



Yearly Status Report - 2014-2015

Part A

Data of the Institution

1. Name of the Institution		BIRLA INSTITUTE OF TECHNOLOGY
Name of the head of the Institution		Dr. M. K. Mishra
Designation		Vice Chancellor
Does the Institution function from own campus		Yes
Phone no/Alternate Phone no.		+916512275402
Mobile no.		9431100447
Registered Email		vc@bitmesra.ac.in
Alternate Email		registrar@bitmesra.ac.in
Address		Birla Institute of Technology, Mesra
City/Town		Ranchi
State/UT		Jharkhand
Pincode		835215
2. Institutional Status		

University	Deemed
Type of Institution	Co-education
Location	Rural
Financial Status	private
Name of the IQAC co-ordinator/Director	Prof. A.K.Sinha
Phone no/Alternate Phone no.	+916512276052
Mobile no.	9431382733
Registered Email	iqac@bitmesra.ac.in
Alternate Email	aksinha@bitmesra.ac.in

3. Website Address

Web-link of the AQAR: (Previous Academic Year)	https://www.bitmesra.ac.in/iqac/page?page=iqac&pid=170
4. Whether Academic Calendar prepared during the year	Yes
if yes,whether it is uploaded in the institutional website: Weblink :	https://bitmesra.ac.in/UploadedDocuments/deanugpg/files/Academic%20Schedule%20MO%202014-15.pdf

5. Accreditation Details

Cycle	Grade	CGPA	Year of Accreditation	Validity	
				Period From	Period To
1	B+	78.25	2003	16-Sep-2003	15-Sep-2008

6. Date of Establishment of IQAC

22-Sep-2010

7. Internal Quality Assurance System

Quality initiatives by IQAC during the year for promoting quality culture		
Item /Title of the quality initiative by IQAC	Date & Duration	Number of participants/ beneficiaries
NBA Accreditation of PG Program	14-Mar-2015 1	3

NBA Accreditation of PG Program	15-Sep-2014 1	1
NBA Accreditation of UG Program	14-Mar-2015 1	2
NBA Accreditation of UG Program	15-Sep-2014 1	2
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8. Provide the list of Special Status conferred by Central/ State Government-UGC/CSIR/DST/DBT/ICMR/TEQIP/World Bank/CPE of UGC etc.

Institution/Department/Faculty	Scheme	Funding Agency	Year of award with duration	Amount
Institution	TEQIPII	NPIU(MHRD)	2011 5	175000000
Chemistry (Deptt.)	FIST	DST	2014 3	16000000
Pharmaceutical Sciences (Deptt.)	FIST	DST	2014 5	6700000
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9. Whether composition of IQAC as per latest NAAC guidelines:

Yes

Upload latest notification of formation of IQAC

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10. Number of IQAC meetings held during the year :

6

The minutes of IQAC meeting and compliances to the decisions have been uploaded on the institutional website

Yes

Upload the minutes of meeting and action taken report

[View File](#)

11. Whether IQAC received funding from any of the funding agency to support its activities during the year?

No

12. Significant contributions made by IQAC during the current year(maximum five bullets)

Accreditation Awareness drive MoU with Academic Institutions Quality Training programs TEQIPII

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13. Plan of action chalked out by the IQAC in the beginning of the academic year towards Quality Enhancement and outcome achieved by the end of the academic year

Plan of Action	Achievements/Outcomes
Quality programs for teaching and non-teaching staffs	Organised programs on pedagogical teaching and skill improvement programs for non-teaching staffs.
Sustenance of accredited programs	Updation of accredited programs
Initiation of MoU's with academic institutions.	Several MoU's with Universities
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14. Whether AQAR was placed before statutory body ?	No
15. Whether NAAC/or any other accredited body(s) visited IQAC or interacted with it to assess the functioning ?	No
16. Whether institutional data submitted to AISHE:	Yes
Year of Submission	2015
Date of Submission	19-Aug-2015
17. Does the Institution have Management Information System ?	Yes
If yes, give a brief description and a list of modules currently operational (maximum 500 words)	The management information system at BIT Mesra has been in force since 2011 with three modules implemented for the purpose of proper record keeping and smooth functioning of different sections. All the three modules work independently. Osprey Technology from Kolkata provides the three different modules which are listed below 1) Administration 2) Finance and Accounts 3) Student Admission and support. In addition, the Training and Placement office has its own inhouse built MIS software to manage the activities of Placement.

Part B

CRITERION I – CURRICULAR ASPECTS

1.1 – Curriculum Design and Development

1.1.1 – Programmes for which syllabus revision was carried out during the Academic year

Name of Programme	Programme Code	Programme Specialization	Date of Revision
BE	N/A	N/A	01/07/2014
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1.1.2 – Programmes/ courses focussed on employability/ entrepreneurship/ skill development during the Academic year

Programme with Code	Programme Specialization	Date of Introduction	Course with Code	Date of Introduction
BE	ENGINEERING MECHANICS	01/07/2014	AM1201 - ENGINEERING MECHANICS	01/07/2014
BArch	PRINCIPLES OF ARCHITECTURE	01/07/2014	AR1301-PRINCIPLES OF ARCHITECTURE	01/07/2014
BArch	PRIMARY BUILDING MATERIALS	01/07/2014	AR1303-PRIMARY BUILDING MATERIALS	01/07/2014
BArch	HISTORY OF INDIAN ARCHITECTURE	01/07/2014	AR1305-HISTORY OF INDIAN ARCHITECTURE	01/07/2014
BArch	HISTORY OF INDIAN ARCHITECTURE	01/07/2014	AR1305-HISTORY OF INDIAN ARCHITECTURE	01/07/2014
BArch	THEORY OF DESIGN [MP]	01/07/2014	AR2301-THEORY OF DESIGN [MP]	01/07/2014
BArch	SECONDARY BUILDING MATERIALS [MP]	01/07/2014	AR2303-SECONDARY BUILDING MATERIALS [MP]	01/07/2014
BArch	HISTORY OF ARCHITECTURE (WESTERN) [MP]	01/07/2014	AR2405-HISTORY OF ARCHITECTURE (WESTERN) [MP]	01/07/2014
BArch	STATICS & STRENGTH OF MATERIALS [MP]	01/07/2014	AR2407-STATICS & STRENGTH OF MATERIALS [MP]	01/07/2014
BArch	BUILDING SCIENCE-I (CLIMATOLOGY)	01/07/2014	AR3301-BUILDING SCIENCE-I (CLIMATOLOGY)	01/07/2014
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1.2 – Academic Flexibility

1.2.1 – New programmes/courses introduced during the Academic year

Programme/Course	Programme Specialization	Dates of Introduction
BArch	Course: Architectural Design - I	01/07/2014

BE	Course: Comprehensive Viva & Time Test	01/07/2014
BArch	Course: Architectural Apprenticeship	01/07/2014
BArch	Course: Vernacular Architecture	01/07/2014
ME	Course: M.E. Chemical Engineering	01/07/2014
MSc	Course: M.Sc. Bio-Technology	01/07/2014
Integrated(PG)	Course: I. M.Sc. Food Technology	01/07/2014
BE	Course: Disaster Management	01/07/2014
BE	Course: Field Studies	01/07/2014
BArch	Course: Principles of Architecture	01/07/2014
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1.2.2 – Programmes in which Choice Based Credit System (CBCS)/Elective Course System implemented at the University level during the Academic year.

Name of programmes adopting CBCS	Programme Specialization	Date of implementation of CBCS/Elective Course System
BE	NA	01/07/2014

1.3 – Curriculum Enrichment

1.3.1 – Value-added courses imparting transferable and life skills offered during the year

Value Added Courses	Date of Introduction	Number of Students Enrolled
(indian classical	01/07/2014	32
western	14/07/2014	39
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1.3.2 – Field Projects / Internships under taken during the year

Project/Programme Title	Programme Specialization	No. of students enrolled for Field Projects / Internships
ME	ME Thesis/Project	5
BHMCT	BH0109 B.H.M.C.T.	22
BArch	Bachelor of Architecture	39
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1.4 – Feedback System

1.4.1 – Whether structured feedback received from all the stakeholders.

Students	Yes
Teachers	Yes
Employers	No
Alumni	Yes

Parents	No
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1.4.2 – How the feedback obtained is being analyzed and utilized for overall development of the institution?
(maximum 500 words)

Feedback Obtained

The feedback is collected systematically from all stakeholders. The feedback mechanism is formulated to get feedback on the courses, syllabus, programmes, teachers, overall system, etc. These are collected either through soft or hard copy format. Collected feedbacks are analysed by the respective heads of concerned departments and after a due consideration in departmental faculty meetings, they are communicated to the Dean Academic Program to be implemented through Board of Studies and Academic Council, if found feasible. The feedback on teachers are being discussed and deliberated upon with the respective teachers by the head of concerned department and accordingly faculty members are advised to make necessary changes and improve. The analysis of the course and program feedback helps the Institute to consider any revision of courses, addition/subtraction of elective courses, change in program structure, etc. The exit feedback gives a holistic view of the Institute as a whole and the scope of further improvements and developments in major areas such as administration, hostels, ambience, library, internet, infrastructures, etc. These feedbacks are shared with the concerned officers to take an action on particular matters of concern.

