,040.00	6,07,433.60	7,47,473.60	18,13,895.40	9,98,459.00
13	Furniture, Fixtures & Fittings	7.5%	4,56,908.00	2,75,239.00	7,32,147.00	37,227.00	62,189.86	99,416.86	6,32,730.14	4,19,681.00
14	Vehicles	10%	47,28,110.00	-	47,28,110.00	3,41,446.00	6,79,204.90	10,20,650.90	37,07,459.10	43,86,664.00
15	Lib. Books & Scientific Journals	10%	3,64,361.00	4,05,221.00	7,69,582.00	69,229.00	80,601.40	1,49,830.40	6,19,751.60	2,95,132.00
16	Tube wells & Water Supply	2%	-	2,10,300.00	2,10,300.00	-	4,206.00	4,206.00	2,06,094.00	-
17	Small Value Assets	100%	-	-	-	-	-	-	-	-
<b>Total (A)</b>			<b>79,10,384.00</b>	<b>35,28,657.00</b>	<b>1,14,39,041.00</b>	<b>6,75,915.00</b>	<b>16,22,357.12</b>	<b>22,98,272.12</b>	<b>91,40,768.88</b>	<b>72,34,469.00</b>

17	Capital work in Progress (B)		9,08,86,571.00	3,46,74,798.00	12,55,61,369.00	-	-	-	12,55,61,369.00	9,08,86,571.00
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Sl. No	Intangible Assets	Rate of Depreciation (%)	Gross Block		Depreciation for the Year			Net Block		
			O.B. 01.04.2017	Additions	Closing Balance	Depreciation OB	Depreciation for the Year	Total Depreciation	As on 31.03.2018	As on 31.03.2017
18	Computer Software	40%	-	-	-	-	-	-	-	-
19	E-Journals	40%	42,31,298.00	1,28,71,527.00	1,71,02,825.00	27,08,031.00	75,18,137.40	1,02,26,168.40	68,76,656.60	15,23,267.00
20	Patents	9 Years	-	-	-	-	-	-	-	-
<b>Total (C)</b>			<b>42,31,298.00</b>	<b>1,28,71,527.00</b>	<b>1,71,02,825.00</b>	<b>27,08,031.00</b>	<b>75,18,137.40</b>	<b>1,02,26,168.40</b>	<b>68,76,656.60</b>	<b>15,23,267.00</b>
<b>Grand Total (A+B+C)</b>			<b>10,30,28,253.00</b>	<b>5,10,74,982.00</b>	<b>15,41,03,235.00</b>	<b>33,83,946.00</b>	<b>91,40,494.52</b>	<b>1,25,24,440.52</b>	<b>14,15,78,794.48</b>	<b>9,96,44,307.00</b>

#-1	5,11,85,082.00	1,10,000.00
#-2	91,40,494.52	1,10,000.00

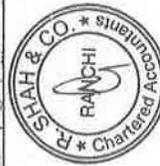


SCHEDULE - 3B NON PLAN FIXED ASSETS

S.No	Assets Heads	Rate of Depreciation (%)	Gross Block			Depreciation for the Year			Net Block	
			O.B. 01.04.2017	Additions	Closing Balance	Depreciation OB	Depreciation for the Year	Total Depreciation	As on 31.03.2018	As on 31.03.2017
1	2	3	4	5	6=4-5	7	8	9=7+8	10=11+5-3	11
1	Land	0%	-	-	-	-	-	-	-	-
2	Site Development	0%	-	-	-	-	-	-	-	-
3	Buildings	2%	-	-	-	-	-	-	-	-
4	Roads & Bridges	2%	-	-	-	-	-	-	-	-
5	Tube wells & Water Supply	2%	1,17,495.00	-	1,17,495.00	4,653.00	2,396.70	7,049.70	1,10,445.30	1,12,842.00
6	Sewage & Drainage	2%	-	-	-	-	-	-	-	-
7	Electrical installation and Equipment	5%	-	-	-	-	-	-	-	-
8	Plant & Machinery	5%	65,737.00	-	65,737.00	5,444.00	3,589.05	9,033.05	56,703.95	60,293.00
9	Scientific & Laboratory Equipment	8%	-	-	-	-	-	-	-	-
10	Office Equipment	7.5%	91,160.00	49,440.00	1,40,600.00	5,734.00	13,271.75	19,005.75	1,21,594.25	85,426.00
11	Audio Visual Equipment	7.5%	2,68,790.00	-	2,68,790.00	38,806.00	21,671.75	60,477.75	2,08,312.25	2,29,984.00
12	Computers & Peripherals	20%	6,66,061.00	19,90,150.00	26,56,211.00	1,97,468.00	5,61,295.40	7,58,703.40	18,97,507.60	4,68,593.00
13	Furniture, Fixtures & Fittings	7.5%	88,171.00	-	88,171.00	10,000.00	7,090.03	17,090.03	71,080.97	78,171.00
14	Vehicles	10%	-	-	-	-	-	-	-	-
15	Lib. Books & Scientific Journals	10%	20,969.00	12,853.00	33,822.00	2,333.00	4,022.50	6,355.50	27,466.50	18,636.00
16	Scientific & Laboratory Equipment	8%	-	49,560.00	49,560.00	-	3,964.80	3,964.80	45,595.20	-
17	Small Value Assets	100%	-	-	-	-	-	-	-	-
<b>Total (A)</b>			<b>13,18,383.00</b>	<b>21,02,003.00</b>	<b>34,20,386.00</b>	<b>2,64,438.00</b>	<b>6,17,241.98</b>	<b>8,81,679.98</b>	<b>25,38,706.02</b>	<b>10,53,945.00</b>

17	Capital work in Progress	(B)	-	-	-	-	-	-	-	-
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S.No	Intangible Assets	Rate of Depreciation	Gross Block			Depreciation for the Year			Net Block	
			O.B. 01.04.2017	Additions	Closing Balance	Depreciation OB	Depreciation for the Year	Total Depreciation	As on 31.03.2018	As on 31.03.2017
18	Computer Software	40	-	-	-	-	-	-	-	-
19	E-Journals	40	-	-	-	-	-	-	-	-
20	Patents	9 Years	-	-	-	-	-	-	-	-
<b>Total (C)</b>			-	-	-	-	-	-	-	-
<b>Grand Total (A+B+C)</b>			<b>13,18,383.00</b>	<b>21,02,003.00</b>	<b>34,20,386.00</b>	<b>2,64,438.00</b>	<b>6,17,241.98</b>	<b>8,81,679.98</b>	<b>25,38,706.02</b>	<b>10,53,945.00</b>
				Schedule No. 3			Dep. Amount 2,76,39,089.57			
				3-a			91,40,494.52			
				3-b			6,17,241.98			
				<b>Total</b>			<b>3,73,96,826.07</b>	(Transferred to I.R. E A/C)		



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### SCHEDULE - 4 - CURRENT ASSETS

		PARTICULAR	Current Year	Previous Year
<b>1</b>	<b>Sundry Debtors:</b>			
a	Debts outstanding for a period exceeding six months		5,14,152.68	5,14,152.68
b.	Amount Receivable From M/s EdCIL India Ltd.		-	35,00,000.00
<b>2</b>	<b>Cash and Bank Balances</b>			
a	<b>In Saving Accounts</b>			
i	Canara Bank SB A/c No. 2730101006939 (Non-Plan)		1,38,94,177.52	2,02,21,248.25
ii	Canara Bank SB A/c No. 2730101007913 (Plan)		4,35,54,447.60	0.10
iii	Canara Bank SB A/c No. 273010109959		1,088.00	1,000.00
iv	SBI Hatia SB A/c (O.B.)		3,344.10	3,344.10
v	Canara Bank SB A/c No. 102191203(Closed balance amount transferred to NIFFT SB A/c 6939)		-	70,637.50
vi	SBI SB A/c No 36228721268		-	21,147.70
vii	Canara Bank SB A/c No. 2730101011451		1,000.00	-
viii	Canara Bank SB A/c No. 2730101011452		1,000.00	-
ix	Canara Bank SB A/c No. 2730101011453		1,000.00	-
<b>3</b>	<b>Cash</b>			
a	Cash in hand		-	-
<b>4</b>	<b>Investment</b>	<b>(schedule-4(a))</b>	5,50,00,000.00	4,83,90,969.00
	<b>TOTAL</b>		<b>11,29,70,209.90</b>	<b>7,27,22,499.33</b>



**SCHEDULE 4(a) : INVESTMENTS**

		Amount in Rupees	
	Current Year	Previous Year	
Term Deposit with Nationalized Bank	5,50,00,000.00	4,83,90,969.00	

**DETAILS OF TERM DEPOSIT WITH CANARA BANK - NIFTT BRANCH AS ON 31.03.2018**

ACCOUNT NO.	PRINCIPAL ON 31.03.2018	Date of Opening/Reinves tment	Rate of Interest	Due Date	ACCRUED INTEREST ON 31.03.2018
FDR/2730301000151/1	50,00,000.00	08.02.2018	4.75%	21.05.2018	27,979.00
FDR/2730301000151/2	90,00,000.00	08.02.2018	4.75%	21.05.2018	50,363.00
FDR/2730301000151/3	90,00,000.00	08.02.2018	4.75%	21.05.2018	50,363.00
FDR/2730301000151/4	90,00,000.00	08.02.2018	4.75%	21.05.2018	50,363.00
FDR/2730301000151/5	90,00,000.00	08.02.2018	4.75%	21.05.2018	50,363.00
FDR/2730301000151/6	90,00,000.00	08.02.2018	4.75%	21.05.2018	50,363.00
FDR/37277111509	50,00,000.00	20.03.2018	6.25%	05.05.2018	1,15,747.00
<b>TOTAL</b>	<b>5,50,00,000.00</b>				<b>3,95,541.00</b>



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**SCHEDULE - 5 - LOANS, ADVANCES & DEPOSITS**

	Current Year	Previous Years
<b>1 Advances to Employees: (Non Interest Bearing)</b>		
a Expenses Advance	2,95,385.00	1,35,700.00
b Festival Advance	42,750.00	28,800.00
c Leave Travel Concession Advance	3,74,569.00	13,000.00
d Medical Advance	15,079.00	15,079.00
e Travelling Advance	7,327.00	43,775.00
f Rolling Advance	3,59,602.00	3,48,208.00
<b>2 Advances to Employees: (Interest Bearing)</b>		
a House Building Advances	37,000.00	61,000.00
b Computer Advance	98,894.00	1,77,663.00
c Car/Motorcycle/Scooter Advance	1,82,210.00	2,88,706.00
<b>3 Advances &amp; Other amounts Recoverable on Capital Account</b>		
a NIFT-Golden Jubilee Celebration	30,10,199.33	50,00,000.00
b Contribution to Annual Feast-JIINKS	16,00,000.00	14,25,000.00
c Advance SBI online A/c -1268	10,62,063.20	-
d Advance to NIFT Student's Gymkhana	60,000.00	60,000.00
e All India Workshop on Excellence in Manufacturing to Suppliers	3,00,000.00	-
<b>a Advance to Suppliers(O.B)</b>		
a M/s Ed.CIL (India) Ltd. (for Campus Wide Networking)	13,53,195.00	13,53,195.00
b M/s Mecon Ltd.	5,00,000.00	5,00,000.00
c M/s National Informatic Centre	3,29,07,670.00	15,62,002.00
d M/s Patents Info	15,000.00	15,000.00
e M/s Sreeleathers	3,235.00	3,235.00
b Deposits Against Foreign Letter of Credit(O.B.)	65,21,899.53	65,21,899.53
c Advance to Central Public Works Department	59,92,16,904.00	59,92,16,904.00
<b>4 Prepaid Expense</b>		
a Pre Paid Internet Expenses	11,80,000.00	11,50,000.00

Contd..



