Annual Quality Assurance Report – 2019-2020

CRITERIA – I

Criterion-1 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	Dates of Revision
B.Tech	Civil Engineering (CE)	03.08.2019
B.Tech	Computer Science and Engineering (CSE)	03.08.2019
B.Tech	Electronics and Communication Engineering (ECE)	03.08.2019
B.Tech	Electrical Engineering (EE)	03.08.2019
B.Tech	Electrical and Electronics Engineering (EEE)	03.08.2019
B.Tech	Information Technology (IT)	03.08.2019
B.Tech	Mechanical Engineering (ME)	03.08.2019
M.Tech	Computer Science and Engineering	03.08.2019
M.Tech	Electrical Engineering (EE)	03.08.2019
M.Tech	Wireless Sensor Network (WSN)	03.08.2019
MBA	MBA	03.08.2019
MCA	MCA	03.08.2019

1.1.2 Programmes/ courses focused on employability/ entrepreneurship/ skill development during the academic year		
Programme with code	Courses with code	Date of introduction
B.Tech	B.Tech-PEN6E101T-Business Communication and Skill for Interview	2019-20 Even Sem
B.Tech	B.Tech-PIT5I103T-E-commerce and ERP	2019-20 Odd Sem
MCA	MCA-MCA205-Communicative English	2019-20 Even Sem
MCA	MCA-19MC208-Communicative English Laboratory	2019-20 Even Sem
MCA	MCA-NMCA405-Personality and Soft Skill Development	2019-20 Even Sem
MCA	MCA-N19MC106-Problem Solving using C Lab	2019-20 Odd Sem
MCA	MCA-NMCA401-Programming with Java	2019-20 Even Sem

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MBA	MBA-19MB206-Entrepreneurship and Business Incubation	2019-20 Even Sem
MBA	MBA-19MB208-BUSINESS ANALYTICS LAB	2019-20 Even Sem
MBA	MBA-19MB210-Personality Development Lab-2	2019-20 Even Sem
MBA	MBA-19MB109-Personality Development Lab-1	2019-20 Odd Sem
MBA	MBA-19MB209-SPSS LABORATORY	2019-20 Even Sem
MBA	MBA-18MBA303A-Digital Marketing	2019-20 Odd Sem
MBA	MBA-18MBA301C-Manpower Planning	2019-20 Odd Sem
MBA	MBA-18MBA402A-Product and Brand Management (PBM)	2019-20 Odd Sem
MBA	MBA-N18MBA304B-MBA-PROJECT APPRAISAL & FINANCING	2019-20 Odd Sem
MBA	MBA-N18MBA402D-Sourcing Management	2019-20 Even Sem
MBA	MBA-18NCC301-ADVANCE EXCEL AND SPSS	2019-20 Odd Sem

1.2 Academic Flexibility

1.2.1 New Programmes/ courses introduced during the academic year

Sl. No	Programme/ course	Date of introduction
1	B.Tech-N18MBA303B-ADVANCED MANAGEMENT ACCOUNTING	2019-20 Odd Sem
2	B.Tech-NREC3C001-Analog Electronic Circuits	2019-20 Odd Sem
3	B.Tech-NRCS3C002-Data Structure	2019-20 Odd Sem
4	B.Tech-NRCS3C001-Digital Logic Design	2019-20 Odd Sem
5	B.Tech-NREN3E001-Engineering Economics	2019-20 Odd Sem
6	B.Tech-NRES3F001-Environmental Science	2019-20 Odd Sem
7	B.Tech-NRME3C002-Fluid Mechanics and Hydraulic Machines	2019-20 Odd Sem
8	B.Tech-NRMA3A001-Mathematics-III	2019-20 Odd Sem
9	B.Tech-NRME3C001-Mechanics of Solids	2019-20 Odd Sem
10	B.Tech-NREE3C002-Network Theory	2019-20 Odd Sem
11	B.Tech-NROP3B001-OBJECT ORIENTED PROGRAMMING WITH JAVA	2019-20 Odd Sem
12	B.Tech-NROB3E002-Organisational Behavior	2019-20 Odd Sem