CRITERION II – TEACHING- LEARNING AND EVALUATION

2.1 – Student Enrolment and Profile

2.1.1 – Demand Ratio during the year

Name of the Programme	Programme Specialization	Number of seats available	Number of Application received	Students Enrolled
ME	Software Engineering	15	17	14
ME	Mechanical Engineering	24	190	21
ME	Electrical & Electronics Engineering	42	150	41
ME	Computer Aided Analysis & Design	18	12	12
MCA	Master of Computer Application	60	491	42
MBA	Master of Business Administration	90	221	46
ME	Automated Manufacturing System	25	23	6
ME	Civil Engineering	24	65	21
ME	Electronics & Communication Engineering	42	261	38

ME	Chemical Engineering	18	8	Nil
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2.2 – Catering to Student Diversity

2.2.1 – Student - Full time teacher ratio (current year data)

Year	Number of students enrolled in the institution (UG)	Number of students enrolled in the institution (PG)	Number of fulltime teachers available in the institution teaching only UG courses	Number of fulltime teachers available in the institution teaching only PG courses	Number of teachers teaching both UG and PG courses
2014	860	524	99	32	179

2.3 – Teaching - Learning Process

2.3.1 – Percentage of teachers using ICT for effective teaching with Learning Management Systems (LMS), E-learning resources etc. (current year data)

Number of Teachers on Roll	Number of teachers using ICT (LMS, e-Resources)	ICT Tools and resources available	Number of ICT enabled Classrooms	Number of smart classrooms	E-resources and techniques used
310	185	3	60	10	5

[View File of ICT Tools and resources](#)

[View File of E-resources and techniques used](#)

2.3.2 – Students mentoring system available in the institution? Give details. (maximum 500 words)

Students during their academic Journey in the institution, need mentoring / guidance from their faculty member/s. Students mentoring needs may arise from very simple matters like selection of electives, registration to respective credits or more complicated like career counselling etc. Each faculty member is the mentor of a group of 20 to 25 students. First year students have mentors from the departments teaching Basic Engineering Science and second, third, fourth year students have mentors from the parent department. Departmental faculties continue to be mentors for the same group of students till their graduation. The mentor performs the following functions, however these are not limited to this list. A mentor can always do more for the benefit of the students

1. Meet the group of students at least twice a month
2. Continuously monitor, counsel, guide and motivate the students in all academic matters
3. Regularly monitor and advice regarding attendance and performance in various institute assessment examination.
4. Contact parents/guardians if situation demands e.g. academic irregularities, undesirable behavioural changes and interpersonal relations, detrimental activities etc
5. Advise students in their career development/professional guidance

Number of students enrolled in the institution	Number of fulltime teachers	Mentor : Mentee Ratio
4531	310	1:15

2.4 – Teacher Profile and Quality

2.4.1 – Number of full time teachers appointed during the year

No. of sanctioned positions	No. of filled positions	Vacant positions	Positions filled during the current year	No. of faculty with Ph.D
329	310	19	23	226

2.4.2 – Honours and recognition received by teachers (received awards, recognition, fellowships at State, National, International level from Government, recognised bodies during the year)

Year of Award	Name of full time teachers receiving awards from	Designation	Name of the award, fellowship, received from

	state level, national level, international level		Government or recognized bodies
2014	Dr. Vijaya Laxmi	Associate Professor	Chaired a session in the 1st International Conference on Nano- Electronics, Circuits and Communication Systems (NCCS-2015), IETE and ISVE
2014	Dr. Dinesh Prasad	Assistant Professor	Fellowship from University of Padova, Defne, Italy
2014	Dr. D. M. Pandey	Assistant Professor	Travel Grant Award from Department of Biotechnology, GOI, New Delhi for presenting research findings at 2nd qPCR and Digital PCR Congress-2014 scheduled at London Marriot Hotel, London, UK from October 20-21, 2014 (2) Young Scientist Award during I
2014	Dr. J. K. Prasad	Professor	Vice- President, Fluid Mechanic Fluid Power Society of India, Member of Core Group, Aerospace Division Board Institution of Engineers (India) , Jharkhand State
2014	SUKALYAN CHAKRABORTY	Assistant Professor	Australia Awards Ambassador by Australian High Commision, New Delhi
2014	Dr. Papiya Mitra Mazumder	Professor	UGC Research Award, UGC
2014	Dr. Manju Bhagat	Professor	Organizing secretary Indian Society of Labour Economics (ISLE) Annual Conference 18-20, Dec,2014 (Organizing

			Secretary),
2014	Akriti Nigam	Assistant Professor	National Internet Exchange Fellowship (NIXI)
2014	Dr. P.R.Thakura	Associate Professor	Member, Board of Studies, M. Tech (Power System Power Electronics), NIT, Jamshedpur
2014	Dr. Sarbani Chakraborty	Associate Professor	Selected as member in International Programme Committee by IFSA for International Conference on SEIA,2015 in conjunction with ASAME in Dubai, UAE, Selected as member in National Advisory Committee by IETE. ,Certificate of Excellence by EET CRS ,Chair
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2.5 – Evaluation Process and Reforms

2.5.1 – Number of days from the date of semester-end/ year- end examination till the declaration of results during the year

Programme Name	Programme Code	Semester/ year	Last date of the last semester-end/ year-end examination	Date of declaration of results of semester-end/ year- end examination
Mtech	MT0102	SP-15	07/05/2015	20/05/2015
BArch	BA0101	SP-15	07/05/2015	20/05/2015
BE	BE0102	SP-15	07/05/2015	20/05/2015
Mtech	MT0202	SP-15	07/05/2015	20/05/2015
MSc	MS0102	SP-15	07/05/2015	20/05/2015
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2.5.2 – Average percentage of Student complaints/grievances about evaluation against total number appeared in the examinations during the year

Number of complaints or grievances about evaluation	Total number of students appeared in the examination	Percentage
38	4617	0.82

2.6 – Student Performance and Learning Outcomes

2.6.1 – Program outcomes, program specific outcomes and course outcomes for all programs offered by the institution are stated and displayed in website of the institution (to provide the weblink)

https://bitmesra.ac.in/Visit_Department_Page?cid=1&deptid=50&pid=12

2.6.2 – Pass percentage of students

Programme Code	Programme Name	Programme Specialization	Number of students appeared in the final year examination	Number of students passed in final year examination	Pass Percentage
BE0206	BE	Information Technology	54	36	67%
BE0107	BE	(Electrical Engineering)	63	48	76%
BE0105	BE	Civil Engineering	53	44	83%
BE0203	BE	(Chemical Engineering -P&P)	25	20	80%
BP0113	BPharm	B. Pharm.	54	45	83%
BE0102	BE	Bio-technology	46	37	80%
BE0103	BE	Chemical Engineering	26	17	65%
BE0106	BE	Computer Science and Engineering	130	121	93%
BE0108	BE	Electronics and Communication Engineering	133	110	83%
BE0112	BE	Mechanical Engineering	113	95	84%
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2.7 – Student Satisfaction Survey

2.7.1 – Student Satisfaction Survey (SSS) on overall institutional performance (Institution may design the questionnaire) (results and details be provided as weblink)

<https://bitmesra.ac.in/UploadedDocuments/admnaac/files/Exit%20Feedback%20-%202016%20Convocation-1.pdf>

CRITERION III – RESEARCH, INNOVATIONS AND EXTENSION

3.1 – Promotion of Research and Facilities

3.1.1 – Teachers awarded National/International fellowship for advanced studies/ research during the year

Type	Name of the teacher awarded the fellowship	Name of the award	Date of award	Awarding agency
National	NIL	NIL	01/07/2014	NIL
International	Dr.C.Jeganathan	ERASMUS MUNDUS Visiting Scholar	04/12/2014	University of Twenty

Fellowship

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3.1.2 – Number of JRFs, SRFs, Post Doctoral Fellows, Research Associates and other fellows in the Institution enrolled during the year