	Current Year	Previous Years
<b>5 Deposits</b>		
<b>Telephone</b>		
a Security Deposit With P&T Department	29,550.00	29,550.00
<b>Electricity</b>		
a Security Deposit With Jharkhand Electricity Board	12,15,000.00	12,15,000.00
c AICTE	1,88,047.00	1,88,047.00
<b>Others</b>		
a CBI Attachment	5,54,613.00	5,54,613.00
b Security Deposit & Earnest Money (O.B.)	2,16,707.00	2,16,707.00
c SBI (FDR) Scholar Fund	23,378.00	23,378.00
d Security Deposit With Jayant Gas Co.	32,501.00	32,501.00
e Security Deposit With Ranchi University	2,50,000.00	2,50,000.00
f Student Welfare Fund	21,563.00	21,563.00
g M/s Jyoti India	55,000.00	55,000.00
<b>6 Income Accrued:</b>		
a On Advance to Employees	14,143.00	14,143.00
b On Investment	3,95,541.00	13,77,365.00
<b>7 Claims Receivable</b>		
a Amount Receivable from M.tab	1,80,000.00	
b Amount Receivable from Pensioners	83,170.00	1,10,473.00
c Income Tax (TDS) Refundable-Unrealized	4,96,476.00	4,96,476.00
d Rent Receivable from BSNL	21,000.00	21,000.00
e TDS - Unrealized	1,153.00	1,153.00
	<b>65,29,20,824.06</b>	<b>62,25,26,135.53</b>

CASH OUTFLOW

2017-18 2016-17

Income (Drain)



NP P



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## NATIONAL INSTITUTE OF FOUNDRY & FORGE TECHNOLOGY

HATIA, RANCHI-834003

### INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED ON 31st MARCH, 2018

	Schedule	Current Year	Previous Year
<b>I N C O M E</b>			
ACADEMIC RECEIPTS	6	3,72,45,333.00	4,40,03,031.50
GRANTS	7	23,56,95,000.00	10,00,00,000.00
INCOME FROM INVESTMENT	8	14,73,216.00	47,15,327.00
INTREST EARNED	9	28,11,157.00	20,60,534.00
OTHER INCOME	10	28,52,023.00	21,49,487.00
<b>TOTAL(A)</b>		<b>28,00,76,729.00</b>	<b>15,29,28,379.50</b>
<b>E X P E N D I T U R E</b>			
STAFF PAYMENT & BENEFITS (Establishment Expenses)	11	19,04,91,610.00	13,29,02,753.00
ACADEMIC EXPENSES	12	3,37,84,572.00	3,47,67,531.00
ADMINISTRATIVE AND GENERAL EXPENSES	13	2,60,53,534.90	2,52,00,766.80
TRANSPORTATION EXPENSES	14	9,91,915.00	11,17,801.00
REPAIR & MAINTENANCE EXPENSES	15	58,58,345.00	70,57,504.00
DEPRECIATION	3	3,73,96,826.07	71,26,111.00
<b>TOTAL(B)</b>		<b>29,45,76,802.97</b>	<b>20,81,72,466.80</b>
<b>Balance Being Deficit Carried to Capital Fund (A-B)</b>		<b>(1,45,00,073.97)</b>	<b>(5,52,44,087.30)</b>

AS INTERNAL AUDITOR

For: M/s R. Shah & CO. (CHARTERED ACCOUNTANTS)

*Rajam*

CA. Neetu Jejani (PARTNER)

MEMBERSHIP NO.: 406561

PLACE : RANCHI

DATE: 07.09.2018

*Himad*  
13.09.18  
Asstt. Registrar-Accounts

*Prof. I/c (Admin)*  
13/09/2018  
Prof. I/c (Admin)

*Director*  
14-09-18  
Director



SCHEDULE - 6 - ACADEMIC RECEIPTS

PARTICULAR		Current Year	Previous year
FEES FROM STUDENTS			
<b>1</b>	<b>Academic</b>		
a	Admission Fee (Note-9)	53,800.00	8,82,300.00
b	Application Fee	1,24,000.00	1,63,020.00
c	Computer Fee	12,86,000.00	15,18,469.00
d	Grade Card Fee	48,150.00	23,700.00
e	Library Access Fee	13,43,000.00	15,18,469.00
f	Registration/Enrolment Fee	3,47,500.00	2,97,693.00
g	Seat Rent	24,75,000.00	25,89,251.00
h	Tuition Fees	2,24,21,100.00	2,69,23,223.50
	<b>Total (A)</b>	<b>2,80,98,550.00</b>	<b>3,39,16,125.50</b>
<b>2</b>	<b>Examinations</b>		
a	Examination Fee	7,83,950.00	7,59,234.00
b	Examination Feè-Ranchi University	23,08,400.00	23,28,000.00
	<b>Total (B)</b>	<b>30,92,350.00</b>	<b>30,87,234.00</b>
<b>3</b>	<b>Other Fees</b>		
a	Fines & Penalties	1,98,033.00	2,39,700.00
b	Gymkhana Fee	3,85,800.00	4,55,540.00
c	Hostel Fee	48,400.00	4,15,900.00
d	Hostel Maintenance Fee (Establishment Charges)	43,53,000.00	46,73,408.00
e	Identity Card Fee (Re-issued)	800.00	350.00
f	Internet Access Fee	3,74,400.00	4,55,540.00
g	Medical Fee	6,94,000.00	7,59,234.00
	<b>Total (C)</b>	<b>60,54,433.00</b>	<b>69,99,672.00</b>
	<b>GRAND TOTAL (A+B+C)</b>	<b>3,72,45,333.00</b>	<b>4,40,03,031.50</b>



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**SCHEDULE - 7 GRANTS**

PARTICULAR	Govt. of India(MHRD)		Current Year Total	Previous Year Total
	Plan	Non Plan		
Receipts during the Year	-	23,56,95,000.00	23,56,95,000.00	10,00,00,000.00
Less: Refund	-	-	23,56,95,000.00	10,00,00,000.00

**SCHEDULE - 8 - INCOME FROM INVESTMENTS**

PARTICULAR	Current Year	Previous Year
1 Interest on Term Deposit with Nationalized Bank	10,77,675.00	33,37,962.00
2 Interest accrued on Term Deposit but not received	3,95,541.00	13,77,365.00
Note-10	14,73,216.00	47,15,327.00

**SCHEDULE - 9 - INTEREST EARNED**

PARTICULAR	Govt. of India(MHRD)		Current Year Total	Previous Year Total
	Plan	Non Plan		
1 Interest on Saving Account with scheduled banks	20,92,794.00	5,53,603.00	26,46,397.00	19,30,043.00
2 Interest on Loans of Employees	-	-	1,64,760.00	1,30,491.00
	-	-	28,11,157.00	20,60,534.00



**SCHEDULE -10- OTHER INCOME**

PARTICULAR		Current Year	Previous Year
<b>A. Income from Land &amp; Buildings</b>			
1. Electricity Charges Recovered		2,22,752.00	2,96,206.00
2. Rent Recovered		2,59,700.00	1,65,800.00
3. License Fee Recovered		3,25,987.00	2,25,515.00
4. Water Charges Recovered		958.00	810.00
<b>Total (A)</b>		<b>8,09,397.00</b>	<b>6,88,331.00</b>
<b>B. Others</b>			
<b>1. Others Incomes</b>			
a) Bus Charges Recovery		19,660.00	16,300.00
b) Certificate Verification & Transcript Fee		32,160.00	22,250.00
c) Mess Fee		-	1,03,200.00
2. Income From Consultancy		5,35,690.00	12,79,820.00
3. Misc. Receipts		14,54,924.00	38,624.00
4. RTI Fees		192.00	962.00
<b>Total (B)</b>		<b>20,42,626.00</b>	<b>14,61,156.00</b>
<b>Grand Total ( A+B)</b>		<b>28,52,023.00</b>	<b>21,49,487.00</b>



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## SCHEDULE - 11 - STAFF PAYMENTS & BENEFITS ( ESTABLISHMENT EXPENSES )

PARTICULAR	Current Year			Previous Year		
	Plan	Non Plan	Total	Plan	Non Plan	Total
<b>1. Salaries and Wages</b>						
a) Salaries and Wages (Teaching & Non Teaching)	-	8,72,49,893.00	8,72,49,893.00	-	7,85,47,556.00	7,85,47,556.00
b) Salary Arrear	-	2,39,18,528.00	2,39,18,528.00	-	4,45,622.00	4,45,622.00
2. Allowance and Bonus	-	1,00,166.00	1,00,166.00	-	1,17,436.00	1,17,436.00
<b>3. Retirement and Terminal Benefits</b>						
a) Composite Transfer/TA Grant	-	26,564.00	26,564.00	-	34,957.00	34,957.00
b) Encashment of Leave	-	10,60,689.00	10,60,689.00	-	5,09,027.00	5,09,027.00
c) Leave Salary & Pension Contribution	-	3,14,844.00	3,14,844.00	-	4,23,485.00	4,23,485.00
d) Other Retirement Benefit	-	64,950.00	64,950.00	-	12,84,153.00	12,84,153.00
e) Payment of Gratuity	-	45,03,880.00	45,03,880.00	-	6,71,748.00	6,71,748.00
f) Pension	-	* 3,66,64,173.00	3,66,64,173.00	-	3,77,48,852.00	3,77,48,852.00
g) Commutation	-	20,71,577.00	20,71,577.00	-	-	-
h) Arrear to Pensioner	-	34,38,713.00	34,38,713.00	-	-	-
4. Leave Travel Concession facilities	-	7,79,354.00	7,79,354.00	-	10,36,260.00	10,36,260.00
5. Medical Facility	-	12,29,928.00	12,29,928.00	-	7,11,139.00	7,11,139.00
6. Children Education Allowance	-	8,32,993.00	8,32,993.00	-	10,61,312.00	10,61,312.00
7. Honorarium	-	1,23,939.00	1,23,939.00	-	48,065.00	48,065.00
<b>8. Payment to Adhoc Staff</b>						
a) Consultants & Contractual Staff	-	3,94,170.00	3,94,170.00	-	6,94,258.00	6,94,258.00
b) Salary-Himanshu Kumar Behra	-	3,00,743.00	3,00,743.00	-	-	-
c) M/s Rej Traders-Manpower Supply	-	-	-	-	1,32,815.00	1,32,815.00
d) Indian Allied Security-Manpower Supply	-	1,65,41,492.00	1,65,41,492.00	-	-	-
e) Bombay Intelligence Security-Sweeping & Cleaning	-	79,35,752.00	79,35,752.00	-	-	-
f) M/s Service Master Clean Ltd.-Manpower Supply	-	29,39,262.00	29,39,262.00	-	94,36,068.00	94,36,068.00
<b>TOTAL</b>	-	<b>19,04,91,610.00</b>	<b>19,04,91,610.00</b>	-	<b>13,29,02,753.00</b>	<b>13,29,02,753.00</b>