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13	B.Tech-NREC3C002-Signals and Systems	2019-20 Odd Sem
14	B.Tech-NRME4D003-Advanced Mechanics of Solids	2019-20 Even Sem
15	B.Tech-NRCS4G001-Analog Electronic Circuits	2019-20 Even Sem
16	B.Tech-NREC4G003-Brain Control Interface	2019-20 Even Sem
17	B.Tech-18MBA401B-Business Taxation	2019-20 Even Sem
18	B.Tech-NRCS4C003-Computer Organization and Architecture	2019-20 Even Sem
19	B.Tech-NRCI4D002-Concrete Technology	2019-20 Even Sem
20	B.Tech-NRCN4F001-Constitution of India	2019-20 Even Sem
21	B.Tech-NRCI4D001-Construction Technology	2019-20 Even Sem
22	B.Tech-NRCI4G002-Data Communication	2019-20 Even Sem
23	B.Tech-NRCS4D004-Data Communication and Computer Networks	2019-20 Even Sem
24	B.Tech-NREC4G002-Data Structure	2019-20 Even Sem
25	B.Tech-NRCS4C002-Design and Analysis of Algorithm	2019-20 Even Sem
26	B.Tech-NRIT4C002-Design and Analysis of Algorithms	2019-20 Even Sem
27	B.Tech-NREL4C001-Digital Electronics	2019-20 Even Sem
28	B.Tech-NRIT4G002-Digital Signal Processing	2019-20 Even Sem
29	B.Tech-NRME4G001-Digital Systems Design	2019-20 Even Sem
30	B.Tech-NRIT4C001-Discrete Mathematics	2019-20 Even Sem
31	B.Tech-NREE4D003-Electrical and Electronics Measurement	2019-20 Even Sem
32	B.Tech-NREL4C002-Electrical Machines-I	2019-20 Even Sem
33	B.Tech-NREE4D001-Electro Magnetic Theory	2019-20 Even Sem
34	B.Tech-NREC4C001-Electromagnetic Theory	2019-20 Even Sem
35	B.Tech-NREE4G003-Embedded Systems	2019-20 Even Sem
36	B.Tech-NREN4E001-Engineering Economics	2019-20 Even Sem
37	B.Tech-NRME4C002-Engineering Thermodynamics	2019-20 Even Sem
38	B.Tech-NRME4D001-Internal Combustion Engines and Gas Turbines	2019-20 Even Sem
39	B.Tech-NRCI4G001-Introduction to Physical Metallurgy and Engineering Materials	2019-20 Even Sem
40	B.Tech-NRME4C001-Kinematics and Dynamics of Machines	2019-20 Even Sem
41	B.Tech-NRME4D002-Mechanical Measurement, Metrology & Reliability	2019-20 Even Sem

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42	B.Tech-NRME4G002-Microprocessor and Micro controllers	2019-20 Even Sem
43	B.Tech-NREC4C003-Network Theory	2019-20 Even Sem
44	B.Tech-NREL4G002-Optoelectronic Device and Instrumentation	2019-20 Even Sem
45	B.Tech-NROB4E002-Organisational Behavior	2019-20 Even Sem
46	B.Tech-NREE4C003-Power Electronics	2019-20 Even Sem
47	B.Tech-NRCS4D003-Principle of Programming Languages	2019-20 Even Sem
48	B.Tech-NREC4G001-Probability Theory And Stochastic Process	2019-20 Even Sem
49	B.Tech-NRCS4G003-Remote Sensing and Geographic Information System	2019-20 Even Sem
50	B.Tech-NREC4D001-Semiconductor Devices	2019-20 Even Sem
51	B.Tech-NREC4D003-Sensors and Transducers	2019-20 Even Sem
52	B.Tech-NREE4D002-Signals and Systems	2019-20 Even Sem
53	B.Tech-NRCI4C003-Structural Analysis-I	2019-20 Even Sem
54	B.Tech-NRCI4C001-Surveying	2019-20 Even Sem
55	B.Tech-NRCI4C002-Transportation Engineering	2019-20 Even Sem
56	B.Tech-NREC3C201-Analog Electronic Circuits Laboratory	2019-20 Odd Sem
57	B.Tech-NRCI3C201-BUILDING DRAWING USING AUTOCAD	2019-20 Odd Sem
58	B.Tech-NRCS3C202-Data Structure Lab	2019-20 Odd Sem
59	B.Tech-NRCS3C201-Digital Logic Design Lab	2019-20 Odd Sem
60	B.Tech-NRIP3H201-EVALUATION OF INTERNSHIP-1	2019-20 Odd Sem
61	B.Tech-NRME3C202-Fluid Mechanics and Hydraulic Machines Lab	2019-20 Odd Sem
62	B.Tech-NATTP301-MATLAB	2019-20 Odd Sem
63	B.Tech-NRME3C201-Mechanics of Solids Laboratory	2019-20 Odd Sem
64	B.Tech-NREE3C202-Network Theory Laboratory	2019-20 Odd Sem
65	B.Tech-NROP3B201-OOP USING JAVA LAB	2019-20 Odd Sem
66	B.Tech-NREC3C202-Signal and System Lab using Software	2019-20 Odd Sem
67	B.Tech-NRCS4C203-Computer Organization and Architecture Lab	2019-20 Even Sem
68	B.Tech-NRCS4C202-Design and Analysis of Algorithms Laboratory	2019-20 Even Sem
69	B.Tech-NREL4C201-Digital Electronics Laboratory	2019-20 Even Sem
70	B.Tech-NREC4C202-Digital System Design Laboratory	2019-20 Even Sem
71	B.Tech-NREE4C202-Electrical Machines-I Laboratory	2019-20 Even Sem