Name of Research fellowship	Duration of the fellowship	Funding Agency
Project Fellowship (JRF)	365	CSIR sponsored
Project Fellowship (Principal Investigator)	1095	DST sponsored
Project Fellowship (JRF)	1095	SAP-UGC sponsored
Project Fellowship (JRF)	365	DST-SERB
Project Fellowship (Project Assistant)	1095	SERB-DST
Project Fellowship (Project Fellow)	1095	UGC Major Project
Project Fellowship (JRF)	1825	DST-INSPIRE
Project Fellowship (Project Fellow)	365	UGC- SAP
Project Fellowship (Project Fellow)	365	UGC Major Research Project
Project Fellowship (JRF)	1095	DST sponsored

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3.2 – Resource Mobilization for Research

3.2.1 – Research funds sanctioned and received from various agencies, industry and other organisations

Nature of the Project	Duration	Name of the funding agency	Total grant sanctioned	Amount received during the year
Major Projects	1095	GOI ASR	31.82	8.5
Minor Projects	1095	GOI SERB	12.6	6.5
Interdisciplinary Projects	0	NIL	0	0

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3.3 – Innovation Ecosystem

3.3.1 – Workshops/Seminars Conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices during the year

Title of workshop/seminar	Name of the Dept.	Date
Operation Maintanace and Trouble shooting of concentrated solar Technology (CST) based system	Mechanical Engineering	03/07/2014

One day workshop on RTI Act	Mechanical Engineering	23/08/2014
Two Day Workshop on Water Engineering	Civil and Environmentall Engineering	11/03/2015
AICTE-QIP: Recent advances in Biopharmaceutics	Pharmaceutical Sciences and Technology	11/07/2014
AICTE-QIP: Automation in Drug Discovery	Pharmaceutical Sciences and Technology	21/11/2014
AICTE-QIP: Application of Biotechnology in Modern Pharmacognosy	Pharmaceutical Sciences and Technology	05/12/2014
Faculty Development Programee	Management	06/04/2015
Faculty Development Programee	Management	21/04/2015
ISTE STTP workshop on Introduction to Design of Algorithms	Computer Science and Engineering	18/05/2015
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3.3.2 – Awards for Innovation won by Institution/Teachers/Research scholars/Students during the year

Title of the innovation	Name of Awardee	Awarding Agency	Date of award	Category
ERASMUS MUNDUS Visiting Scholar Fellowship	Dr. C. Jeganathan	University of Twente, Netherlands	04/12/2014	Teacher
Development of Vehicle license plate recognition system	Dr Vijaya Laxmi	UGC Research Award	25/09/2015	Teacher
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3.3.3 – No. of Incubation centre created, start-ups incubated on campus during the year

Incubation Center	Name	Sponsered By	Name of the Start-up	Nature of Start-up	Date of Commencement
NIL	NIL	NIL	NIL	NIL	01/07/2014
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3.4 – Research Publications and Awards

3.4.1 – Ph. Ds awarded during the year

Name of the Department	Number of PhD's Awarded
Bio-Engineering	6
Chemical Engineering	2
Computer Science Engineering	5
Electrical Electronics Engineering	3

Management	9
Mathematics	3
Mechanical Engineering	3
Pharmaceutical Sciences Technology	2
Physics	6

3.4.2 – Research Publications in the Journals notified on UGC website during the year

Type	Department	Number of Publication	Average Impact Factor (if any)
International	Bio-Engineering	25	0
International	Chemical Engineering	10	0
International	Chemistry	12	0
International	Civil and Environmental Engineering	4	0
International	Computer Science Engineering	11	0
International	ECE	34	0
International	ECE, PHY	2	0
International	ECE, ECE, and APPLIED Math	1	0
International	EEE	39	0
International	HMCT	1	0
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3.4.3 – Books and Chapters in edited Volumes / Books published, and papers in National/International Conference Proceedings per Teacher during the year

Department	Number of Publication
Management	8
Mathematics	2
Hotel Management and Catering Technology	7
Electrical and Electronics Engineering	29
Electronics and Communication Engineering	26
Computer Science and Engineering	12
Chemical Engineering	1
Civil and Environmental Engineering	5
Bionengineering	1
Architecture	2
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3.4.4 – Patents published/awarded/applied during the year

Patent Details	Patent status	Patent Number	Date of Award
Name of Patenter: DR. (PROF) SRIKANTA PAL, MRINMOY CHAKRABORTY, BIRLA INSTITUTE OF TECHNOLOGY, SUPER COMPACT PLANAR ANTENNA FOR ULTRA WIDE-BAND APPLICATIONS	Filed	814/KOL/2013	16/01/2015
Name of Patenter: BIRLA INSTITUTE OF TECHNOLOGY, A NEW LIQUID CELL FOR MEV- ELECTRON IRRADIATION AT LOW TEMPERATURE	Filed	935/KOL/2013	05/12/2014
Name of Patenter: Dr. SUNIL KUMAR KAUSHAL, Dr. ROOP NARAYAN GUPTA, Dr. RAKESH KUMAR SHARMA, FORMULATION OF POTASSIUM IODATE TABLET AND LIQUID DOSAGE FORM	Filed	1239/KOL/2013	05/08/2015
Name of Patenter: SWASTIKA GANGULY, GEETA YADAV, NOVEL BENZIMIDAZOLES AS ANTIMICROBIALS.	Filed	1323/KOL/2013	29/05/2015
Name of Patenter: GANGULY, SWASTIKA DEBNATH, BIPLAB, ISATIN (1H- INDOLE-2,3-DIONE) DERIVATIVES, THEIR SYNTHESIS AND USES.	Filed	1226/KOL/2013	05/01/2015
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3.4.5 – Bibliometrics of the publications during the last academic year based on average citation index in Scopus/ Web of Science or PubMed/ Indian Citation Index

Title of the Paper	Name of Author	Title of journal	Year of publication	Citation Index	Institutional affiliation as mentioned in the publication	Number of citations excluding self citation
NIL	NIL	NIL	2014	0	NIL	Nil
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3.4.6 – h-Index of the Institutional Publications during the year. (based on Scopus/ Web of science)

Title of the Paper	Name of Author	Title of journal	Year of publication	h-index	Number of citations excluding self	Institutional affiliation as mentioned in
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					citation	the publication
Nanostructured anode materials for lithium ion batteries	Roy, Poulomi Srivastava, Suneel Kumar	JOURNAL OF MATERIALS CHEMISTRY A	2015	370	Nil	Birla Institute of Technology Mesra
Structure activity relationship (SAR) study of benzimidazole scaffold for different biological activities : A mini-review	Yadav, Geeta Ganguly, Swastika	EUROPEAN JOURNAL OF MEDICINAL CHEMISTRY	2015	134	Nil	Birla Institute of Technology Mesra
Recycled chitosan nanofibril as an effective Cu(II), Pb(II) and Cd(II) ionic chelating agent: Adsorption and desorption performance	Liu, Dagang Li, Zehui Zhu, Yi Li, Zhenxuan Kumar, Rakesh	CARBOHYDRATE POLYMERS	2014	84	Nil	Birla Institute of Technology Mesra
Benthic macroalgae as biological indicators of heavy metal pollution in the marine environments: A biomonitoring approach for pollution	Chakraborty, Sukalyan Bhattacharya, Tanushree Singh, Gurmeet Maity, Jyoti Prakash	ECOTOXICOLOGY AND ENVIRONMENTAL SAFETY	2014	76	Nil	Birla Institute of Technology Mesra

assessment						
Polysaccharide-Based Conjugates for Biomedical Applications	Basu, Arijit Kunduru, Konda Reddy Abteew, Ester Domb, Abraham J.	BIOCONJUGATE CHEMISTRY	2015	75	Nil	Birla Institute of Technology Mesra
Stimulus-Responsive, Biodegradable, Biocompatible, Covalently Cross-Linked Hydrogel Based on Dextrin and Poly(N-isopropyl acrylamide) for in Vitro/in Vivo Controlled Drug Release	Das, Dipankar Ghosh, Paulomi Ghosh, Animesh Halder, Chanchal Dhara, Santanu Panda, Asit Baran Pal, Sagar	ACS APPLIED MATERIALS INTERFACES	2015	74	Nil	Birla Institute of Technology Mesra
Nanostructured copper sulfides: synthesis, properties and applications	Roy, Poulomi Srivastava, Suneel Kumar	CRYSTENG COMM	2015	73	Nil	Birla Institute of Technology Mesra
Review of vision-based steel surface inspection systems	Neogi, Nirbhar Mohanta, Dushmantha K. Dutta, Pranab K.	EURASIP JOURNAL ON IMAGE AND VIDEO PROCESSING	2014	73	Nil	Birla Institute of Technology Mesra
A review of radar remote sensing for biomass estimation	Sinha, S. Jeganathan, C. Sharma, L. K. Nathawat, M. S.	INTERNATIONAL JOURNAL OF ENVIRONMENTAL SCIENCE AND TECHNOLOGY	2015	68	Nil	Birla Institute of Technology Mesra
Effect of Utilization	Sehgal, Vinit	WATER RESOURCES	2014	61	Nil	Birla Institute

tion of Discrete Wavelet Components on Flood Forecasting Performance of Wavelet Based ANFIS Models	Sahay, Rajeev Ranjan Chatterjee, Chandranath	MANAGEMENT				of Technology Mesra
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3.4.7 – Faculty participation in Seminars/Conferences and Symposia during the year