SCHEDULE - 12 - ACADEMIC EXPENSES

PARTICULAR	Current Year			Previous Year		
	Plan	Non Plan	Total	Plan	Non Plan	Total
	1. Examination Expenses	-	25,95,728.00	25,95,728.00	-	27,90,884.00
2. Payment to Visiting Faculty	-	19,70,558.00	19,70,558.00	-	31,58,530.00	31,58,530.00
<b>3. Stipend /Merit Cum Means Scholarship</b>						
a) Merit-Cum-Means Scholarship	-	13,26,000.00	13,26,000.00	-	13,26,000.00	13,26,000.00
b) Scholarship to M. Tech Students	-	1,75,39,615.00	1,75,39,615.00	-	1,93,91,015.00	1,93,91,015.00
c) Stipend to Advanced Diploma Course Students	-	42,94,994.00	42,94,994.00	-	28,71,400.00	28,71,400.00
d) Stipend to PhD Scholars	-	29,16,448.00	29,16,448.00	-	38,48,386.00	38,48,386.00
<b>4. Student Welfare Expenses</b>						
a) NIFT Clinic Expenses	-	98,161.00	98,161.00	-	-	-
b) Student Medical Reimbursement	-	675.00	675.00	-	93,165.00	93,165.00
c) Students Recreation Activities	-	1,43,710.00	1,43,710.00	-	50,860.00	50,860.00
5. Laboratory & Workshop Expenses	-	13,99,803.00	13,99,803.00	-	8,09,839.00	8,09,839.00
6. Participation in Seminar & Conferences	-	1,95,575.00	1,95,575.00	-	46,143.00	46,143.00
7. Seminar/Workshop/Conference Expenses	-	9,31,340.00	9,31,340.00	-	2,59,019.00	2,59,019.00
8. Subscription/Membership Expenses	-	31,840.00	31,840.00	-	69,290.00	69,290.00
9. Other Academic Expenses	-	3,40,125.00	3,40,125.00	-	53,000.00	53,000.00
<b>TOTAL</b>	-	<b>3,37,84,572.00</b>	<b>3,37,84,572.00</b>	-	<b>3,47,67,531.00</b>	<b>3,47,67,531.00</b>



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SCHEDULE - 13 - ADMINISTRATIVE AND GENERAL EXPENSES

PARTICULAR	Current Year			Previous Year		
	Plan	Non Plan	Total	Plan	Non Plan	Total
<b>A) Infrastructure</b>						
<b>a) Electricity &amp; Power</b>						
a) D.G. Set Fuel Expenses	-	6,05,261.00	6,05,261.00	-	5,28,128.00	5,28,128.00
b) Jharkhand Bijli Vitran Nigam Ltd.	-	88,93,122.00	88,93,122.00	-	79,08,510.00	79,08,510.00
<b>b) Rent, Rates and Taxes</b>						
a) Lease Rent to M/s HEC Ltd.	-	51,804.00	51,804.00	-	51,804.00	51,804.00
b) Municipal Tax	-	4,00,000.00	4,00,000.00	-	4,00,000.00	4,00,000.00
<b>B) Communication</b>						
<b>a) Telephone, Fax and Internet Charges</b>						
a) M/s BSNL	-	3,42,357.00	3,42,357.00	-	3,75,257.00	3,75,257.00
b) M/s Ernet	-	21,317.00	21,317.00	-	1,20,474.00	1,20,474.00
c) M/s Software Technology Parks of India	-	68,540.00	68,540.00	-	2,33,529.00	2,33,529.00
d) Other Mobile & Landline	-	9,797.00	9,797.00	-	15,881.00	15,881.00
e) BSNL Internet Leased Line	-	11,50,000.00	11,50,000.00	-	11,45,000.00	11,45,000.00
f) Internet Charges-NICSI	-	62,179.00	62,179.00	-	-	-
<b>b) Postage &amp; Stationery Expenses</b>	-	40,151.00	40,151.00	-	57,288.00	57,288.00
<b>C) Others Expenditure</b>						
<b>a) Advertisement &amp; Publicity</b>						
a) M/s ABP Pvt. Ltd.	-	-	-	-	1,83,063.00	1,83,063.00
b) M/s Bennett, Coleman & Co.Ltd.	-	-	-	-	15,30,960.00	15,30,960.00
c) M/s Employment News	-	51,672.00	51,672.00	-	46,769.00	46,769.00
d) M/s Hindustan Media Ventures Ltd.	-	-	-	-	11,83,776.00	11,83,776.00
e) M/s HT Media Ltd.	-	-	-	-	2,38,998.00	2,38,998.00
f) M/s Neutral Publishing House Ltd.	-	-	-	-	2,01,960.00	2,01,960.00
g) M/s Kasturi & Sons Pvt. Ltd.	-	1,03,794.00	1,03,794.00	-	-	-
h) M/s Neutral Publishing House Ltd.	-	83,160.00	83,160.00	-	-	-
i) M/s D B Corpn Ltd.	-	-	-	-	2,23,997.00	2,23,997.00
j) The Indian Express Pvt.Ltd.	-	-	-	-	1,36,000.00	1,36,000.00

Contd...



PARTICULAR	Current Year			Previous Year		
	Plan	Non Plan	Total	Plan	Non Plan	Total
b) Hospitality Expenses	-	8,75,223.00	8,75,223.00	-	9,83,403.00	9,83,403.00
c) Internal & CAG Auditor Remuneration	-	2,47,260.00	2,47,260.00	-	1,20,372.00	1,20,372.00
d) Magazine/Journals/News Paper/Subscriptions	-	10,759.00	10,759.00	-	6,397.00	6,397.00
e) Printing & Stationary (Consumption)	-	4,51,087.00	4,51,087.00	-	4,32,164.00	4,32,164.00
f) Rajbhasha Activities Expenses	-	83,647.00	83,647.00	-	70,061.00	70,061.00
g) Security Expenses						
h) Jharkhand Home Guards		69,84,080.00	69,84,080.00		60,70,015.00	60,70,015.00
i) Sitting Charges for Meetings	-	57,900.00	57,900.00	-	71,000.00	71,000.00
j) Travelling & Conveyance	-	20,70,551.00	20,70,551.00	-	21,25,753.34	21,25,753.34
k) Legal Expenses	-	3,03,795.00	3,03,795.00	-	1,73,250.00	1,73,250.00
l) Bank Charges	-	21,079.00	21,079.00	-	2,278.46	2,278.46
m) Celebration & other Activities Expenses		30,39,664.00	30,39,664.00		-	-
n) Miscellaneous Expenditure	-	25,335.90	25,335.90	-	4,58,782.00	4,58,782.00
o) Medical Facility Expenditure					1,05,897.00	1,05,897.00
<b>TOTAL</b>	-	<b>2,60,53,534.90</b>	<b>2,60,53,534.90</b>	-	<b>2,52,00,766.80</b>	<b>2,52,00,766.80</b>



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**SCHEDULE- 14 - TRANSPORTATION EXPENSES**

PARTICULAR	Current Year		Previous Year	
	Plan	Non Plan	Total	Total
<b>1. Vehicles (Owned by Institutions)</b>				
a) Insurance Expenses	-	1,90,804.00	1,90,804.00	1,54,476.00
B) Running Expenses (Fuel)	-	5,24,959.00	5,24,959.00	5,44,566.00
C) Vehicles Repairs & Maintenance	-	2,60,628.00	2,60,628.00	3,17,788.00
<b>2. Vehicles Hiring Expenses</b>				
	-	15,524.00	15,524.00	1,00,971.00
<b>Total</b>	-	<b>9,91,915.00</b>	<b>9,91,915.00</b>	<b>11,17,801.00</b>

**SCHEDULE- 15 - REPAIRS & MAINTENANCE**

PARTICULAR	Current Year		Previous Year	
	Plan	Non Plan	Total	Total
<b>1. Annual Maintenance Cost</b>				
a) AMC of DG Set	-	47,200.00	47,200.00	41,400.00
b) AMC of Photocopier	-	24,780.00	24,780.00	46,926.00
c) AMC of Water Purifiers	-	22,000.00	22,000.00	9,310.00
d) AMC of Induction Furnace	-	-	-	13,740.00
2. Building Maintenance	-	21,99,098.00	21,99,098.00	12,14,976.00
3. Cleaning Material & Services	-	5,52,739.00	5,52,739.00	38,94,354.00
4. Computer Maintenance	-	1,39,149.00	1,39,149.00	2,90,965.00
5. Electrical Maintenance	-	8,78,624.00	8,78,624.00	4,81,422.00
6. Furniture & Fixtures Maintenance	-	44,180.00	44,180.00	48,367.00
7. Gardening	-	1,98,225.00	1,98,225.00	45,006.00
8. Office Equipments Maintenance	-	1,80,397.00	1,80,397.00	-
9. Water Filtration Plant Maintenance	-	-	-	9,71,038.00
10. Repair & Maintenance-Others	-	15,71,953.00	15,71,953.00	-
<b>Total</b>	-	<b>58,58,345.00</b>	<b>58,58,345.00</b>	<b>60,86,466.00</b>
			<b>9,71,038.00</b>	<b>70,57,504.00</b>



**NATIONAL INSTITUTE OF FOUNDRY & FORGE TECHNOLOGY**  
**HATIA, RANCHI-834003**  
**RECEIPTS AND PAYMENTS ACCOUNT FOR THE YEAR ENDED 31.03.2018**