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72	B.Tech-NREC4C201-Electronic Device Laboratory	2019-20 Even Sem
73	B.Tech-NRME4C202-Engineering Thermodynamics Laboratory	2019-20 Even Sem
74	B.Tech-NRCI4C201-Field Surveying Sessional	2019-20 Even Sem
75	B.Tech-NRME4C203-Introduction to Physical Metallurgy and Engineering Materials Laboratory	2019-20 Even Sem
76	B.Tech-NRME4C201-Kinematics & Dynamics of Machines Laboratory	2019-20 Even Sem
77	B.Tech-NRCI4C203-Material Testing Laboratory	2019-20 Even Sem
78	B.Tech-NREC4C203-Network Theory Laboratory	2019-20 Even Sem
79	B.Tech-NREE4C203-Power Electronics Laboratory	2019-20 Even Sem
80	B.Tech-NRCS4C201-Problem Solving and Python Programming Laboratory	2019-20 Even Sem
81	B.Tech-NRCI4C202-Transportation Engineering Laboratory	2019-20 Even Sem
82	B.Tech-19FY1HS01T-English	2019-20 Odd Sem
83	B.Tech-19FY1MC01N-NCC/NSS/Yoga/Professional Ethics	2019-20 Odd Sem
84	B.Tech-19FY2MC01L-NCC/NSS/Yoga/Professional Ethics	2019-20 Even Sem
85	B.Tech-19FY1ES07L-Workshop or Manufacturing	2019-20 Odd Sem
86	B.Tech-19FY2ES05L-Programming Lab	2019-20 Even Sem
87	B.Tech-19FY2ES07L-Workshop or Manufacturing	2019-20 Even Sem
88	M.Tech-MTCS418-T-Adavanced Data Structure And Algorithm	2019-20 Even Sem
89	M.Tech-MTCS318-T-Advanced Computer Architecture	2019-20 Odd Sem
90	M.Tech-NP3PGCC02-IPR (INTELLECTUAL PROPERTY RIGHTS)	2019-20 Odd Sem
91	M.Tech-NP3PGCC01-Research Methodology	2019-20 Odd Sem
92	M.Tech-MTEE318-T-Smart Electrical Energy System	2019-20 Odd Sem
93	M.Tech-NP4EEBL01-DISSERTATION EVALUATION AND OPEN DEFENCE	2019-20 Even Sem
94	M.Tech-NP3CSBL01-PRE-DISSERTATION WORK EVALUATION	2019-20 Odd Sem
95	M.Tech-CSM201-Advanced Algorithms	2019-20 Even Sem
96	M.Tech-ECM101-Advanced Communication Networks	2019-20 Odd Sem
97	M.Tech-CSM101-Advanced Data Structures	2019-20 Odd Sem
98	M.Tech-ECM201-Advanced Digital Signal Processing	2019-20 Even Sem
99	M.Tech-CSM202-AI and Machine Learning	2019-20 Even Sem

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100	M.Tech-VLM201-Analog and Digital CMOS VLSI Design	2019-20 Even Sem
101	M.Tech-VLM106-Audit Course(English for Research Paper Writing)	2019-20 Odd Sem
102	M.Tech-CSM205-Audit Course-2	2019-20 Even Sem
103	M.Tech-CSM232-Big Data Analytics	2019-20 Even Sem
104	M.Tech-VLM123-CAD of Digital System	2019-20 Odd Sem
105	M.Tech-ECM121-Cognitive Radio	2019-20 Odd Sem
106	M.Tech-VLM241-Communication Busses and Interfaces	2019-20 Even Sem
107	M.Tech-ECM243-Data Encryption and Security	2019-20 Even Sem
108	M.Tech-CSM111-Data Science	2019-20 Odd Sem
109	M.Tech-CSM231-Data Visualization	2019-20 Even Sem
110	M.Tech-CSM233-Data Warehouse and Data Mining	2019-20 Even Sem
111	M.Tech-VLM111-Digital Signal and Image Processing	2019-20 Odd Sem
112	M.Tech-ECM112-Information theory and coding	2019-20 Odd Sem
113	M.Tech-CSM243-Knowledge Discovery	2019-20 Even Sem
114	M.Tech-VLM233-Low power VLSI Design	2019-20 Even Sem
115	M.Tech-VLM231-Memory Technologies	2019-20 Even Sem
116	M.Tech-VLM102-Microcontrollers and Programmable Digital Signal Processors	2019-20 Odd Sem
117	M.Tech-ECM202-Microwave and Antenna Engineering	2019-20 Even Sem
118	M.Tech-ECM242-MIMO Systems	2019-20 Even Sem
119	M.Tech-VLM242-Network Security and Cryptography	2019-20 Even Sem
120	M.Tech-CSM122-Pattern Recognition	2019-20 Odd Sem
121	M.Tech-VLM243-Physical Design Automation	2019-20 Even Sem
122	M.Tech-CSM105-Research Methodology & Intellectual Property Rights	2019-20 Odd Sem
123	M.Tech-VLM101-RTL Simulation and Synthesis with PLDs	2019-20 Odd Sem
124	M.Tech-VLM232-SoC Design	2019-20 Even Sem
125	M.Tech-CSM102-Soft Computing	2019-20 Odd Sem
126	M.Tech-ECM231-Statistical Signal Processing	2019-20 Even Sem
127	M.Tech-VLM202-VLSI Design Verification and Testing	2019-20 Even Sem
128	M.Tech-ECM233-Voice and Data network	2019-20 Even Sem