Number of Faculty	International	National	State	Local
Attended/Seminars/Workshops	12	133	3	6
Presented papers	45	12	3	Nill
Resource persons	14	31	2	3

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3.5 – Consultancy

3.5.1 – Revenue generated from Consultancy during the year

Name of the Consultant(s) department	Name of consultancy project	Consulting/Sponsoring Agency	Revenue generated (amount in rupees)
3.5.1 Revenue generated from Consultancy during the year Name of the Consultant(s) department Civil and Environmental Engineering	TESTING OF PHYSO-MECHANICAL PROPERTIES OF OVERBURDEN DUMP/HIGHWALL MATERIALS	CMPDI	311000
Civil and Environmental Engineering	SCIENTIFIC STUDY FOR SLOPE AND STABILITY	LANCO MINING THERMAL ENERGY LTD.	28000
Civil and Environmental Engineering	SCIENTIFIC STUDY FOR DESIGNING OF CONFIGURATION OF BENCHES FOR EXTRACTION FOR EXTRACTION OF CAOL RESERVE AT DURGAPUR OCM MINE, SECTOR-V, WCL	WESTERN COAL FIELD LTD. DURGAPUR OCM MINE	275000
Civil and Environmental Engineering	SCIENTIFIC STUDY FOR DUMP STABILITY AT MUNGOLI OCM WANI AREA, WCL	WESTERN COAL FIELD LTD. WANI AREA	275000

Civil and Environmental Engineering	SCIENTIFIC STUDY FOR METHOD OF WORK TO FACILITATE REMOVAL OF OB/EXTRACTION OF COAL ALONG DIP-RISE DIRECTION AT GAURI DEEP OC MINE, BALLARPUR AREA, WCL	WESTERN COAL FIELD LTD. BALLARPUR AREA	275000
Civil and Environmental Engineering	SCIENTIFIC STUDY FOR DESIGNING THE CONFIGURATION OF BENCHES FOR EXTRACTION OF COAL RESERVE AT MAKARDHOKADA OCM, WCL, UA	WESTERN COAL FIELD LTD. UMRER OC MINE	275000
Civil and Environmental Engineering	SCIENTIFIC STUDY FOR INTERNAL DUMP STABILITY AND SAFE METHOD OF EXTRACTION AT DIP SIDE OF THE PROPERTY AT KOLARPIMPRI OC WANI NORTH AREA, WCL	WESTERN COAL FIELD LTD. WANI NORTH AREA	250000
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3.5.2 – Revenue generated from Corporate Training by the institution during the year

Name of the Consultan(s) department	Title of the programme	Agency seeking / training	Revenue generated (amount in rupees)	Number of trainees
NIL	NIL	NIL	0	0
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3.6 – Extension Activities

3.6.1 – Number of extension and outreach programmes conducted in collaboration with industry, community and Non- Government Organisations through NSS/NCC/Red cross/Youth Red Cross (YRC) etc., during the year

Title of the activities	Organising unit/agency/ collaborating agency	Number of teachers participated in such activities	Number of students participated in such activities
Independence Day Prabhat Pheri and Gift Distribution to the needy children	NSS	2	250
Blood Donation Camp	NSS	2	300
Old Age Home Visit	NSS	2	30
FINANCIAL LITERACY AND CONSUMER AWARENESS	NSS	2	150

Blood Donation Camp	NSS	2	300
INTERNATIONAL YOGA DAY	NSS	2	300
AIDS Awareness Campaign	NCC	2	45
Blood Donation Camp	Rotaract	2	25
Cleanliness Education awareness	NSS	2	80
Road safety awareness	NSS	2	80
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3.6.2 – Awards and recognition received for extension activities from Government and other recognized bodies during the year

Name of the activity	Award/Recognition	Awarding Bodies	Number of students Benefited
NIL	NIL	NIL	Nil
View File			

3.6.3 – Students participating in extension activities with Government Organisations, Non-Government Organisations and programmes such as Swachh Bharat, Aids Awareness, Gender Issue, etc. during the year

Name of the scheme	Organising unit/Agency/collaborating agency	Name of the activity	Number of teachers participated in such activities	Number of students participated in such activities
Independence Day Prabhat Pheri and Gift Distribution to the needy children	NSS	Independence Day Prabhat Pheri and Gift Distribution to the needy children	2	250
Blood Donation Camp	NSS	Blood Donation Camp	2	300
Old Age Home Visit	NSS	Old Age Home Visit	2	30
FINANCIAL LITERACY AND CONSUMER AWARENESS	NSS	FINANCIAL LITERACY AND CONSUMER AWARENESS	2	150
Blood Donation Camp	NSS	Blood Donation Camp	2	300
INTERNATIONAL YOGA DAY	NSS	INTERNATIONAL YOGA DAY	2	300
Environment awareness festival	EPAC	Environment awareness festival	2	300
View File				

3.7 – Collaborations

3.7.1 – Number of Collaborative activities for research, faculty exchange, student exchange during the year

Nature of activity	Participant	Source of financial support	Duration
Research Project	2	Institute	12
Research	2	Institute	12
Research	1	Institute	6
Research	1	Institute	12
Research	1	Institute	12
Research	1	Institute	12
Research. Automated feature extraction, quantification of phenological parameteres and Software Development	2	Institute	12
Development of drought indices, downscaled drought product and software development	2	Institute	12
Mapping and modelling ground water quality	1	Institute	12
Mapping and Characterising different glaciers	1	Institute	60
View File			

3.7.2 – Linkages with institutions/industries for internship, on-the- job training, project work, sharing of research facilities etc. during the year

Nature of linkage	Title of the linkage	Name of the partnering institution/ industry /research lab with contact details	Duration From	Duration To	Participant
Internship Internship	Internship Internship	Colgate Palmolive	01/05/2015	30/06/2015	1
Internship Internship	Internship Internship	Ericsson I ndia,DEBJANI CHATTERJEE SEN,Campus S pecialist ,9 1 33 6602 61 58,debjani.c hatterjee.c. sen@ericsson .com	01/05/2015	30/06/2015	3

Internship Internship	Internship Internship	Flipkart, Mikami C, HR, 9538347219, mikami.c@flipkart.com	01/05/2015	30/06/2015	1
Internship Internship	Internship Internship	Hero Motocorp Ltd., Gunjan Khurana, HR, 9818651562, gunjan.khurana@heromotocorp.com	01/05/2015	30/06/2015	1
Internship Internship	Internship Internship	Microsoft, Ashish Tanwar, URT, 9916065786, Ashish.Tanwar@microsoft.com	01/05/2015	30/06/2015	7
Internship Internship	Internship Internship	Samsung Sri Noida, Sankar S Kumar, Deputy Manager - HR, 9821550093, sankar.kumar@samsung.com	01/05/2015	30/06/2015	2
Internship Internship	Internship Internship	St Microelectronics, Shweta Butola, Human Resource, 91-120-4006129, shweta.butola@st.com	01/05/2015	30/06/2015	2
Internship Internship	Internship Internship	Tata Hitachi, Monikut Sharma, HR, 7544004090, Monikut.Sharma@atahitachi.co.in	01/05/2015	30/06/2015	2
Internship Internship	Internship Internship	Tata Steel, Ayush Shrivastava, HR, 7632987366, ayush.srivastava@tatasteel.com	01/05/2015	30/06/2015	4
View File					

3.7.3 – MoUs signed with institutions of national, international importance, other universities, industries, corporate houses etc. during the year

Organisation	Date of MoU signed	Purpose/Activities	Number of
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			students/teachers participated under MoUs
DIT UNIVERSITY, DEHRADUN, INDIA	02/04/2014	Faculty exchange (FDPs, MDPs etc.)	5
Rajagiri College of Social Sciences	02/04/2014	Faculty exchange (FDPs, MDPs etc):	5
INTERNATIONAL CENTRE FOR INTEGRATED MOUNTAIN DEVELOPMENT (ICIMOD), Kathmandu, Nepal	13/05/2014	Agriculture Ecosystem, In- Season Crop Monitoring Products,	1
LOVELY PROFESSIONAL UNIVERSITY,	17/07/2014	Faculty exchange (FDPs, MDPs etc)	2
DIT UNIVERSITY, DEHRADUN, INDIA	02/02/2015	Student Exchange	3
Rajagiri College of Social Sciences	07/04/2015	Student Exchange:	2
View File			