RECEIPTS	Sch. No.	Current Year 2017-18	Previous Year 2016-17	PAYMENTS	Sch. No.	Current Year 2017-18	Previous Year 2016-17
<b>I. Opening Balances</b>				<b>I. Expenses</b>	<b>20</b>		
A) Cash Balances		-	1,50,889.00	1. Non Plan Expenses		16,69,74,857.00	13,22,92,595.00
B) Bank Balances				1. Staff Payments & Benefits (Est. Expenses)		3,09,79,618.00	3,42,67,489.00
In Savings Accounts				2. Academic Expenses		1,78,58,706.90	2,14,59,102.00
SB A/c No. 2730101006939 (Non-Plan)		2,02,21,246.25	3,42,75,442.25	3. Administrative and General Expenses		5,48,666.00	10,95,572.00
SB A/c No. 2730101007913 (Plan)		0.10	48,28,821.10	4. Transportation Expenses		44,68,136.00	52,69,559.00
SB A/c No. 2730101009959 (IDF)		1,000.00	1,000.00	5. Repair & Maintenance		-	-
SBI Hatia (O.B)		3,344.10	3,344.10	2. Plan Expenses		-	9,71,038.00
Canara Bank SB A/c No. 102191203(Online)		70,637.50	-		<b>21</b>	36,87,429.00	34,30,914.00
SBI SB A/c No 36228721268(Online)		21,147.70	-	II. Payments Against Sponsored Projects		-	-
				III. Payments Against Sponsored Fellowship	<b>2(b)</b>	1,27,15,220.00	81,26,300.00
<b>II. Grants Received</b>				IV. Expenditure on Fixed Assets			
From Government of India (MHRD)				1. Plan Fixed Assets	<b>22</b>	4,89,34,610.00	5,57,85,572.00
1. Plan Grant		10,00,000.00	3,00,00,000.00	2. Non Plan Fixed Assets	<b>23</b>	49,440.00	98,214.00
2. Non Plan Grant		23,56,95,000.00	10,00,00,000.00	V. Term Deposit With Scheduled Bank	<b>24</b>	5,00,00,000.00	7,50,00,000.00
<b>III. Academic Receipts</b>	<b>16</b>	2,80,98,550.00	3,60,15,512.00	VI. Loans, Advances and Deposits	<b>25</b>	11,34,87,386.70	4,12,68,730.60
1. Academic		30,92,350.00	24,07,000.00	VII. Other Payments	<b>26</b>	4,68,58,735.10	8,37,954.00
2. Examination		60,54,433.00	10,60,105.00	VIII. Closing Balances			
3. Other Fees		-	-	A) Cash Balances		-	-
<b>IV. Receipts Against Sponsored Projects</b>	<b>2(a)</b>	38,93,115.00	32,57,279.00	B) Bank Balances			
<b>V. Receipt Against Sponsored Fellowship</b>	<b>2(b)</b>	91,04,020.00	55,29,305.00	In Savings Accounts			
VI. Interest Received on				Canara Bank SB A/c No. 102191203(Online)		1,38,94,177.52	70,637.50
1. On SB Accounts (Non Plan)		4,44,866.00	14,23,953.00	Canara Bank SB A/c No. 2730101006939 (Non Plan)		4,35,54,447.60	2,02,21,248.25
2. On Loans & Advances		1,33,712.00	1,30,491.00	Canara Bank SB A/c No. 2730101007913(Plan)		1,088.00	0.10
3. On Term Deposits (Non Plan)		3,25,235.00	12,79,785.00	Canara Bank SB A/c No. 2730101009959 (IDF)		3,344.10	3,344.10
4. On SB Accounts (Plan)		20,92,794.00	5,06,090.00	SBI Hatia SB A/c (O.B.)		-	-
5. On Term Deposits (Plan)		-	30,833.00	SBI SB A/c No 36228721268(Online)		-	-
<b>VII. Term Deposits Encashed</b>							
1. Plan Investment			2,14,36,166.00				
2. Non Plan Investment		4,83,90,969.00	12,32,76,234.00				



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VIII. Other Income							
1. other Income	17	20,32,333.00	17,14,111.00	Canara Bank SB A/c No. 2730101011451(OH-31) Canara Bank SB A/c No. 2730101011452(OH-36) Canara Bank SB A/c No. 2730101011453(OH-35)	1,000.00 1,000.00 1,000.00		
IX. Miscellaneous receipts including statutory Receipts	18	3,92,75,961.10	2,99,30,385.00				
X. Deposits & Advances	19	5,15,70,126.17	24,16,958.00				
XI. Sundry Debtors 1. EDCL India Ltd.		35,00,000.00					
XII. Any Other Receipts			5,46,713.90				
		<b>55,40,18,861.92</b>	<b>40,02,20,417.25</b>		<b>55,40,18,861.92</b>	<b>40,02,20,417.25</b>	

AS INTERNAL AUDITOR

For: M/s R. Shah & Co. (CHARTERED ACCOUNTANTS)

*R. Manoj*  
R. Manoj (PARTNER)

MEMBERSHIP NO.: 405561

PLACE : RANCHI

DATE: 07.09.2018

*R. Manoj*  
13.09.2018  
ASST. Registrar-Accounts

*Prof. Vc*  
13.09.2018  
Director



**SCHEDULE- 16 - ACADEMIC RECEIPTS**

PARTICULARS	AMOUNT
<b>1.Academic</b>	
a. Admission Fee	53,800.00
b. Application Fee	1,24,000.00
c. Computer Fee	12,86,000.00
d. Grade Card Fee	48,150.00
e. Library Access Fee	13,43,000.00
f. Registration/Enrolment Fee	3,47,500.00
g. Seat Rent	24,75,000.00
h. Tuition Fees	2,24,21,100.00
<b>(1) Sub Total</b>	<b>2,80,98,550.00</b>
<b>2.Examination Fees</b>	
a. Examination Fees-Institute	7,83,950.00
b.Examination Fees-Ranchi University	23,08,400.00
<b>(2) Sub Total</b>	<b>30,92,350.00</b>
<b>3.Other Fees</b>	
a.Fine & Penalties	1,98,033.00
b.Gymkhana Fee	3,85,800.00
c.Hostel Fees	48,400.00
d.Hostel Maintenance Fee	43,53,000.00
e.Identity card Fee	800.00
f.Internet Access Fee	3,74,400.00
g.Medical Fee	6,94,000.00
<b>(3) Sub Total</b>	<b>60,54,433.00</b>



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## SCHEDULE- 17 - OTHER INCOME

PARTICULARS	AMOUNT
<b>1. Other</b>	
a. Bus Charges Recovery	19,660.00
b. Certificate/Transcript verification fees	32,160.00
c. Misc. Receipts (sale of Tender Form etc.)	11,70,924.00
d. RTI Fees	192.00
<b>2. Income from Land &amp; Building</b>	
a. Electricity charges Recovered	2,22,752.00
b. Rent Recovered	2,59,700.00
c. Licence Fees	3,25,987.00
d. Water Charges Recovery	958.00
<b>TOTAL</b>	<b>20,32,333.00</b>



**SCHEDULE- 18 MISC.RECEIPTS INCLUDING STATUTORY RECEIPTS**

PARTICULARS	AMOUNT
<b>1.Current Liabilities</b>	
a.Gratuity Payable-Vinod Kumar (AO)	1,00,000.00
b.Caution Money	16,14,500.00
c.Earnest Money	43,00,000.00
d.Other Liabilities	8,46,180.10
<b>2.Statutory Liabilities</b>	
a.Employees Loan Repayment	96,900.00
b.GPF Deduction from Salary	1,04,23,936.00
c.GIS Premium	34,500.00
d.LIC Premium	9,78,076.00
e.New Pension Scheme (Employees Contribution)	21,17,912.00
f.New Pension Scheme (Employers Contribution)	21,13,178.00
g.Professional Tax on Salary	1,55,465.00
h.TDS Payable U/sec. 192A	1,62,88,486.00
i.TDS Payable U/sec. 194C	87,838.00
j.TDS Payable U/sec. 194J	1,16,990.00
<b>TOTAL</b>	<b>3,92,73,961.10</b>



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## SCHEDULE- 19 - DEPOSIT & ADVANCES

PARTICULARS	AMOUNT
<b>1. Advance &amp; Other Amount Receivable</b>	
a. Advance to SBI (online)-1268	4,79,81,439.50
b. Advance to Student's Gymkhana	230.00
c. NIFT Golden Jubilee Celebration	1,11,065.67
<b>2. Advance to Employees (Interest Bearing)</b>	
a. Car/Motorcycle/Scooter Advance	1,19,230.00
b. Computer Advance	96,633.00
c. House Building Advance	24,000.00
<b>3. Advance to Employees (Non Interest Bearing)</b>	
a. Expenses Advance	6,53,882.00
b. Festival Advance	67,500.00
c. Leave Travel Concession Advance	6,71,220.00
d. Medical Advance	10,000.00
e. Rolling Advance	91,222.00
f. Travelling Advance	3,39,036.00
<b>4. Claim Receivable</b>	
a. Amount Receivable from Pensioners	27,303.00
<b>5. Income Accrued</b>	
a. Interest Accrued on Investment	13,77,365.00
<b>TOTAL</b>	<b>5,15,70,126.17</b>



SCHEDULE- 20 - NON-PLAN EXPENSES

PARTICULARS	AMOUNT	AMOUNT
<b>1.Academic Expenses</b>		
a.Examination Expenses	25,65,728.00	
b.Payment to Visiting Faculty	7,60,994.00	
c. Stipend/Merit cum means Scholarship	2,60,77,057.00	
d.Student Welfare Expenses	98,328.00	
e. Laboratory & workshop Expenses	8,43,963.00	
f.Participation in Seminar & Conferences Expenses	1,62,245.00	
g.Seminar/Workshop/Conference Expenses	4,71,303.00	3,09,79,618.00
<b>2.Administrative General Expenses</b>		
a.Communication	4,75,711.00	
b.Infrastructure	85,01,808.00	
c.Others Expenditure	88,81,187.90	1,78,58,706.90
<b>3.Repair &amp; Maintenance</b>		
a.Annual Maintenance Cost	71,980.00	
b.Building Maintenance	21,99,098.00	
c.Computer Maintenance	61,273.00	
d.Cleaning Material & Services	3,53,294.00	
e.Electrical Maintenance	5,19,322.00	
f.Furniture & Fixture Maintenance	30,580.00	
g.Gardning	1,98,225.00	
h.Repair & Maintenance-Printer	43,949.00	
i.Repair & Maintenance-others	9,90,415.00	44,68,136.00
<b>4.Staff Payments &amp; Benefits (Est.Expenses)</b>		
a.Allowances & Bonus	1,00,166.00	
b.Children Education Allowance	8,32,993.00	
c.Honorarium	1,13,759.00	
d.Leave Travel Concession Facilities	6,37,574.00	
e.Medical Facility	12,29,928.00	
f.Payment to Adhoc Staff	47,46,626.00	
g.Retirement & Terminal Benefits	4,81,45,390.00	
h.Salaries & Wages	11,11,68,421.00	16,69,74,857.00
<b>5.Transportation Expenses</b>		
a.Vehicle Hiring Expenses	10,524.00	
b.Vehicles(Owned by Institution)	5,38,142.00	5,48,666.00
<b>TOTAL</b>	<b>22,08,29,983.90</b>	<b>22,08,29,983.90</b>



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**SCHEDULE- 21 - PAYMENT AGAINST SPONSORED PROJECT**

<b>PARTICULARS</b>	<b>AMOUNT</b>
Buriapur Surgical Cluster, MSME (West Bengal)	78,842.00
Chair Professor-Ministry of Steel	22,99,615.00
Consultancy-Tata Steel Ltd.	1,95,000.00
Naval Dockyard Mumbai Publication	2,22,200.00
Petroleum conservation Research Association	76,500.00
Project-Science & Engineering Research Board(New)	8,15,272.00
<b>TOTAL</b>	<b>36,87,429.00</b>