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129	M.Tech-CSM242-Web Analytics	2019-20 Even Sem
130	M.Tech-ECM102-Wireless and Mobile Communication	2019-20 Odd Sem
131	M.Tech-ECM107-Advanced Communication Lab	2019-20 Odd Sem
132	M.Tech-CSM107-Advanced Data Structures Laboratory	2019-20 Odd Sem
133	M.Tech-ECM207-Advanced Digital Signal Processing Lab	2019-20 Even Sem
134	M.Tech-CSM206-AI and Machine Learning Lab	2019-20 Even Sem
135	M.Tech-VLM206-Analog and Digital CMOS VLSI Design Laboratory	2019-20 Even Sem
136	M.Tech-CSM108-Data Science Lab	2019-20 Odd Sem
137	M.Tech-CSM207-Data Visualization Lab	2019-20 Even Sem
138	M.Tech-VLM108-Microcontrollers and Programmable Digital Signal Processors Lab	2019-20 Odd Sem
139	M.Tech-ECM206-Microwave and Antenna Engineering Lab	2019-20 Even Sem
140	M.Tech-ECM208-Mini Project with Seminar	2019-20 Even Sem
141	M.Tech-VLM107-RTL Simulation and Synthesis with PLDs Laboratory	2019-20 Odd Sem
142	M.Tech-CSM208-Seminar and Technical Writing	2019-20 Even Sem
143	M.Tech-VLM207-VLSI Design Verification and Testing Laboratory	2019-20 Even Sem
144	M.Tech-ECM108-Wireless and Mobile Communication Laboratory	2019-20 Odd Sem
145	MCA-NMCA306-Advance OS	2019-20 Odd Sem
146	MCA-NMCA404-Compiler Design and Language Processor	2019-20 Even Sem
147	MCA-NMCA402-Computer Graphics and Multimedia	2019-20 Even Sem
148	MCA-NMCA304-Database Management System	2019-20 Odd Sem
149	MCA-NMCA301-Design and Analysis of Algorithm	2019-20 Odd Sem
150	MCA-NMCA401-Programming with Java	2019-20 Even Sem
151	MCA-NMCA305-Quantitative Techniques (OR & SM)	2019-20 Odd Sem
152	MCA-NMCA403-Software Engineering	2019-20 Even Sem
153	MCA-NMCA302-Theory of Computation	2019-20 Odd Sem
154	MCA-NMCA405-Personality and Soft Skill Development	2019-20 Even Sem
155	MCA-MCA205-Communicative English	2019-20 Even Sem
156	MCA-21MC106-Environmental Science	2019-20 Odd Sem
157	MCA-N19MC105-Green Computing	2019-20 Odd Sem

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158	MCA-MCA203-Management Information System/ DSS	2019-20 Even Sem
159	MCA-MCA204-Math - II	2019-20 Even Sem
160	MCA-N19MC103-Mathematics – I	2019-20 Odd Sem
161	MCA-N19MC102-Principles and Practice of Management	2019-20 Odd Sem
30	MCA-N19MC101-Problem Solving using C	2019-20 Odd Sem
31	MCA-19MC208-Communicative English Laboratory	2019-20 Even Sem
32	MCA-19MC404B-Python Programming	2019-20 Even Sem
33	MBA-18MBA303B-Advanced Management Accounting	2019-20 Odd Sem
34	MBA-18MBA403A-B2B Marketing	2019-20 Even Sem
35	MBA-N18MBA402B-Behavioural Finance (BF)	2019-20 Even Sem
36	MBA-N18MBA401B-Business Taxation (BT)	2019-20 Even Sem
37	MBA-18MBA303C-Compensation and Benefit Management	2019-20 Odd Sem
38	MBA-18MBA301A-Consumer Behaviour	2019-20 Odd Sem
39	MBA-18MBA303A-Digital Marketing	2019-20 Odd Sem
40	MBA-18MBA302C-Employess Relation	2019-20 Odd Sem
41	MBA-N18MBA302B-Financial Derivative	2019-20 Odd Sem
42	MBA-N18MBA403C-Industrial Legislation (IL)	2019-20 Even Sem
43	MBA-N18MBA401D-MANAGEMENT OF MANUFACTURING SYSTEMS	2019-20 Even Sem
44	MBA-18MBA301C-Manpower Planning	2019-20 Odd Sem
45	MBA-N18MBA403B-Merger and Corporate Restructuring	2019-20 Even Sem
46	MBA-N18MBA403D-Operations Research Applications (ORA)	2019-20 Even Sem
47	MBA-18MBA303D-Operations Strategy	2019-20 Odd Sem
48	MBA-18MBA304C-Performance Management System	2019-20 Odd Sem
49	MBA-18MBA302D-Pricing and Revenue Management	2019-20 Odd Sem
50	MBA-18MBA402A-Product and Brand Management (PBM)	2019-20 Even Sem
51	MBA-N18MBA304B-PROJECT APPRAISAL & FINANCING	2019-20 Odd Sem
52	MBA-N18MBA401A-Retail Marketing (RM)	2019-20 Even Sem
53	MBA-18MBA302A-Sales and Distribution Management	2019-20 Odd Sem
54	MBA-18MBA304D-Sales and Operation Planning	2019-20 Odd Sem