CRITERION IV – INFRASTRUCTURE AND LEARNING RESOURCES

4.1 – Physical Facilities

4.1.1 – Budget allocation, excluding salary for infrastructure augmentation during the year

Budget allocated for infrastructure augmentation	Budget utilized for infrastructure development
4106	904.89

4.1.2 – Details of augmentation in infrastructure facilities during the year

Facilities	Existing or Newly Added
Campus Area	Existing
View File	

4.2 – Library as a Learning Resource

4.2.1 – Library is automated {Integrated Library Management System (ILMS)}

Name of the ILMS software	Nature of automation (fully or patially)	Version	Year of automation
KOHA	Fully	16.05	2004

4.2.2 – Library Services

Library Service Type	Existing		Newly Added		Total	
e-Books	110010	593598	731	148050	110741	741648
Text Books	141868	6409823	3580	12360006	145448	18769829
Journals	5	6534	33	62897	38	69431
e-Journals	9305	6836813	15767	7442672	25072	14279485

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4.2.3 – E-content developed by teachers such as: e-PG- Pathshala, CEC (under e-PG- Pathshala CEC (Under Graduate) SWAYAM other MOOCs platform NPTEL/NMEICT/any other Government initiatives & institutional (Learning Management System (LMS) etc

Name of the Teacher	Name of the Module	Platform on which module is developed	Date of launching e-content
NIL	NIL	NIL	01/07/2014
View File			

4.3 – IT Infrastructure

4.3.1 – Technology Upgradation (overall)

Type	Total Computers	Computer Lab	Internet	Browsing centers	Computer Centers	Office	Departments	Available Bandwidth (MBPS/GBPS)	Others
Existing	1015	22	4500	0	0	39	17	220	0
Added	168	0	0	0	0	0	0	0	0
Total	1183	22	4500	0	0	39	17	220	0

4.3.2 – Bandwidth available of internet connection in the Institution (Leased line)

220 MBPS/ GBPS

4.3.3 – Facility for e-content

Name of the e-content development facility	Provide the link of the videos and media centre and recording facility
NA	NA

4.4 – Maintenance of Campus Infrastructure

4.4.1 – Expenditure incurred on maintenance of physical facilities and academic support facilities, excluding salary component, during the year

Assigned Budget on academic facilities	Expenditure incurred on maintenance of academic facilities	Assigned budget on physical facilities	Expenditure incurred on maintenance of physical facilities
728	502.94	1465.7	975.85

4.4.2 – Procedures and policies for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports complex, computers, classrooms etc. (maximum 500 words) (information to be available in institutional Website, provide link)

The academic infrastructure of the institute, such as laboratories and classrooms are housed in its 17 departments. All departments have their own laboratories. Some of the important facilities include the High Performance Computing Laboratory, Central Instrumentation Facility, Central CAD Laboratory, Design Lab and Language lab, etc. In addition, there are several shared classrooms and halls. The regular maintenance of these facilities is taken care of by the respective departments in which the facilities are located. The upgradation and repair work of these facilities are undertaken by the Planning and Development division, which has number of experienced engineers. This department is also responsible for periodically surveying the state of affairs of the various infrastructures in the campus and taking measures to ensure standard maintenance and upkeep. The computers and networking facilities and all digital physical infrastructures in the campus are maintained by the Communication Services section. The Estate Office, which has a support staff of

mechanics, plumbers, welders, carpenters, masons and electricians, is responsible for the general maintenance of the campus. The Department of Physical Education manages the sports facilities in the campus. This department is headed by a sports-inclined faculty member and a group of sport-enthusiast students. This department manages the regular upkeep of the indoor game facilities and the extensive playgrounds. Any major works are reported to the Planning and Development division. The Institute has a well-developed Gymnasium, that is managed by the skilled employees under physical education. BIT Mesra has guest house facilities within the campus to meet its needs. The upkeep and maintenance of the guest houses are attributed to the Estate Office. The campus boasts two auditoriums, namely G.P. Birla Auditorium and CAT Hall, that are utilized for cultural events organized by the student community, and are maintained by the Estate Office. The campus also has two canteens and several other eating options within the premises, which are entrusted in the supervision of the Committee for Shop Allocation and Vendor Management. The same committee also manages the shopping complexes which are located in the campus. An on-campus dispensary provides primary healthcare facilities. A Doctor from the campus Health Centre accompanies the patient in case of an emergency. The campus Dispensary-cum-Health Centre also provides free treatment and supply of medicines to residents of local villages in the region. The Institute provides transportation facilities to students and staff and their children for commuting to and from Ranchi city. The bookings, schedules, running and maintenance of vehicles are undertaken by the Transport Office.

CRITERION V – STUDENT SUPPORT AND PROGRESSION

5.1 – Student Support

5.1.1 – Scholarships and Financial Support

	Name/Title of the scheme	Number of students	Amount in Rupees
Financial Support from institution	Freeship (Institute Scholarship)	200	4223000
Financial Support from Other Sources			
a) National	E-Kalyan Jharkhand, Top Class Education for SC/ST Students, PMSSS-J K Students, PMS State scholarship Bihar, Merit-com means Scholarship CS	402	20584470
b) International	NIL	Nil	0

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5.1.2 – Number of capability enhancement and development schemes such as Soft skill development, Remedial coaching, Language lab, Bridge courses, Yoga, Meditation, Personal Counselling and Mentoring etc.,

Name of the capability enhancement scheme	Date of implementation	Number of students enrolled	Agencies involved
BLOOD DONATION CAMP	23/08/2014	300	NATIONAL SERVICE SCHEME, BIT MESRA
Competency	10/02/2015	60	M/s B Factory

Development Programme			Ltd. Ranchi,
ANNUAL ATHLETICS MEET	30/01/2015	380	DEPARTMENT OF PHYSICAL EDUCATION SPORTS, BIT MESRA
BLOOD DONATION CAMP	14/03/2015	300	NATIONAL SERVICE SCHEME, BIT MESRA
INTERNATIONAL YOGA DAY	21/06/2015	300	NATIONAL SERVICE SCHEME, BIT MESRA
View File			

5.1.3 – Students benefited by guidance for competitive examinations and career counselling offered by the institution during the year

Year	Name of the scheme	Number of benefited students for competitive examination	Number of benefited students by career counseling activities	Number of students who have passed in the comp. exam	Number of students placed
2014	AMCAT	Nil	878	Nil	653
2014	Pre Placement career counselling	Nil	20	Nil	20
View File					

5.1.4 – Institutional mechanism for transparency, timely redressal of student grievances, Prevention of sexual harassment and ragging cases during the year

Total grievances received	Number of grievances redressed	Avg. number of days for grievance redressal
6	6	5

5.2 – Student Progression

5.2.1 – Details of campus placement during the year

On campus			Off campus		
Name of organizations visited	Number of students participated	Number of students placed	Name of organizations visited	Number of students participated	Number of students placed
Abbott	44	4	NIL	Nil	Nil
View File					

5.2.2 – Student progression to higher education in percentage during the year

Year	Number of students enrolling into higher education	Programme graduated from	Department graduated from	Name of institution joined	Name of programme admitted to
2014	1	ME (HPE)	Mechanical	NIT Rourkela	Ph.D
2014	1	ME (HPE)	Mechanical	NIT Rourkela	Ph.D
2014	1	B.E.	CSE	New Jersey	MS

				Inst. Of Tech.	
2014	1	B.E.	CSE	NUS	Ph.D
2014	1	B.E.	CSE	IIM, Bangalore	MBA
2014	1	M.E.	Space Engg. Rocketry	IIT, Khragpur	Ph.D
2014	1	M.E.	Space Engg. Rocketry	Hindustan University, Chennai	Ph.D
2014	1	M.E.	Space Engg. Rocketry	B.I.T., Mesra	Ph.D
2014	1	M.E.	Space Engg. Rocketry	IIT Kanpur	Ph.D
2014	1	M.E.	Space Engg. Rocketry	UPES, Dehradun	Ph.D
View File					

5.2.3 – Students qualifying in state/ national/ international level examinations during the year (eg:NET/SET/SLET/GATE/GMAT/CAT/GRE/TOFEL/Civil Services/State Government Services)

Items	Number of students selected/ qualifying
NET	Nil
SET	Nil
SLET	Nil
GATE	11
GMAT	1
CAT	Nil
GRE	1
TOFEL	1
Civil Services	Nil
View File	

5.2.4 – Sports and cultural activities / competitions organised at the institution level during the year

Activity	Level	Number of Participants
Talkies	Intra University	40
Stomp The Yard	Intra University	60
Mr. Ms. Bitotsav	Intra University	50
Face Painting	Intra University	40
Bitotsav Hogathon	Intra University	40
BITOTSAV Treasure Hunt	Intra University	60
BIT Roadies	Intra University	75
Acoustic Alchemy	Intra University	70