**SCHEDULE- 22 - PLAN FIXED ASSETS**

<b>PARTICULARS</b>	<b>AMOUNT</b>
Audio Visual Equipment	53,700.00
Capital Work In Progress	3,46,74,798.00
Computer & Peripherals	3,80,039.00
Furniture, Fixture & Fittings	1,13,700.00
Library Books & Scientific Journals	4,05,221.00
Tube wells & Water Supply System	1,27,925.00
Plant & Machinery	3,07,700.00
E-Journals	1,28,71,527.00
<b>TOTAL</b>	<b>4,89,34,610.00</b>



**SCHEDULE- 23 - NON PLAN FIXED ASSETS**

PARTICULARS	AMOUNT
Office Equipment	49,440.00
<b>TOTAL</b>	<b>49,440.00</b>

**SCHEDULE- 24 - TERM DEPOSIT WITH SCHEDULED BANK**

PARTICULARS	AMOUNT
FDR/2730301000151/1	50,00,000.00
FDR/2730301000151/2	90,00,000.00
FDR/2730301000151/3	90,00,000.00
FDR/2730301000151/4	90,00,000.00
FDR/2730301000151/5	90,00,000.00
FDR/2730301000151/6	90,00,000.00
<b>TOTAL</b>	<b>5,00,00,000.00</b>



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### SCHEDULE- 25 - LOAN ADVANCES & DEPOSITS

PARTICULARS	AMOUNT
<b>1.Advance &amp; Other Amount Receivable in cash/kind</b>	
a. Advance to Suppliers	3,13,45,668.00
b. On Capital Account	7,66,06,974.70
<b>2.Advance to Employees ( Non Interest Bearing)</b>	
a. Expenses Advance	18,91,512.00
b. Festival Advance	81,000.00
c. Leave Travel Concession Advance	11,74,569.00
d. Medical Advance	10,000.00
e. Rolling Advance	7,95,502.00
f. Travelling Advance	4,02,161.00
<b>3.Prepaid Expense</b>	
a. Prepaid Internet Expenses	11,80,000.00
<b>TOTAL</b>	<b>11,34,87,386.70</b>

### SCHEDULE- 26 - OTHER PAYMENT

PARTICULARS	AMOUNT
<b>1.Deposit From Staff</b>	
a. withheld Gratuity of Lt. Somnath Oraon	70,839.00
<b>2.Deposit From Students</b>	
a. Caution Money	29,23,300.00
<b>3.Deposits-Other</b>	
a. Earnest Money	4,95,000.00
<b>4.Other Current Liabilities</b>	
a. Other Liabilities	2,76,26,504.10
<b>5.Statutory Liabilities</b>	
a. Employees Loan Repayment	1,36,200.00
b.GPF Deduction from Salary	1,03,63,226.00
c.GIS Premium	34,500.00
d.LIC Premium	9,78,076.00
e. New Pension Scheme(Employees Contribution)	21,17,912.00
f. New Pension Scheme(Employers Contribution)	21,13,178.00
<b>TOTAL</b>	<b>4,68,58,735.10</b>



NATIONAL INSTITUTE OF FOUNDRY & FORGE TECHNOLOGY  
 HATIA, RANCHI-834003  
 BANK RECONCILIATION STATEMENT AS ON 31.03.2018

1) CANARA BANK SB A/C NO. 2730101006939 [NON PLAN A/C]  
 Particulars

Particulars	Amount
Balance as per Ledger as on 31.03.2018	1,38,94,177.52
Add: Cheques issued but not cleared as on 31.03.2018 (Annexure-I)	63,79,553.00
Less: Cheques deposited but not cleared as on 31.03.2018 (Annexure-II)	1,02,97,241.00
Balance as per Ledger as on 31.03.2018 (After Calculation)	99,75,489.52
Balance as per Bank Statement as on 31.03.2018	99,75,489.52
Difference	-

2) CANARA BANK SB A/C NO. 2730101007913 [PLAN A/C]  
 Particulars

Particulars	Amount
Balance as per Ledger as on 31.03.2018	4,35,54,447.60
Add: Cheques issued but not cleared as on 31.03.2018	1,00,00,000.00
Date	
Cheque No.	525347
Amount	1,00,00,000.00
Less: Amount Received in Cash Book but not cleared in Bank	2,21,00,000.00
Date	
Cheque No.	
Amount	2,21,00,000.00
Balance as per Ledger as on 31.03.2018 (After BRS)	3,14,54,447.60
Balance as per Bank Statement as on 31.03.2018	3,14,54,447.60
Difference	-

3) CANARA BANK SB A/C NO. 2730101011451  
 Particulars

Particulars	Amount
Balance as per Ledger as on 31.03.2018	1,000.00
Less: Bank Charges Debited by Bank but not in cash book	106.00
Balance as per Ledger as on 31.03.2018 (After Calculation)	894.00
Balance as per Bank Statement as on 31.03.2018	894.00
Difference	-

4) CANARA BANK SB A/C NO. 2730101011452  
 Particulars

Particulars	Amount
Balance as per Ledger as on 31.03.2018	1,000.00
Less: Bank Charges Debited by Bank but not in cash book	106.00
Balance as per Ledger as on 31.03.2018 (After Calculation)	894.00
Balance as per Bank Statement as on 31.03.2018	894.00
Difference	-

5) CANARA BANK SB A/C NO. 2730101011453  
 Particulars

Particulars	Amount
Balance as per Ledger as on 31.03.2018	1,000.00
Less: Bank Charges Debited by Bank but not in cash book	106.00
Balance as per Ledger as on 31.03.2018 (After Calculation)	894.00
Balance as per Bank Statement as on 31.03.2018	894.00
Difference	-



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# Annual Report 2017-18

**Annexures Forming Part of Bank Reconciliation Statement**

Date	Particulars	Chq. No.	Amount
23.03.2018	Gardening	439241	24,850.00
23.03.2018	LIC Premium	439247	69,515.00
28.03.2018	Dipti Kumari	439255	28,755.00
28.03.2018	R.L.Gorai-Building Maintenance	439259	16,335.00
28.03.2018	Basudeb Auto Ltd.	439265	35,125.00
28.03.2018	Honorarium	439266	6,000.00
28.03.2018	Laboratory & Workshop Expenses	439267	7,000.00
28.03.2018	S.K.Pandey(External Faculty)	439268	2,100.00
28.03.2018	S.S.Makaptra(External Faculty)	439269	1,300.00
28.03.2018	Supra SAE 2016 Sponsorship	439270	50,000.00
28.03.2018	Mansab Mallik(External Faculty)	611401	25,372.00
28.03.2018	Sukalyan Chakraborty(External Faculty)	611402	23,673.00
28.03.2018	Sitting Charges for Meetings	611403	3,500.00
28.03.2018	Sitting Charges for Meetings	611404	5,836.00
28.03.2018	NPS Contribution	611405	7,91,602.00
28.03.2018	PSERB Project	611406	4,000.00
28.03.2018	PSERB Project	611437	23,414.00
28.03.2018	PSERB Project	611437	7,873.00
28.03.2018	RAJESH ENTERPRISES	611409	79,472.00
28.03.2018	Krishan Kumar	611410	1,88,597.00
28.03.2018	Electrical Maintenance	611411	1,02,569.00
28.03.2018	Electrical Maintenance	611412	24,847.00
28.03.2018	Sports Equipment	611413	24,990.00
28.03.2018	Books (Non-Plan)	611414	1,86,816.00
28.03.2018	Books (Non-Plan)	611415	60,619.00
28.03.2018	Hemant Kumar Gupta(Canteen)	611416	25,512.00
28.03.2018	V.M.S. Hussain-CPDA Payable	611417	1,60,000.00
28.03.2018	Banmesh Gupta-CPDA Payable	611418	60,727.00
28.03.2018	Laboratory & Workshop Expenses	611419	21,034.00
28.03.2018	Travelling & Conveyance	611421	1,11,395.00
28.03.2018	S.K.Pandya-CPDA Payable	611422	4,88,618.00
28.03.2018	Advance to SBI (Online)-1268	611423	3,70,690.00
28.03.2018	Laboratory & Workshop Expenses	611424	2,28,177.00
28.03.2018	Laboratory & Workshop Expenses	611425	24,367.00
28.03.2018	Laboratory & Workshop Expenses	611426	18,455.00
28.03.2018	Laboratory & Workshop Expenses	611427	8,260.00
28.03.2018	Laboratory & Workshop Expenses	611428	20,356.00
28.03.2018	Laboratory & Workshop Expenses	611429	24,636.00
28.03.2018	Advance to SBI (Online)-1268	611430	39,457.00
28.03.2018	Sundry Expenses (8 Bills Reimbursement)	611431	2,69,422.00
28.03.2018	Binooy Kumar Sinha	611432	19,000.00
28.03.2018	Scholarship to PhD.Students	611433	2,11,628.00
28.03.2018	Vineet Chak-CPDA Payable	611434	18,778.00
28.03.2018	LIC Maturity Claim	611435	39,539.00
28.03.2018	R.L.Gorai-Building Maintenance	611436	7,91,957.00
31.03.2018	Advance to SBI (Online)-1268	611438	64,310.00
31.03.2018	Srujita Gupta-CPDA Payable	611439	13,499.00
31.03.2018	N.K.Singh-CPDA Payable	611440	4,500.00
31.03.2018	Sujata Gupta-CPDA Payable	267141	54,000.00
31.03.2018	C.Chatonadhyay-CPDA Payable	267142	49,560.00
31.03.2018	Cleaning Material & Services	267143	1,34,601.00
31.03.2018	R.L.Gorai-Building Maintenance	267144	2,24,250.00
31.03.2018	Arrear to Pensioners	267145	8,77,965.00
31.03.2018	Advance to SBI (Online)-1268	267146	2,09,700.00
	<b>TOTAL</b>		<b>63,76,553.00</b>



ANNEXURE-II: Cheques deposited but not cleared as on 31.03.2018

Date	Particulars	Cheq. No.	Amount
11.05.2017	Examination Fee-Insttute (Cash Deposit)		2,300.00
04.09.2017	Tuition Fees		22,350.00
08.09.2017	Tuition Fees		25,600.00
29.12.2017	Examination Fees		1,700.00
28.03.2018	Camara Bank-7913 (Plan)		1,00,00,000.00
28.03.2018	Advance to SBL (Umbra)-3268		2,29,027.00
31.03.2018	Electricity Charges-BSNL	110647	5,469.00
31.03.2018	A.K.Prasanna-Expenses Advance		10,000.00
31.03.2018	NIPPT Golden Jubilee Celebration		795.00
	TOTAL		1,02,97,245.00



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**ANNEXURE-II: Cheques deposited but not cleared as on 31.03.2018**

Date	Particulars	Cheq. No.	Amount
11.05.2017	Examination Fee-Institute (Cash Deposit)		2,300.00
04.09.2017	Tuition Fees		22,350.00
08.09.2017	Tuition Fees		25,600.00
29.12.2017	Examination Fees		1,700.00
28.03.2018	Canara Bank-7913 (Plan)		1,00,00,000.00
28.03.2018	Advance to SEI (Online)-1268		2,29,027.00
31.03.2018	Electricity Charges-BSNL	110647	5,469.00
31.03.2018	A.K.Pramanik-Expenses Advance		10,000.00
31.03.2018	NIFFT Golden Jubilee Celebration		795.00
	<b>TOTAL</b>		<b>1,02,97,241.00</b>