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55	MBA-18MBA301B-Security Analysis and Portfolio Management	2019-20 Odd Sem
56	MBA-18MBA304A-Services Marketing	2019-20 Odd Sem
57	MBA-N18MBA402D-Sourcing Management	2019-20 Even Sem
58	MBA-N18MBA402C-Strategic Human Resource Management	2019-20 Even Sem
59	MBA-18MBA301D-Supply Chain Management & Logistics	2019-20 Odd Sem
60	MBA-N18MBA401C-Team Dynamics at Work (TDW)	2019-20 Even Sem
61	MBA-18NCC301-ADVANCE EXCEL AND SPSS	2019-20 Odd Sem
62	MBA-N18MBA404-Seminar Presentation	2019-20 Even Sem
63	MBA-18MBA305-Summer Internship Project	2019-20 Odd Sem
64	MBA-19MB205-Business Analytics	2019-20 Even Sem
65	MBA-19MB105-Business Economics	2019-20 Odd Sem
66	MBA-19MB207-Business Research Methods	2019-20 Even Sem
67	MBA-19MB206-Entrepreneurship and Business Incubation	2019-20 Even Sem
68	MBA-19MB202-Financial Management	2019-20 Even Sem
69	MBA-19MB106-Management Principles and Practice	2019-20 Odd Sem
70	MBA-19MB107-Managerial Communication	2019-20 Odd Sem
71	MBA-19MB201-PRODUCTION AND OPERATION MANAGEMENT	2019-20 Even Sem
72	MBA-19MB104-Statistics for Management	2019-20 Odd Sem
73	MBA-19MB208-BUSINESS ANALYTICS LAB	2019-20 Even Sem
74	MBA-19MB210-Personality Development Lab-2	2019-20 Even Sem
75	MBA-19MB109-Personality Development Lab-1	2019-20 Odd Sem
76	MBA-19MB209-SPSS LABORATORY	2019-20 Even Sem

1.2.2 Programmes in which Choice Based Credit System (CBCS)/Elective Course System implemented at the College level during the Academic year.

Names of programmes adopting CBCS	UG	PG	Date of implementation of CBCS / Elective Course System
B.Tech	✔		01 July 2019
M.Tech		✔	01 July 2019
MBA		✔	01 July 2019

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MCA		✔	01 July 2019

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
AUTOCAD	-	10
Advanced C	-	-
Hands on IoT	-	-
Basic VLSI design using EDA tools	-	-
Virtual Instrumentation using LabView	-	25
Soft Computing and its applications using MATLAB	-	-
CADENCE VLSI design	-	-
Advanced PCB development training	-	-
ANSYS	-	20
STAAD Pro	-	30
SPSS	-	-

1.3.2 Field projects / internships undertaken during the year

Project/ Programme title	No. of students enrolled for Field Projects/ internships
Summer Internship Program (MBA)	58
Pre-Placement Internship	84
IIT/NIT/IIIT/CSIR research internship	23
On-site internships at various companies	98
Online internship at companies	83
Summer course at NIST	18

1.4 Feedback system

1.4.1 Whether structured feedback received from all the stakeholders.

1. Students	2. Teachers	3. Employers	4. Alumni	5. Parents

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Yes	Yes	Yes	Yes	Yes

1.4.2 How the feedback obtained is being analyzed and utilized for overall development of the institution?

Feedback is analyzed at different administrative levels and corrective action is taken.

Student feedback: Abstract information is made available to the corresponding BCs, HoDs and subject teachers. The first feedback collected during mid-term examination provides a glimpse into the class conduction and understanding level. Teachers adjust their content delivery methods at this stage. The final feedback is collected after the end-semester examination. It helps assess the course coverage, quality of content, student satisfaction, any major challenges in classrooms or in study.