Annual Athletics Meet	Intra University	80
Chetan Devraj Cricket Tournament	Intra University	100
View File		

5.3 – Student Participation and Activities

5.3.1 – Number of awards/medals for outstanding performance in sports/cultural activities at national/international level (award for a team event should be counted as one)

Year	Name of the award/medal	National/ Internaional	Number of awards for Sports	Number of awards for Cultural	Student ID number	Name of the student
2014	Best Studio Design Project, Ethos, Transparency	National	Nil	Nil	00	Karan Dhawan
2014	Runners Up, Zonasa	National	Nil	Nil	00	Karan Dhawan
View File						

5.3.2 – Activity of Student Council & representation of students on academic & administrative bodies/committees of the institution (maximum 500 words)

BIT encourages students' participation in various academic and administrative committees which empowers students in developing leadership qualities and team working skills. Different academic and administrative committees of the Institute are represented by adequate number of student representative through various student bodies ex, student representatives are part of the grievance redressal committee which not only looks after the complaints and grievances of students and staffs of the Institute but are also authorised to initiate necessary remedial measures. Student play important role in preventing sexual harassment through their representation in the committee for prohibition and prevention of sexual harassment. They have been playing active role in maintaining discipline and decorum while various important activities are executed or performed by students. They work as a whole in every activity of the university contributing to its smooth functioning. Students also organise various programs such as paper presentations, workshops, and seminars every year at department / institute level. Every year, Institute organizes several mega-events such as BITOTSAV, PANTHEON, VAJRA, DEEPOTSAV, Annual Athletic Meet etc which are exclusively organised and administered by students. All managerial, financial, security, sponsorship, advertisement/promotion, news/media, photography aspects are completely planned and executed by students under faculty mentorship. Overall through these activities student get the opportunity for their holistic development in leadership qualities as well as team working skills.

5.4 – Alumni Engagement

5.4.1 – Whether the institution has registered Alumni Association?

Yes

BITMAA - NA (North America) established in 02.10.2013 looks after helping alumni in need - Financially Non financially, establishes interaction with industry for the benefit of students, and establishes and maintain contact among past students, present students and the teaching staff.

5.4.2 – No. of registered Alumni:

400

5.4.3 – Alumni contribution during the year (in Rupees) :

6415000

5.4.4 – Meetings/activities organized by Alumni Association :

a) Distinguished Alumni (Professors of US Universities) are engaged as Adjunct Faculty. They interact with students and faculty on various projects and contemporary issues. b) Distinguished Alumni (Industrial Experts) conduct webinars and deliver Guest Lectures. c) Alumni regularly help and support our placement / internship activities and connect us to their peers in other industries/Universities. d) The institute organizes Industry Academia Symposium to build relationship with industry/Universities with the support of senior alumni as brand ambassadors.

CRITERION VI – GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1 – Institutional Vision and Leadership

6.1.1 – Mention two practices of decentralization and participative management during the last year (maximum 500 words)

The Birla Institute of Technology is a "Deemed to be University" under Sec. 3 of the U. G. C. Act 1956. The institute functions under the overall supervision, and guidance of a high power Board of Governors(BOG), comprising representatives of the Ministry of Education, Government of India, University Grants Commission(UGC), State Government, A.I.C.T.E, The Hindustan Charity Trust and representatives of the Institute Faculty. In addition, the BOG is represented by Alumni of the institute as well. His Excellency, The Governor of Jharkhand is the Chancellor of the University and Shri C.K. Birla is the Chairman of the Board of Governors. There are several committees formed under the supervision of the Board to look after specific matters in the Institute's functioning. These include (i) The Finance Committee, and (ii) The Institute and Building Works Committee. The Academic Council (formerly Technical council) decides the academic policy of the Institute. It approves the curriculum, courses and the examination results. For smooth functioning of the institute, the Vice Chancellor, who is the Chairman of the Academic council is authorized to appoint different Committees such as • Regulation Committee for Undergraduate and Postgraduate Courses • Semester Programme Co-ordination Committee • Admission Committee • Scholarship Committee • Students Welfare Committee. The teaching, training, faculty development and research activities of various departments at the Institute are constantly reviewed to monitor outcome, quality and available facilities. The Institute practices and nurture the culture of participatory Management to execute its activities such as Administration, Admission, Student activities, Curriculum Development, Research, Sports etc. The Institute ensures adequate representation in various committees by Professors, Associate Professor, Assistant Professors and student representatives from different Departments, that has made the functioning of the Institute smooth, participatory and transparent which is one of the best practices in the Institute. At the institute level, BIT has been adopting collective leadership which is provided by the Vice Chancellor, Deans, Head of the Department and Registrar which is another best practices of the Institute. The leadership for the regular activities of the Institute is provided by the Vice Chancellor, who is advised and assisted by Deans, Heads of Departments/ In- Charges besides the Registrar for overall administrative and academic activities of the Institute. The administrative structure is similar to that of some of premier institutions in the country and abroad. BIT has created a

governance plan that embodies the institute's values of transparency, accountability and efficiency. By participatory management, BIT has ensured the transparent, accountable and efficient functioning of the institute.

6.1.2 – Does the institution have a Management Information System (MIS)?

Partial

6.2 – Strategy Development and Deployment

6.2.1 – Quality improvement strategies adopted by the institution for each of the following (with in 100 words each):

Strategy Type	Details
Curriculum Development	<p>At BIT Mesra, involvement of all stakeholders is ensured for design and development of the Curricula. The Institute has the provision of a well-planned and organized Board of Studies (BOS) in each Department which is approved by the Academic Council. The BOS is responsible for the design and development of curricula giving due recognition to the opinions of concerned faculty members of the department and institutes mission and vision. The curricula in practice have relevance to the regional and national developmental needs at all levels to meet requirements of the industry.</p> <p>While framing the curricula, the institute adheres to the guidelines recommended by the UGC /AICTE and other national apex regulation bodies. The review of curricula takes place at a regular interval.</p>
Teaching and Learning	<p>The teaching and learning process involves theory classes which are complemented by laboratory classes with live examples. Usually, teacher explains the topics in an eloquent manner so that the student could grasp them easily and use them in furthering the courses. The Institute has been sensitive enough to promote experiential and participative learning and inculcate real world problem solving methodologies among students by providing industrial visits, field visits, Internship, assignments in the curriculum as well as activities of technical clubs. Students of specific programme are required to go for compulsory educational tour of 2 weeks duration. Apart from the scheduled trips, students are also sent for site inspection within the city to get adapted with the project management mechanism.</p>
Examination and Evaluation	The examination section of BIT Mesra

maintains the global standard in examination procedures. The continuous internal assessment is spread over the whole semester. The breakup of continuous internal assessment and the type of assessment tools to be used are mentioned in the course curriculum. The institute has the specific guidelines for examination in UG, PG and Ph.D. programs. Grading system with percentage conversion formula is followed in examination to maintain the global requirements. A proper seat-matrix system and corresponding ratio based invigilation duty are followed to maintain discipline in examination hall during MID and END Semester examinations. Any kind of unfair means is reported to the examination section for proper action. Guidelines for invigilators and Instructions for the candidates are strictly maintained by the examination section during the examination. Evaluations of Ph.D. thesis by both national and international examiners are executed within six months that illustrates the best practices of the examination section.

Research and Development

Institute has been actively pursuing research in a large number of emerging and classical fields of science and technology. It has a large number of Research scholars who are the heart of research activities in the institute. These scholars along with their mentors have been contributing significantly towards expanding the scientific and technological knowledge base, which could be useful for the development of society. The Institute has state of art laboratory facilities. Faculty members are executing Research and Development projects which are funded by reputed national organizations such as ISRO, DST, DRDO, ARDB, BRNS, DBT, CSIR, AICTE, UGC etc. The institute also encourages UG and PG students to engage in Research and Development activities by providing them grants for consumables and minor equipment which could be used to execute projects. The recruitment and promotion policies of the institute have been also framed in such a way to encourage and recognize research activities. The institute has been publishing several books and more than 300 research papers in SCI and