**GENERAL PROVIDENT FUND ACCOUNT**

**FOR THE FINANCIAL YEAR 2017-18**



*Annual Report 2017-18*



# Annual Report 2017-18

## NATIONAL INSTITUTE OF FOUNDRY & FORGE TECHNOLOGY

HATIA, RANCHI-834003

GENERAL PROVIDENT FUND ACCOUNT

BALANCE SHEET AS AT 31st MARCH, 2018

Previous Year	Liabilities	Current Year	Previous Year	Assets	Current Year
6,40,77,415.00	<b>GPF</b>	7,18,05,848.00	6,60,57,400.00	<b>Investment in Term Deposit</b>	8,14,29,995.00
	Opening Balance	6,40,77,415.00		2030401002217/3	89,10,279.00
	Add: Subscription	1,01,23,000.00		2030401002218/3	89,10,280.00
	Add: Advances Recovered	1,08,465.00		270302000004/3	58,98,530.00
	Less: Advances			2730401001442/5	1,59,06,183.00
	Less: Withdrawals	45,22,000.00		2730401001627/3	1,40,10,423.00
	Less: GPF Final settlements	27,41,070.00		2730401001848/5	68,43,061.00
	Add: Interest Credited	47,60,038.00		30155723633/1(SBII)	1,10,51,239.00
	<b>Closing Balance</b>	<b>7,18,05,848.00</b>		2730401001442/4	99,00,000.00
1,37,55,570.29	<b>Interest Reserve</b>	1,42,83,483.29	33,74,000.00	Accrued Interest	28,73,732.00
	Opening Balance			Cash at Bank	
	Add: Excess of Income over Exp.	5,27,913.00	84,01,585.29	Canara Bank SB A/c No. 2730101007115	17,85,604.29
	<b>Closing Balance</b>	<b>1,42,83,483.29</b>		<b>Total</b>	<b>8,60,89,331.29</b>
<b>7,78,32,985.29</b>	<b>Total</b>	<b>8,60,89,331.29</b>	<b>7,78,32,985.29</b>		

AS INTERNAL AUDITOR

For: M/s R. Shah & Co. (CHARTERED ACCOUNTANTS)

CA. Neetu Jejan (PARTNER)

MEMBERSHIP NO.: 406561

PLACE : RANCHI

DATE: 07.09.2018

13/09/18

Asstt. Registrar-Accounts

14-09-18

Director

Prof./c (Admin)

Consultant-Audit

R. Shah & Co. Chartered Accountants RANCHI

**SCHEDULE - 1 - CORPUS/CAPITAL FUND**

Particulars	Current Year	Previous Year
Balance at the beginning of the year	4,68,62,897.39	5,09,40,395.93
Add: Contributions towards Corpus/Capital fund	-	-
Add: Grants Received	-	-
Add: Excess of Income over Expenditure transferred from the Income & Expenditure Account	-	-
<b>TOTAL</b>	<b>4,68,62,897.39</b>	<b>5,09,40,395.93</b>
Deduct: Deficit transferred from Income & Expenditure Account	(1,49,83,238.28)	(40,77,498.54)
<b>Balance at the year end</b>	<b>3,18,79,659.11</b>	<b>4,68,62,897.39</b>



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### SCHEDULE - 2- TEQIP FIXED ASSETS (O.B)

S.No	Assets Heads	Opening Balance	Additions	Deductions	Total	Depreciation for the Year	Closing Balance
1	2	3	4	5	6	7	8
1	Scientific & Laboratory Equipment	3,75,42,094.82	-	-	3,75,42,094.82	89,56,858.47	2,85,85,236.35
2	Furniture, Fixtures & Fittings	5,32,235.57	-	-	5,32,235.57	3,50,068.19	1,82,167.38
3	Vehicles	2,32,945.93	-	-	2,32,945.93	2,06,481.93	26,464.00
4	Lib. Books & Scientific Journals	66,95,382.96	-	-	66,95,382.96	54,69,829.69	12,25,553.27
	<b>Total ( C )</b>	<b>4,50,02,659.28</b>	<b>-</b>	<b>-</b>	<b>4,50,02,659.28</b>	<b>1,49,83,238.28</b>	<b>3,00,19,421.00</b>

### SCHEDULE- 3 - CURRENT ASSETS(OB)

Particulars	Current Year	Previous Year
1. cash in Hand	1,255.00	1,255.00
2. Cash at Bank	7,04,229.11	7,04,229.11
<b>Total</b>	<b>7,05,484.11</b>	<b>7,05,484.11</b>

### SCHEDULE- 4 - LOANS & ADVANCES(OB)

Particulars	Current Year	Previous Year
1. M/s Ed.CIL (India) Ltd.	11,23,225.00	11,23,225.00
2. M/s NIFFT	31,529.00	31,529.00
<b>Total</b>	<b>11,54,754.00</b>	<b>11,54,754.00</b>



**NATIONAL INSTITUTE OF FOUNDRY AND FORGE TECHNOLOGY  
HATIA ,RANCHI-834003**

Schedule 27

**SIGNIFICANT ACCOUNTING POLICIES AND NOTES ON ACCOUNTS (FY: 2017-18)**

**A- SIGNIFICANT ACCOUNTING POLICIES**

**A) GENERAL**

The Financial Statement are prepared in three parts i.e. (i) Receipts and Payments Account, (ii) Income and Expenditure Account and (iii) Balance sheet along with other two subsidiary accounts of the Institute viz. NIFFT- General Provident Account and Technical Education Quality Improvement Programme-NIFFT. The Annual Accounts of the Institute for FY 2017-18 are prepared on the revised "Formats of Financial Statements for Central Higher Education Institutions" which is suggested by the Ministry of Human Resource Development, Department of Higher Education, Government of India, Shastri Bhawan, New Delhi vide No. 29-4/2012-IFD dated 17<sup>th</sup> April, 2015.

**SIGNIFICANT ACCOUNTING POLICIES**

**1. Accounting Convention:**

The Annual Accounts are prepared under the historic cost convention and ongoing concern concept, unless otherwise stated, and on Accrual Method of Accounting.

**2. Revenue Recognition:**

- (i) The Institute is funded by the Ministry of Human Resource & Development (MHRD), Govt, of India. Grant-in-aid from Government of India is accounted for in the same financial year for which it is sanctioned by the MHRD, Government of India.
- (ii) The Institute, by way of its own nature/character, generates internal income. The major sources are various fees realized from students, interest earned on investments, consultancy and testing fees and other miscellaneous income. Fee from Students, Sale of Admission forms and realization against discarded/written off assets are accounted for on Cash Basis.
- (iii) Interest on Savings Bank Accounts is accounted for on Cash Basis.
- (iv) Interest on interest bearing advances to staff for house building, vehicles and computers are accounted for on accrual basis in the year of advance even, though the actual recovery of interest in case of house building advances starts after full repayment of principal amount.



*Annual Report 2017-18*



### 3. Fixed Asset & Depreciation:

- (i) Fixed assets in case of assets belonging to Account are stated at cost of acquisition less accumulated depreciation thereon & impairment loss, if any. The cost includes inward freight, customs duty, installation charges and other directly attributable expenses related to their acquisition, installation and commissioning as per Rule 292 (1) (a) of GFR.
- (ii) The assets which are unserviceable condemned or out of use are written-off as per the provision given in Rule-124 of General Financial Rules (GFR). Such written-off is given effect in the Balance Sheet only after the issue of final order by the competent authority of the Institute.
- (iii) Patents and copy rights, E-Journals and computer software are grouped under Intangible assets
- (iv) Fixed assets are valued at cost less accumulated depreciation. Depreciation on fixed assets is provided on Straight Line Method at the following rates. Depreciation is provided for the whole year on net additions during the year.

Land	0%	Office Equipment	7.5%
Site Development	0%	Audio Visual Equipment	7.5%
Buildings	2%	Computers & Peripherals	20%
Roads & Bridges	2%	Furniture, Fixtures & Fittings	7.5%
Tube wells & Water Supply	2%	Vehicles	10%
Sevrage & Drainage	2%	Lib. Books & Scientific Journals	10%
Electrical Installation and Equipment	5%	Computer Software	40%
Plant & Machinery	5%	E-Journals	40%
Scientific & Laboratory Equipment	8%	Patents	9 Years

### 4. Capital Work-in-Progress:

Deposit works are accounted for as Capital Work-in-Progress on the basis of inputs provided from Central Public Works Department. These are valued at cost. Running bills of contractors are also accounted for as Capital Work-in-Progress till completion. No depreciation is charged on capital work in progress. Secured advances and mobilization advances being in the nature of advances are disclosed separately under the head Loans & Advances.

### 5. Investments:

Investments represent amount held in the form of fixed deposit/Term Deposit with banks as per the guidelines issued by Government of India / Reserve Bank of India. No investments are made by the Institute in tradable securities. The investments are valued at cost.



**6. Corpus/Capital Fund:**

The excess of Income over Expenditure over income is added to the Corpus / Capital Fund and the excess of expenditure over income is deducted from Corpus/Capital Fund.

**7. Foreign Currency Transactions:**

Foreign Currency Transactions are accounted for at the rate of exchange prevailing on the dates of such transactions.

**8. Provisions:**

Known liabilities recognized up to the date of finalization of accounts are provided for.

**9. Income Tax:**

The Institute is exempt from Income Tax as per the Provisions of Section 10(23C)(iii)(ab) of the Income Tax Act 1961. Therefore, no provision for Income Tax is made.

**10. Purchase procedure through Institute's Stores & Purchase Unit:**

Payments made/cheques issued for purchase of consumable and non-consumable stocks against the confirmed Purchase Orders released by Institute's Stores and Purchase Unit are treated as final expenditure.

AS INTERNAL AUDITOR

For: M/s R. Shah & CO. (CHARTERED ACCOUNTANTS)

*Rajman*  
CA. Neetu Jajani (PARTNER)

MEMBERSHIP NO.: 406561

PLACE : RANCHI

DATE: 07.09.2018



*Rajman*  
19.09.18  
Asstt. Registrar-Accounts

*V. S. S. S.*  
Consultant-Audit  
19/09/2018  
Prof. Jc (Admin)

*[Signature]*  
14-09-18  
Director





## **B- NOTES ON THE ACCOUNTS**

1. As the General Provident Fund Accounts are owned by members of those Funds and not by the Institution, These Accounts were separated from the Institute Accounts from 01.04.2015. A Receipt & Payments Account, an Income & Expenditure Account (on Accrual Basis) and a Balance Sheet of the General Provident Account have been attached to the Institute Accounts.
2. In the Balance sheet as on 31.03.2015 and the Balance Sheet of earlier years, Fixed Assets Created out of Plan Funds and Non Plan Funds were not exhibited distinctly. The Additions during the Year from 01.04.2015 from Plan and Non Plan Funds and the depreciation on those additions respectively have been exhibited distinctly in Sub Schedules A & B to the main schedule of Fixed Assets (Schedule -3).
3. The method of depreciation has been changed from WDV to SLM as instructed by MHRD. Due to unavailability of data for fixed assets SLM method is used taking retrospective effect from 2006. As the management was able to provide data from 2006 (Schedule3).
4. SBI Bank A/c no -36228721268 was treated as bank a/c for the F.Y. 2015-16 but for the current F.Y. It is treated under the head loans, Advances & Deposit. The Institute explanation regarding the same is that the bank A/c is treated as advance with the limit of Rs. 10 lakh payment is made through this a/c for any expenditure made and the same A/c is claimed from the main A/c.
5. **Expenditure in Foreign Currency**  
NIL
6. In the opinion of the management, the current assets, loans, Advances and Deposits have a value on realization in the ordinary course, equal at least to the aggregate amount shown in the Balance Sheet.
7. Previous year's Figures have been regrouped /rearranged wherever found necessary.
8. Schedule 1 to 17 are annexed to and bears an integral part of Balance Sheet as at 31<sup>st</sup> March 2018 and Income and Expenditure account for the year ended on that date.