Teacher feedback: Teacher feedback is collected with the (i) course completion report, (ii) self-assessment report and (iii) response to student feedback report submitted by the teachers at different stages. It helps the administration/management understand the reasons and challenges in effective conduction of classes.

Employer feedback: At the end of each placement drive, the interviewers are requested to provide feedback on the student performance. This feedback is mostly technical in nature. Also, the HR/ admin persons in the companies where the students have been recruited provide feedback on outstanding performance or deficiency in the competence of the students. Employers, who hire students on PPO mode and offer internships prior to joining, provide feedback on performance of the students. The feedback collected is on technical knowledge, professional and interpersonal behavior and growth potential of the student. The placement cell consolidates the information and shares these in semester-wise/ annual review meetings in presence of the Principal and Chairman. Appropriate action items are suggested for the next academic session.

Alumni feedback: Alumni are involved in the Department BoS where they take part in the syllabus formulation, course content selection activities. They provide feedback on the actual industry needs faced by them or their peers (mostly at entry level positions) and suggest aligning courses that will benefit the fresh graduates over time. Alumni feedback on academic environment, transport, hostel, food, extracurricular activities etc. is also collected by the alumni cell coordinator. Every visiting alumni is presented with an alumni response form where they provide open ended (unstructured) suggestions for improvement of the campus and academics. Senior alumni provide feedback on the course content which will help the students take up future career positions.

Parent feedback: Parents feedback is collected over telephone calls, email, whatsapp messages etc. Visiting parents are also interviewed to take feedback on student performance, academic expectations, hostel facilities, transport facilities, teacher engagement etc. The nodal points of receiving parent feedback are batch coordinator, HoD, hostel superintendent, admission office and official telephone numbers.

Feedback review and recommendation:
The student feedback received on the internal ERP is consolidated and shared with the subject teachers for self-review and appraisal. The Periodic review of feedback is conducted by the Principal during HoD/BC meetings every month. The top management also conducts review meetings on major feedback received.

CRITERION II – TEACHING- LEARNING AND EVALUATION

2.1 Student Enrolment and Profile

2.1. 1 Demand Ratio during the year

Name of the Programme	Number of seats available	Number of applications received	Students Enrolled
B.Tech. - Computer Science and Engineering	240	-	203
B.Tech. - Electronics and Communication	120	-	109

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B.Tech. - Electrical and Electronics Engineering	180	-	50
B.Tech. - Information Technology	90	-	70
B.Tech. - Mechanical Engineering	120	-	48
B.Tech. - Electrical Engineering	120	-	14
B.Tech. - Civil Engineering	60	-	27
M.Tech. - Computer Science and Engineering	18	-	8
M.Tech. - Electronics and Communication	18	-	0
M. Tech. - VLSI Embedded System's Design	18	-	0
M. Tech. - Electrical Engineering	18	-	1
Master of Business Administration	18	-	0
Master of Computer Applications	60	-	60

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 full-time teachers available in the institution teaching only UG courses	Number of full-time teachers available in the institution teaching only PG courses	Number of teachers teaching both UG and PG courses
2019-2020	2569	184	96	16	16

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
180	91	LCD Projector, Laptop, Audio system	34	3	NPTEL, SWAYAM, e-book, pdf, Animations, Text, Graphics, e-notes, Acadly, NIS, & Quizzee

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

Number of students enrolled in the institution	Number of fulltime teachers	Mentor: Mentee Ratio
2753	180	1:15.29

As part of the program, the institution provides a student mentorship system. Students are divided into groups from the moment they are admitted and are mentored or supervised by instructors. The needs of the pupils are attended to by the appropriate faculty members. There are **2753** students and **180** faculty members available in

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the B.Tech, M.Tech, MBA, and MCA programs. A total of **138** groups of students are formed. A faculty member is in charge mentors each group. The faculty's responsibility is to care after each student's academic needs, motivation, and wellbeing. The mentor is in charge of all activities, both scholastic and extracurricular.