<p>Library, ICT and Physical Infrastructure / Instrumentation</p>	<p>SCOPUS indexed Journals every year.</p> <p>The institute Library is housed in the main academic building with 3900 sq. meter working space. It has a seating capacity for 200 students, fully automated with a Fiber Optic connectivity and Wi-Fi facility. A total of 60 classrooms are available in the Institute, out of which 50 are ICT enabled and 10 are smart classrooms. A state of the art Central instrumentation facility and high performance computing facility are available in the institute to cater to the needs of the students. The sports complex of the institute spreads over 25 acres of land. Everyday approximately five hundred students utilize the sports complex for PT Games classes and practice. The complex consists of a standard athletic track along with badminton hall, multi-gym hall, volleyball court, basketball court, hockey ground, football field, kabaddi court, netball court, kho - kho field, cricket field, lawn tennis court, gymnasium hall etc.</p>
<p>Human Resource Management</p>	<p>The Institute has well laid policies pertaining to the recruitment, training, welfare and promotion of faculty and staff members. The office of the Dean (Faculty affairs) has been responsible for addressing above issues pertaining to the faculty members. The promotions of faculty members are ensured through CAS as well as direct recruitment policies of UGC. A separate committee looks after the above issues pertaining to non teaching employees of the institute. The institute has endorsed the modified assured career progression scheme of MHRD, GOI, through its recruitment and promotion norms for non-academic staff since 2012. To upgrade knowledge base, faculties are encouraged to participate in Symposium/ Seminar Conference etc held in India and abroad regularly. Training programs are arranged regularly to upgrade the skill level of non-academic staff and successful employees are given additional increment/promotion as per rules of the Institute. Several welfare schemes such as Mediclaim, provident fund, group insurance etc are available for the benefit of employees. The Institute has</p>

	in house Dispensary for staff and students.
Industry Interaction / Collaboration	The Institute promotes the Industry-Academia interaction wherein the faculty and students are encouraged to go to industry visits to identify problems of practical nature and find possible solution. In addition students are encouraged to go for their internship for a better exposure and work culture in industry. Summer internships are considered as an important career stepping stone. Second and third year UG students are facilitated for industrial internship. Summer internships teach valuable on-the-job skills, provide excellent networking opportunities and make them ready for jobs in industry.
Admission of Students	Birla Institute of Technology, Mesra, Ranchi is a Deemed to be University and the admission procedure is executed as per the clearly laid down policies and guidelines set by the Institute. Admission to all UG, PG and Ph.D. programs are based on National / Institute level competitive test and counselling / interviews. For B.Tech. B.Arch. programs, admissions are based on all-India entrance examination (JEE-Main) followed by JoSAA / CSAB counselling. This transparent process ensured good students from all over India thereby maintaining diversity in student profile. Eligibility criteria, Fee Structure, Selection process are decided after due deliberation by the Admission Committee which comprise of Deans, HoDs and other administrative members. Reservation of seats for OBC / SC / ST / EWS and PWD are strictly adhered as per statutory reservation policy of State of Jharkhand and Govt. of India.

6.2.2 – Implementation of e-governance in areas of operations:

E-governance area	Details
Examination	Exam Section follows the simultaneous conduction of examination and evaluation of answer scripts for faster result processing. The central evaluation system, has been using bar code in evaluation process which is one of the best practices of examination section. The speedy publication of result helps the students in their further career progression. Examination

section has an ERP based system to manage its activities, where entry of marks, processing of marks and notification of results are carried out using this facility. As a result of this ERP, students can check their results individually through designated login credentials.

Planning and Development

The Planning and Development issues of the Institute are divided into two different categories, i.e., Academics and Administration. The academic planning and development are taken care by offices of the concerned Dean's wherein online mode of communication or MIS system is in operation to take care of different activities. Similarly, the administrative structure also is supported by different offices such as Accounts, Purchase, Stores, Estate and Construction, Communication services, Security and surveillance etc. All of them manage their data digitally that is based on the laid down Institutional policies. For example, all the indents for procurement of equipment or Services are made using the IBIS software, where they are processed online by the purchase office and the same is automatically linked to the Accounts office and general store section.

Administration

The institute has robust governance structures consisting of different Governance organs such as Board of Governors, General Council, Finance Committee and Academic Council etc., that are aligned to the UGC regulations as applicable from time to time. Institute has an MIS for access, processing and management of data. Data pertaining to different academic activities are captured in ERP. The procurement of equipments and services and payment for the same are done using software. There is online provision for submission of applications for admission and deposition of fees for students. Faculty and staff are able to get their monthly salary slips in ERP using dedicated login credentials. Main mode of communication amongst institute faculty and staff is through institute webmail. Notices and minutes of meetings are also circulated through emails. All the academic zones and hostels are covered under Wi-Fi

	facility which ensures seamless internet connectivity.
Finance and Accounts	The Finance and Accounts section of the Institute is responsible for observance of regulations relating to maintenance of accounts of Income and Expenditures and consider any other matter referred by Board of Governors. The Accounts Department ensures that all statutory payments are being deducted as per the Government rules and regulations and are being deposited in time to the concerned Government Department. The Accounts also ensure that all statutory Returns are being filed in time. For all these activities, accounts section uses software such as IBIS, ERP etc. and uses the latest computing facilities.
Student Admission and Support	Admission to all UG, PG and Ph.D. programs are based on National / Institute level competitive test and counselling / interviews using the required web applications. For B.Tech. and B.Arch. programs, admissions are based on All-India entrance examination (JEE-Main) followed by JoSAA / CSAB counselling, which is nationally executed through a centralised online process. The Institute is also a Counselling centre for the above process to assist JoSAA/CSAB. Student life cycle which covers admission, registration of courses, examination, results, payment of fees, issue of grade cards etc is being captured by an ERP System. All the students are provided with an Institute email id. Institute central library has adopted library management system to manage its services which helps the students in the process of learning and development.

6.3 – Faculty Empowerment Strategies

6.3.1 – Teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies during the year

Year	Name of Teacher	Name of conference/ workshop attended for which financial support provided	Name of the professional body for which membership fee is provided	Amount of support
2014	Dr. S. K. Ghorai	National Knowledge Network annual Workshop at IIT, Guwahati	NA	28692

2014	Praveen Srivastava	National Seminar on Corporate social responsibility : need of the hour at Ism, Pundag, Ranchi	NA	3000
2014	Rajeshwari Chatterjee	International Conference Gwalior	NA	3000
2014	Rajeshwari Chatterjee	International Conference , Kolkata	NA	6070
2014	Sudip Kumar Sahana	5th International Conference on Swarm Intelligence 2014 (ICSI-2014) held in Hefai, China	NA	82725
2014	Bimal Chandra Roy	The 3rd ICADA 2014-SSIS, Bangkok, International Conference	NA	35768
2014	Nidhi Jaiswal	To attend Workshop at Bangalore	NA	230
2014	Dr. Uma Ranjan Lal	To Attend Conference	NA	6554
2014	Animesh Ghose	To Attend International Symposium in Ranchi	NA	6192
2014	Dr. Chandralata Bal	27th International Conference on antiviral research, USA	NA	70800
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6.3.2 – Number of professional development / administrative training programmes organized by the University for teaching and non teaching staff during the year

Year	Title of the professional development programme organised for teaching staff	Title of the administrative training programme organised for non-teaching staff	From date	To Date	Number of participants (Teaching staff)	Number of participants (non-teaching staff)
2014	Internal quality en	NIL	07/07/2014	11/07/2014	8	Nil

	hancement programme through micro teaching in the area of Production Engineering					
2014	Six Sigma tools and applications	NIL	25/08/2014	30/08/2014	25	Nil
2014	AICTE-QIP: Recent advances in Bio pharmaceuticals	NIL	07/11/2014	20/11/2014	30	Nil
2014	AICTE-QIP: Automation in Drug Discovery	NIL	21/11/2014	04/12/2014	30	Nil
2014	Workshop on control System	NIL	02/12/2014	12/12/2014	32	Nil
2014	AICTE-QIP: Application of Biotechnology in Modern Pharmacognosy	NIL	05/12/2014	18/12/2014	21	Nil
2014	AICTE-QIP Developmental path for phyto-pharmaceuticals towards future perspective	NIL	01/02/2015	15/02/2015	12	Nil
2014	One week Workshop on Advanced Microcontroller Applications (AMA-2015)	NIL	02/02/2015	08/02/2015	2	Nil
2014	One Week Short term	NIL	25/05/2015	29/05/2015	37	Nil

	course on Lean six sigma tools technique					
2014	Two Week ISTE STTP on Environmental Studies	NIL	02/06/2015	12/06/2015	12	Nil
View File						

6.3.3 – No. of teachers attending professional development programmes, viz., Orientation Programme, Refresher Course, Short Term Course, Faculty Development Programmes during the year

Title of the professional development programme	Number of teachers who attended	From Date	To date	Duration
Know Yourself as a Teacher held at Birla Institute of Technology, Mesra, Ranchi	17	24/11/2014	28/11/2014	5
5 day Training Programme on Patent filing Processing, Patent Drafting	1	05/01/2015	09/01/2015	5
5 Day workshop on Supply Chain Management	1	04/02/2015	08/02/2015	5
A Short Term Course on Advances in Computational Fluid Dynamics Conducted by the School of Mechanical Sciences, IIT Bhubaneswar	2	08/06/2015	12/06/2015	5
AICTE Sponsored Quality Improvement Program 2014, Organized by Dept. of Pharmaceutical Sciences Tech(UGC-SAP DST-FIST, BIT,	1	05/12/2014	18/12/2014	14