9. In FY 2016-17 full amount of Fees Rs 22,350/- was taken under admission fees but as per fees structure admission fees is Rs. 200/- each so in current FY 2017-18 only Rs. 200/- has been transferred under admission fees and remaining part of fees has been transferred to other fees component as per fees structure. Due to this reason there is difference in amount of admission fees in FY 2016-17 & FY 2017-18.

10. Due to following reasons amount of interest on investment is lower in FY 2017-18 in comparison to FY 2016-17

- (i) There is approx 12.00 Crore less investment in FY 2017-18
- (ii) Major fund is related to General & salary head which is expensed on monthly basis.
- (iii) Rate of interest decreased in FY 2017-18 in comparison with FY 2016-17

AS INTERNAL AUDITOR

For: M/s R. Shah & CO. (CHARTERED ACCOUNTANTS)

*Neetu Jeani*  
CA. Neetu Jeani (PARTNER)

MEMBERSHIP NO.: 406561

PLACE : RANCHI

DATE: 07.09.2018

*Neetu Jeani*  
Asstt. Registrar-Accounts

*Neetu Jeani*  
Consultant-Audit

*Neetu Jeani*  
14-09-18  
Director



Annual Report 2017-18



भारतीय लेखा और लेखा परीक्षा विभाग

कार्यालय प्रधान निदेशक लेखापरीक्षा (केंद्रीय) लखनऊ



INDIAN AUDIT & ACCOUNTS DEPARTMENT

Office of the Principal Director of Audit (Central) Lucknow

2555  
19-3-19

No. PDAC/LKO/SAR-NIFFT/2017-18/ 342

Dated: 06.03.2019

To,

The Director,  
National Institute of Foundry & Forge Technology  
Ranchi – 834003

**Subject: Separate Audit Report on the accounts of National Institute of Foundry & Forge Technology, Hatia, Ranchi for the year 2017-18.**

Sir,

I enclose a copy of the Audit Report and Audit Certificate along with audited Annual Accounts of National Institute of Foundry & Forge Technology, Hatia, Ranchi for the year 2017-18 for information and necessary action.

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

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

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

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

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

Yours faithfully,

Encl: - As above.

Principal Director of Audit (Central)

A-2 (ATC)  
19-03-19

1

**NATIONAL INSTITUTE OF FOUNDRY & FORGE TECHNOLOGY**  
**HATIA, RANCHI-834003**  
**GENERAL PROVIDENT FUND ACCOUNT**  
**INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31st MARCH 2018**

EXPENDITURE	Current Year	INCOME	Current Year
Interest credited to GPF Account	47,60,038.00	Interest Earned on Investment Interest received on FDR	54,72,595.00
Bank Charges	107.00	Add: Interest accrued on 31.03.2018	28,73,732.00
Excess of Income over Expenditure transferred to GPF Interest Reserve	5,27,913.00	Less: Interest Accrued on 31.03.2017	33,74,000.00
<b>Total</b>	<b>52,88,058.00</b>	<b>Total</b>	<b>52,88,058.00</b>

AS INTERNAL AUDITOR  
 For: M/s R. Shah & CO. (CHARTERED ACCOUNTANTS)

CA. Neetu Jejaní (PARTNER)

MEMBERSHIP NO.: 406561

PLACE : RANCHI

DATE: 07.09.2018

*Neetu Jejaní*  
 07/09/18

Asstt. Registrar-Accounts



*V. S. Singh*  
 13/09/2018  
 Prof./c (Admin)

Consultant-Audit

*[Signature]*  
 14-09-18  
 Director



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# Annual Report 2017-18

**NATIONAL INSTITUTE OF FOUNDRY & FORGE TECHNOLOGY**  
**HATIA, RANCHI-834003**  
**GENERAL PROVIDENT FUND ACCOUNT**  
**RECEIPT AND PAYMENT ACCOUNT FOR FINANCIAL YEAR ENDED 31st MARCH 2018**

RECEIPTS	Current Year	PAYMENTS	Current Year
Opening Balance			
Canara Bank SB A/c No. 2730101007115	84,01,585.29	GPF Investment	99,00,000.00
GPF Subscription	1,01,23,000.00	GPF Final Settlement	27,41,070.00
GPF Advance recovery	1,08,465.00	GPF Withdrawal	45,22,000.00
		Bank Charges	107.00
Interest on Saving Bank Account	3,15,731.00	Closing Balance	17,85,604.29
		Canara Bank SB A/c No. 2730101007115	
<b>Total</b>	<b>1,89,48,781.29</b>	<b>Total</b>	<b>1,89,48,781.29</b>

AS INTERNAL AUDITOR

For: M/s R. Shah & CO. (CHARTERED ACCOUNTANTS)

*R. Shah*

CA. Neetu Jejani (PARTNER)

MEMBERSHIP NO.: 406561

PLACE : RANCHI

DATE: 07.09.2018

*Neetu Jejani*  
15.09/18  
Asstt. Registrar

*R. Shah*  
19/09/2018  
Prof. I/c (Admin)

*R. Shah*  
14-09-18  
Director



# NATIONAL INSTITUTE OF FOUNDRY & FORGE TECHNOLOGY

HATIA, RANCHI-834003

## GENERAL PROVIDENT FUND ACCOUNT DETAILS OF TERM DEPOSITS AS ON 31.03.2018

Sl.	Account Number	Bank	Principle	Interest Accrued
1	2730401002218/3	Canara	89,10,280.00	5,42,813.00
2	2730401002217/3	Canara	89,10,279.00	5,42,813.00
3	2730401001442/5	Canara	1,59,06,183.00	1,40,726.00
4	2730401001848/5	Canara	68,43,061.00	60,542.00
5	2730302000004/3	Canara	58,98,530.00	4,02,108.00
6	2730401001627/3	Canara	1,40,10,423.00	9,18,418.00
7	2730401001442/4	Canara	99,00,000.00	2,48,069.00
8	30155723633/1	S.B.I	1,10,51,239.00	18,243.00
<b>Total:</b>			<b>8,14,29,995.00</b>	<b>28,73,732.00</b>



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**NATIONAL INSTITUTE OF FOUNDRY & FORGE TECHNOLOGY**  
HATIA, RANCHI-834003

**Bank Reconciliation Statement as on 31.03.2018**

**1) CANARA BANK SB A/C NO. 2730101007115 (NIFT GPF A/C)**

Particulars	Amount
Balance as per Ledger as on 31.03.2018	17,85,604.29
Balance as per Bank Statement as on 31.03.2018	17,85,604.29
Difference	-



# TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME ACCOUNT

FOR THE FINANCIAL YEAR 2017-18



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# Annual Report 2017-18

## NATIONAL INSTITUTE OF FOUNDRY AND FORGE TECHNOLOGY

HATIA, RANCHI-834003

### TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME ACCOUNT

BALANCE SHEET AS AT 31st MARCH, 2018

SOURCES OF FUNDS	Schedule	Current Year 2017-18	Previous Year 2016-17
CORPUS/CAPITAL FUND	1	3,18,79,659.11	4,68,62,897.39
<b>TOTAL</b>		<b>3,18,79,659.11</b>	<b>4,68,62,897.39</b>
APPLICATION OF FUNDS	Schedule	Current Year 2017-18	Previous Year 2016-17
FIXED ASSETS	2	3,00,19,421.00	4,50,02,659.28
CURRENT ASSETS	3	7,05,484.11	7,05,484.11
LOANS, ADVANCES & DEPOSITS	4	11,54,754.00	11,54,754.00
<b>TOTAL</b>		<b>3,18,79,659.11</b>	<b>4,68,62,897.39</b>

AS INTERNAL AUDITOR

For: M/s R. Shah & Co. (CHARTERED ACCOUNTANTS)

CA. Neetu Jejani (PARTNER)

MEMBERSHIP NO.: 406561

PLACE : RANCHI

DATE: 07.09.2018



*Neetu Jejani*  
19/09/2018  
Consultant-Audit

*Shriya*  
13/09/2018  
Prof. I/c (Admin)

*[Signature]*  
14-09-18  
Director

**SCHEDULE - 1 - CORPUS/CAPITAL FUND**

Particulars	Current Year	Previous Year
Balance at the beginning of the year	4,68,62,897.39	5,09,40,395.93
Add: Contributions towards Corpus/Capital fund	-	-
Add: Grants Received	-	-
Add: Excess of Income over Expenditure transferred from the Income & Expenditure Account	-	-
<b>TOTAL</b>	<b>4,68,62,897.39</b>	<b>5,09,40,395.93</b>
Deduct: Deficit transferred from Income & Expenditure Account	(1,49,83,238.28)	(40,77,498.54)
<b>Balance at the year end</b>	<b>3,18,79,659.11</b>	<b>4,68,62,897.39</b>



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## **Separate Audit Report of the Comptroller & Auditor General of India on the accounts of National Institute of Foundry and Forge Technology, Hatia, Ranchi for the year ended 31 March 2018**

We have audited the attach Balance Sheet of National Institute of Foundry and Forge Technology, Hatia, Ranchi as at 31 March 2018, the Income & Expenditure Account and Receipts & Payments Account for the year ended on that date under Section 20(1) of the Comptroller & Auditor General's (Duties, Powers & Conditions of Service) Act, 1971 read with Section 20 (i to ii) of the Memorandum of Association of National Institutes of Foundry and Forge Technology Society. The audit has been entrusted for the period 2017-22. These financial statements are the responsibility of the Institute's management. Our responsibility is to express an opinion on these financial statements based on our audit.

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

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

4. Based on our audit, we report that:

i. We have obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purpose of our audit.