2.4 Teacher Profile and Quality

2.4.1 Number of full-time teachers appointed during the year (2018-2019)

No. of sanctioned positions	No. of filled positions	Vacant positions	Positions filled during the current year	No. of faculty with Ph.D
25	21	4	21	5

2.4.2 Honors and recognitions received by teachers

(received awards, recognition, fellowships at State, National, International level from Government, recognized bodies during the year)

Year of award	Name of full time teachers receiving awards from state level, national level, international level	Designation	Name of the award, fellowship, received from Government or recognized bodies
2019-20	-	-	-

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 End-sem / year-end examination	Date of declaration of results of End-sem/ year-end examination
B.Tech. - Computer Science and Engineering	CSE	8th/2019	27/03/2019	27/05/2019
B.Tech. - Electronics and Communication Engineering	ECE	8th/2020	27/03/2020	27/05/2020
B.Tech. - Electrical and Electronics Engineering	EEE	8th/2021	27/03/2021	27/05/2021
B.Tech. - Electronics and Instrumentation Engineering	EIE	8th/2022	27/03/2022	27/05/2022
B.Tech. - Information Technology	IT	8th/2023	27/03/2023	27/05/2023
B.Tech. - Mechanical Engineering	ME	8th/2024	27/03/2024	27/05/2024
B.Tech. - Electrical Engineering	EE	8th/2025	27/03/2025	27/05/2025
B.Tech. - Civil Engineering	CE	8th/2026	27/03/2026	27/05/2026
M.Tech. - Computer Science and Engineering	M.Tech CSE	4th/2019	3/8/2019	3/8/2019
M.Tech. - Electronics and Communication Engineering	M.Tech ECE	4th/2019	3/8/2019	3/8/2019

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M. Tech. - VLSI Embedded System's Design	M.Tech VLSI	4th/2019	3/8/2019	3/8/2019
M. Tech. - Electrical Engineering	M.Tech EE	4th/2019	3/8/2019	3/8/2019
Master of Business Administration	MBA	4th/2019	6/6/2019	17/08/2019
Master of Computer Applications	MCA	6th/2019	11/6/2019	11/6/2019

2.5.2 Average percentage of Student complaints/grievances about evaluation against total number appeared in the examinations during the year

**Do not include re-evaluation/ re-totalling*

S. No.	Number of complaints or grievances about evaluation	Total number of students appeared in the examination	Percentage
1	0	-	0%

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 web link)

B.Tech Program	**MTech Program**
CSE: https://nist.edu/academics/BTech_CSE.html	CSE: https://nist.edu/academics/MTech_CSE.html
ECE : https://nist.edu/academics/BTech_ECE.html	ECE: https://nist.edu/academics/MTech_ECE.html
EEE: https://nist.edu/academics/BTech_EEE.html	VLSI: https://nist.edu/academics/MTech_VLSI.html
IT: https://nist.edu/academics/BTech_CSE.html	EE: https://nist.edu/academics/MTech_EE.html
ME : https://nist.edu/academics/BTech_ME.html	MBA: https://nist.edu/academics/MBA.html
EE: https://nist.edu/academics/BTech_EE.html	MCA: https://nist.edu/academics/MCA.html
CE: https://nist.edu/academics/BTech_CE.html	

2.6.2 Pass percentage of students

Programme name	Programme Code	Number of students appeared in the final year examination	Number of students passed in final Semester /year examination	Pass Percentage
B.Tech. - Computer Science and Engineering	CSE	196	186	94.90
B.Tech. - Electronics and Communication Engineering	ECE	129	122	94.57
B.Tech. - Electrical and Electronics Engineering	EEE	154	148	96.10

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B.Tech. - Electronics and Instrumentation Engineering	EIE	15	15	100.00
B.Tech. - Information Technology	IT	75	69	92.00
B.Tech. - Mechanical Engineering	ME	131	126	96.18
B.Tech. - Electrical Engineering	EE	69	63	91.30
B.Tech. - Civil Engineering	CE	73	68	93.15
M.Tech. - Computer Science and Engineering	M.Tech CSE	3	3	100.00
M.Tech. - Electronics and Communication Engineering	M.Tech ECE	-	-	-
M. Tech. - VLSI Embedded System's Design	M.Tech VLSI	2	2	100.00
M. Tech. - Electrical Engineering	M.Tech EE	-	-	-
Master of Business Administration	MBA	58	55	94.83
Master of Computer Applications	MCA	38	37	97.37

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)

Link to student satisfaction survey portal: https://nis.nist.edu/

Student can log-in and navigate to feedback module to provide structured feedback.

Results of satisfaction survey: https://nist.edu/IQAC/SSS/student-satisfaction.html

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CRITERIA – III

CRITERION III–RESEARCH, INNOVATIONS AND EXTENSION (2019-2020)			
3.1 Promotion of Research and Facilities			
3.1.1The institution provides seed money to its teachers for research,			
Yes (Provision exists)			
Name of the teacher Getting seed money	The amount of seed money	Year of receiving grant	Duration of the grant
-	-	-	-

3.1.2Teachers awarded National/International fellowship for advanced studies/research during the year

	Name of the teacher awarded the fellowship	Name of the Award	Date of Award	Awarding Agency
National	-	-	-	-
International	-	-	-	-