Mesra				
AICTE Sponsored Quality Improvement Program 2014, Organized by Dept. of Pharmaceutical Sciences Tech(UGC-SAP DST-FIST, BIT, Mesra	13	07/11/2014	20/11/2014	14
CEP course on Coordinators workshop on Environmental Studies, IIT Bombay	1	23/03/2015	27/03/2015	5
Consumer Behaviour: Role of Market Research	1	04/05/2015	08/05/2015	5
Continuing Education Programme: Design Analysis of Efficient Systems for Microwave Transmission Radiation, organised by IIT, Kharagpur	2	23/02/2015	28/02/2015	6
Course On Modern Antenna Technology(MAT) From Theory To Practice	2	29/06/2015	03/07/2015	5

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6.3.4 – Faculty and Staff recruitment (no. for permanent recruitment):

Teaching		Non-teaching	
Permanent	Full Time	Permanent	Full Time
2	Nil	Nil	Nil

6.3.5 – Welfare schemes for

Teaching	Non-teaching	Students
10	10	12

6.4 – Financial Management and Resource Mobilization

6.4.1 – Institution conducts internal and external financial audits regularly (with in 100 words each)

The Institute has two type of Auditing system -Statutory and Internal. The

Internal Audit is being conducted at regular Intervals -April to July, August to November, December to March every year. External auditors visit at the end of the financial year and help to close the Balance Sheet, Income and Expenditure and check the annexure relating to Balance Sheet. They mainly check statutory dues such as Income Tax, TDS, Professional Tax, GST etc. deducted from various payments and ensure that these are being timely deposited with the concerned Authority.

6.4.2 – Funds / Grants received from management, non-government bodies, individuals, philanthropies during the year(not covered in Criterion III)

Name of the non government funding agencies /individuals	Funds/ Grnats received in Rs.	Purpose
NIL	0	NIL
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6.4.3 – Total corpus fund generated

11717000

6.5 – Internal Quality Assurance System

6.5.1 – Whether Academic and Administrative Audit (AAA) has been done?

Audit Type	External		Internal	
	Yes/No	Agency	Yes/No	Authority
Academic	No	NA	No	NA
Administrative	No	NA	No	NA

6.5.2 – What efforts are made by the University to promote autonomy in the affiliated/constituent colleges? (if applicable)

NIL

6.5.3 – Activities and support from the Parent – Teacher Association (at least three)

NIL

6.5.4 – Development programmes for support staff (at least three)

1. One day workshop on RTI

6.5.5 – Post Accreditation initiative(s) (mention at least three)

NIL

6.5.6 – Internal Quality Assurance System Details

a) Submission of Data for AISHE portal	Yes
b)Participation in NIRF	No
c)ISO certification	No
d)NBA or any other quality audit	Yes

6.5.7 – Number of Quality Initiatives undertaken during the year

Year	Name of quality initiative by IQAC	Date of conducting IQAC	Duration From	Duration To	Number of participants
2014	NIL	01/07/2014	01/07/2014	01/07/2014	Nil
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CRITERION VII – INSTITUTIONAL VALUES AND BEST PRACTICES

7.1 – Institutional Values and Social Responsibilities

7.1.1 – Gender Equity (Number of gender equity promotion programmes organized by the institution during the year)

Title of the programme	Period from	Period To	Number of Participants	
			Female	Male
NIL	01/07/2014	01/07/2014	Nil	Nil

7.1.2 – Environmental Consciousness and Sustainability/Alternate Energy initiatives such as:

Percentage of power requirement of the University met by the renewable energy sources
0

7.1.3 – Differently abled (Divyangjan) friendliness

Item facilities	Yes/No	Number of beneficiaries
Physical facilities	Yes	45
Provision for lift	Yes	45
Rest Rooms	Yes	45
Any other similar facility	Yes	10

7.1.4 – Inclusion and Situatedness

Year	Number of initiatives to address locational advantages and disadvantages	Number of initiatives taken to engage with and contribute to local community	Date	Duration	Name of initiative	Issues addressed	Number of participating students and staff
2014	Nil	Nil	01/07/2014	00	NIL	NIL	Nil

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7.1.5 – Human Values and Professional Ethics Code of conduct (handbooks) for various stakeholders

Title	Date of publication	Follow up(max 100 words)
CONDUCT DISCIPLINE AND APPEAL RULES FOR BIT EMPLOYEES	01/07/2015	NA

7.1.6 – Activities conducted for promotion of universal Values and Ethics

Activity	Duration From	Duration To	Number of participants
AWARENESS OF INSTITUTE OF CODE OF CONDUCT	22/08/2014	22/08/2014	50

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7.1.7 – Initiatives taken by the institution to make the campus eco-friendly (at least five)

1. Pedestrian Friendly campus 2. E-Vehicle Facility 3. Plastic Free Green campus 4. Solar Panel usage in Hostel and Academic Building 5. Energy Efficient light installed across the campus 6. Sensor operated power usage in classrooms

7.2 – Best Practices

7.2.1 – Describe at least two institutional best practices

Upload details of two best practices successfully implemented by the institution as per NAAC format in your institution website, provide the link

<https://bitmesra.ac.in/UploadedDocuments/admnaac/files/Two%20BEST%20PRACTICES.pdf>

7.3 – Institutional Distinctiveness

7.3.1 – Provide the details of the performance of the institution in one area distinctive to its vision, priority and thrust in not more than 500 words

The vision of the Institute is to become a globally recognized academic institution in consonance with the social, economic and ecological environment, striving continuously for excellence in education, research, and technological service to the Nation. Contribute to national needs through dissemination of knowledge, research and development, and technological service : BIT Mesra has a vision to be recognized as a world-class institution catering to engineering and technological education and research. Today, it has moved beyond the fulfillment of a scholastic promise to re-defining education and making its mark through significant contributions to knowledge and national needs. The thrust areas are: • Remote Sensing • Space Engineering and Rocketry • Civil and Environmental Engineering The Department of Remote Sensing at BIT Mesra has been disseminating knowledge of satellite remote sensing technology and its applications since 1997 through research and post graduate academic courses like M. Tech. (Remote Sensing) and M.Sc. (Geo-informatics) degree programmes. The notable research activities of the department includes, Development of methodology to detect the pollutants in flowing river water, Development of algorithm for mineral mapping on the surface of the moon, Development of Drought Modelling Software, etc. The department established the line of Tropic of Cancer passing near Ormanjhi area of Ranchi using Differential and Geodetic Global Position System (GPS). Institute was the first technical institution to establish a Department of Space Engineering Rocketry way back in 1964. It was also the first to establish static rocket test firing facility and to offer P.G. programmes in the strategic areas in association with the Indian Space Research Organization (ISRO). The Department aims to provide state of art education and training to its students to enable them to contribute efficiently in the National efforts being made in the fields of Space Defence related technologies and challenging future missions. The Department also provides research facilities at doctoral and postdoctoral levels in the fields of Aerodynamics and Flow Studies, Propellant Technology, Rocket Propulsion and Combustion. The Department of Civil Environmental Engineering has been contributing significantly in mitigating problems related to mine slope stability and disaster management issues across India. Faculties are involved in designing of stable slope for mine over burdens and engaged in its safety management. They are also part of the National Rural Road Development Authority, which contributes to the nation's road building endeavors. The department also played a role in the development of cost effective toilets based on gender sensitivity, in rural and government schools of Khunti, Hazaribagh and Deoghar districts. Research in multiple areas such as waste water treatment, environmental remediation using FENTON process, nano materials and fuzzy algorithm is being carried out and technical research papers are being published in reputed journals. In addition various other research works are pursued in multi - disciplinary areas related to core Civil Engineering discipline.

Provide the weblink of the institution

[https://bitmesra.ac.in/UploadedDocuments/admnaac/files/Institute%20Distinctiveness\(1\).pdf](https://bitmesra.ac.in/UploadedDocuments/admnaac/files/Institute%20Distinctiveness(1).pdf)

8.Future Plans of Actions for Next Academic Year

The following points describes the proposal of plan of action to be implemented for the next academic year in consonance with the Institute vision and mission.

- 1) Participation in major government declared competitions and events.
- 2) Encouragement to faculty members in publications in good and reputed Journals and Conferences.
- 3) Effort in achieving 75 percentage accreditation to UG Programs.
- 4) To increase MoU's with Industries and Academic Institutions.
- 5) To participate in national ranking and rating system.
- 6) To organise technical and motivational talks through various departments.
- 7) Organise seminar, conferences, workshops through various departmental groups.