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ii. The Balance Sheet, Income & Expenditure Account and Receipts & Payments Account dealt with by this report have been drawn up in the format approved by the Government of India, Ministry of Human Resources Development.

iii. In our opinion, proper books of accounts and other relevant records have been maintained by the National Institute of Foundry and Forge Technology (Institute), Hatia, Ranchi as required under Section 20 (i to ii) of the Memorandum of Association of National Institutes of Foundry and Forge Technology Society in so far as it appears from our examination of such books.

iv. We further report that;

#### **A Balance sheet**

##### **A.1 Liabilities**

##### **A.1.1 Corpus/Capital Fund (Schedule 1) –Rs 102.18 crore**

**A.1.1.1** The Institute received grant in aid of Rs 10 crore under the head capital during the year, interest earned from Government Grant was Rs. 0.21 Crore and unspent balance of previous year was Rs 8.11 crore. During the year, the Institute incurred expenditure of Rs 5.11 crore under the head capital. As such Rs 13.21 crore was to be exhibited as 'Refundable to Ministry' under current liabilities which was not exhibited. This resulted in overstatement of Corpus/Capital Fund and understatement of Current liabilities by Rs 13.21 crore.

**A.1.1.2** The unspent revenue grant of the previous year was Rs 6.80 crore. During the year, the Institute received revenue grant of Rs 23.57 crore and interest earned from Government Grant was Rs 0.22 crore. Revenue expenditure during the year was Rs 25.72 crore. As such Rs 4.87 crore was to be shown as grant refundable to Ministry. Non-exhibition resulted in understatement of Current liabilities and overstatement of Corpus/Capital Fund by Rs 4.87 crore.

##### **A.1.2 Current Liabilities (Schedule 2) –Rs 2.28 crore**

**A.1.2.1** M/s Elsevier BV claimed US \$ 82534.58 for supply of E-journal (science direct) for the period January 2017 to December 2017. The institute, however, paid Rs 43.95 lakh (\$ 68546.50) due to paucity of budget. However, the liability of \$ 13988.08 (Rs. 9.10 lakh) was not disclosed in the accounts. Further from the same firm, Institute subscribed E-Journal for the period January 2018 to March 2018. Institute neither made payment to the firm nor made provision for the same in the accounts for Rs 11.95 lakh. This resulted in understatement of Current Liabilities and Intangible Assets by Rs 21.05 lakh each.

**A.1.2.2** The Institute did not disburse scholarship and stipend amounting to Rs 59.78 lakh to M. Tech and ADC students from January 2018 to March 2018. Further Institute has also made no provision for the same. This has resulted in understatement of Current Liabilities and Academic Expenses by Rs 59.78 lakh each.

## **A.2 Assets**

### **A.2.1 Fixed Assets (Schedule 3) – Rs 27.88 crore**

**A.2.1.1** Loans, Advance and Deposits depicted as on 31.03.2018 advance to CPWD Rs 59.92 crore against deposit works sanctioned up to 2014. As per Report of CPWD, all works (which was sanctioned up to 2014) except Gymkhana and allied building were completed for Rs 51.74 crore. The civil work of Gymkhana building was completed by CPWD for Rs 7.74 crore (installation of AC and some misc, work is to be done). But these works were not capitalized under the head Building or under the head Work in Progress. This resulted in understatement of Fixed Assets and overstatement Loans, Advances and Deposits by Rs 59.48 crore.

**A.2.1.2** The Institute deposited with CPWD Rs 12.56 crore for works (Civil and electrical) sanctioned from 2015-16 onwards which was accounted for under the head Capital Work in Progress, against which CPWD incurred expenditure of Rs 13.87 crore up to March 2018. As such the Institute was required to exhibit Rs 1.31 crore as liability. Non depiction resulted in understatement of Liabilities and Fixed Assets (Work in Progress) by Rs 1.31 crore.

**A.2.1.3** The Institute purchased print Journals from Total Library Solution Pvt. Ltd., New Delhi for the period from January 2018 to December 2018 for Rs 41.57 lakh on 8.02.2018 and accounted for incorrectly under the head E-Journals which is depreciated at the rate of 40 percent. Printed Journals are tangible assets, as such to be booked under the head Library books and Journals, which attract depreciation rate of 10 percent.

The irregular treatment resulted is overstatement of deficit and understatement of assets by Rs 12.47 lakh.

### **A.2.2 Current Assets (Schedule 4) –Rs 11.30 crore**

**A.2.2.1** Institute received sanction of revenue grant of Rs 2.21 crore under the head OH-36 on 15.03.2018, against which the amount is actually received in April 2018. The Institute, however, accounted for the above amount in cash Book on 28.03.2018. This has resulted in overstatement





of bank under Current Assets and understatement of grant receivable under head Loans, Advances and Deposits by Rs 2.21 crore each.

#### **B. Income and Expenditure Account**

**B.1** The CPWD incurred expenditure of Rs 19.80 lakh on day to day operation and maintenance of pressure filtration plant out of advance given by the Institute. Though the expenditure was reflected in Form 65 submitted by CPWD, the institute did not account for the expenditure in Income and Expenditure Account resulting in understatement of excess of expenditure over income and understatement of Current Liabilities.

#### **C Receipts and Payments Account**

**C.1** Record revealed that the Institute has a Bank Account No.36228721268 (savings) in SBI. Transaction of this Account has not been incorporated in any Cash or Bank Book. The closing balance as per bank statement as on 31.03.2018 was Rs 8.07 lakh. The closing balance was also not reflected in Receipts and Payments Account. Bank book may be prepared and bank balance is to be reconciled with book balance.

**C.2** The Institute maintains a cash/bank book for recording transactions of Ministry of Steel for Chair Fund. As per Bank Book, the opening and closing balance of bank were Rs 3.94 lakh and Rs 4.32 lakh respectively. The transactions of this head were not recorded in the Receipts and Payments Account and Balance sheet. This resulted in understatement of Bank balance by Rs 4.32 lakh.

**C. 3** Closing balance of Receipts and Payment Account depicted dormant bank account with bank balance of Rs 3344.10 in SBI Savings account at Hatia. The Institute, however, could not produce Bank statement against this account.

**C.4** TEQIP Account had been closed on 31.03.2009. The Balance Sheet and Receipts and Payments Account of TEQIP showed cash balance of Rs. 704229.11 as on 31.03.2017. The Bank Account is dormant.

#### **D. Accounting Policy and Notes to Accounts**

**D.1** The Institute was situated on land leased by M/s HEC and the lease agreement expired in June 1998, but it was not renewed by M/s HEC till November 2017. This was not mentioned even in the Notes on accounts.

**D.2** The Institute had not made provisions for retirement benefit on actuarial valuation.

#### **E. General**

**E.1** As per Accounting Standard 6, when a change in method of depreciation is made, depreciation is recalculated in accordance with the new method from the date the assets coming into use.

During the year, the Institute changed its depreciation method from WDV to Straight line method. The institute did not recalculate the depreciation from the respective assets coming into use and also not quantified the effect of change of method in its annual accounts as required in AS 6. Further Institute instead of charging the whole depreciation (Rs 1.22 crore net of depreciation and appreciation) in Income and Expenditure Account, charged Rs 3.74 crore in Income and Expenditure Account and appreciation directly in Capital account. The irregular treatment resulted in overstatement of Excess of Expenditure over Income by Rs 2.52 crore.

**E.2** Although TEQIP project had been completed and closed on 31 March 2009, loans and advances amounting to Rs 11.55 lakh were lying unadjusted (Rs 11,23,225 advance to EDCIL Ltd. (2008-09) and Rs 31,529 advance to NIFFT (2009-10). No corrective action has been taken by the Institute despite the issue being raised in previous Audit Report.

**E.3** The Institute refunded Rs 1.80 lakh to M/s MTAB Engineer (P) Ltd as earnest money without actual receipt in November 2016. Though more than one year has elapsed the amount was not recovered. The Institute did not make any provision in annual accounts for the loss.

#### **F Grants- in-Aid**

The Institute received Grants Rs 33.57 crore (Capital Rs 10 crore and Revenue Rs 23.57 crore) from MHRD during the financial year 2017-18. The internal income of the Institute was Rs 4.01 crore. Interest earned on Government Grant was Rs 0.43 crore (Plan Rs.0.21 crore and non-plan Rs. 0.22 crore). The unspent balance of previous year was Rs 14.91 crore (Plan Rs 8.11 crore and Non Plan Rs 6.80 crore). Thus, the Institute had total fund of Rs 52.92 crore (Plan/Capital Rs 18.32 crore, Non plan/Revenue Rs 30.59 crore and Internal resources Rs 4.01 crore). Out of which the Institute utilized a sum of Rs 30.83 crore (Plan/Capital Rs 5.11 crore and Non Plan/Revenue Rs 25.72 crore) and leaving of balance of Rs 22.09 crore (Plan/Capital Rs 13.21 crore and Non Plan/Revenue Rs 4.87 crore and internal resources Rs 4.01 crore) as unutilized amount as on 31.03.2018.

#### **G. Management letter**





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

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

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

(a) In so far as it relates to the Balance Sheet, of the state of affairs of the National Institute of Foundry and Forge Technology, Hatia, Ranchi as at 31<sup>st</sup> March 2017, and

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

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

**Place: Lucknow**

**Date: 8.3.2019**

**Principal Director of Audit (Central), Lucknow**

## Annexure-I to Audit Report

### 1. Adequacy of Internal Audit system:

The Internal Audit Wing of the Institute consists of one person only who conduct pre-check of bills only. Besides, no Internal Audit Manual has been prepared. Internal audit is conducted by a CA Firm.

### 2. Adequacy of Internal Control System:

The internal control system in the Institute reflected deficiencies in the following areas:

- According to Rule 14 (i) of the Rules and Regulation of Memorandum of Association (MOA) of NIFFT 'The Board shall ordinarily meet once in every three months. Records revealed that during the year 2017-18 only two meetings of BOG were held.
- The Institute has not prepared Internal Audit and Office Procedure Manual. Besides, definition and job description of the officers and staff and procedure for maintaining accounts and records has not been put in place.
- No transfer policy is in place especially the employees dealing with cash, valuables, stores and stock have been put in place.
- Physical progress of the work-in- progress of buildings was not monitored by the concerned authority, resulting in delays in completion of these buildings.
- No Management Reporting system exists in the Institute.
- There is no Investment Committee in the Institute for investment of GPF and other surplus funds.
- Register of valuables has not been maintained. The Institute has also not maintained Expenditure Control Register, Grant in Aid Register, Advance Register, Medical Claim Register and Register of Contract.
- No proper procedures for checking, reconciliation and authentication of ledgers have been designed.
- Fixed Assets Register has not been completed.
- Advance was pending for more than 05 years for settlement.
- No physical verification was done of Fixed Assets and Inventory during the year.
- Due to delayed payments of energy bills, the Institute had to pay DPS of Rs 1.60 lakh during the year.
- Cheque issue register were not being maintained properly. Date of encashment of cheque was also not recorded in the Register.
- Acknowledgements of receipts were not attached with vouchers.



*Annual Report 2017-18*



**3. System of physical verification of Fixed Assets and Inventory**

The Institute did not carry out physical verification of fixed assets as well as consumable and non-consumable items since a long time. In absence of physical verification, actual existence of assets could not be ascertained in Audit.

**4. Regularity in payment of statutory dues**

The Institute is regular in payment of statutory dues.