3.2 Resource Mobilization for Research

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

Nature of the Project	Duration	Name of the Funding Agency	Total grant sanctioned	Amount received during the year
Major projects	1 year	DST AICTE DST SERB BPUT DST SERB	2024000 1058000 3502400 270000 3700000	250000 0 567470 270000 363880
Minor Projects				
Interdisciplinary Projects				
Industry sponsored Projects				
Projects sponsored by the University/College	1 year	NIST Autonomous Berhampur	82422.00	82422.00
Students Research Projects *(other than compulsory by the College)*	-	-	-	-
International Projects	-	-	-	-
Any other (Specify)	-	-	-	-
Total	-	-	-	-

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3.2.2 Number of ongoing research projects per teacher funded by government and non-government agencies during the years

- Dr. Sandipan Mallik: Structural Modification of Flexible Solar Cell by Incorporating Graphene tapered ZnO Anti-reflector in Wearable Electronics Power Solutions
- Dr. B Sambi Reddy: Design of Orthopedic Material for Artificial Hip Prosthetic
- Dr. Souren Misra: A multiple solar dryer for BPL people
- Dr. Shrabani Mahata: Development of highly ordered dye sensitize TiO2 nanotube-based interface for solar driven hydrogen generation via photo catalytic water splitting

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(s)
-	-	-

3.3.2Awards for Innovation won by Institution/ Teachers/ Research scholars/ Students during the year.

Title of the innovation	Name of the Awardee	Awarding Agency	Date of Award	Category
Smart India Hackathon 2019	K Pavan Kumar	Government of India	Jul-19	Hardware
smart India Hackathon 2019	K Ram Sai	Government of India	Jul-19	Hardware
smart India Hackathon 2019	Pallabi Mohapatra	Government of India	Jul-19	Hardware
smart India Hackathon 2019	Amisha Sahu	Government of India	Jul-19	Hardware
smart India Hackathon 2019	Sudhir Panda	Government of India	Jul-19	Hardware
smart India Hackathon 2019	Bhabani S Maharana	Government of India	Jul-19	Hardware
Sankalp Hackathon	Raju Ranjan Gupta	Sankalp Semiconductor	Dec-19	Hardware
Odisha Youth Innovation Fund (OIYF)	Abhijeet Choudhury	Government of Odisha	Jun-20	Hardware
Odisha Youth Innovation Fund (OIYF)	Sachitra K Patra	Government of Odisha	Jun-20	Software
Odisha Youth Innovation Fund (OIYF)	Ajit Dash	Government of Odisha	Jun-20	Hardware

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3.3.3 No. of Incubation center created, start-ups incubated on campus during the year		
Incubation Centre	Name	Sponsored by
NIST	Incuvations Foundation	Startup Odisha
Name of the Start-up	Nature of Start-up	Date of commencement
-	-	-

3.4 Research Publications and Awards	
3.4.1 PhDs awarded during the year	
Name of the Department	No. of PhDs Awarded
-	-

3.4.2ResearchPublicationsintheJournalsnotifiedonUGCwebsiteduringtheyear			
	Department	No. of Publication	Average Impact Factor, if any
National	-	-	-
International	CHEM	-	-
	CSE	06	4.8
	ECE	15	2.1
	EE	05	4.49
	MATH	08	1.52
	MBA	01	0.13
	ME	01	1.11
	PHYS	08	3.17

3.4.3 Books and Chapters in edited Volumes/Books published, and papers in National/ International Conference Proceedings per Teacher during the year	
Department	No. of publication
CHEM	-
CSE	7
ECE	-
EE	1
MATH	-
MBA	-
ME	-
PHYS	-

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3.4.4 Patents published/awarded during the year

Patent Details	Patent status Published/Filed	Patent Number	Date of Award
Metal protein semiconductor structure	Published	201831045064	22-11-2019
Internet of things based low-cost digital signal oscilloscope system	Published	201911050872	20-12-2019
Intelligent Maneuvering Hypolimnetic Aeration System	Published	201831031000	21-02-2020
A system for customized universal dc circuit emulation and a method thereof	Published	201831035787	27-03-2020

3.4.5 Bibliometrics of the publications during the last Academic year based on average citation index in Scopus/ Web of Science or Pub Med/Indian Citation Index

Title of the paper	Name of the author	Title of the journal	Year of publication	Citation Index	Institutional affiliation as mentioned in the publication	Number of citations excluding self-citations
QoS optimization through PBMR algorithm in multipath wireless multimedia sensor networks	Suseela S., Eswari R., Nickolas S., Saravanan M.	Peer-to-Peer Networking and Applications	2020	8	yes	7
Local Traffic Aware Unicast Routing Scheme for Connected Car System	Bhoi S.K., Sahu P.K., Singh M., Khilar P.M., Sahoo R.R., Swain R.R.	IEEE Transactions on Intelligent Transportation Systems	2020	14	yes	13
Clinical ultrasound image standardization using histogram specification	Roy R., Ghosh S., Ghosh A.	Computers in Biology and Medicine	2020	8	yes	7
Activities of the IEEE GRSS Kolkata chapter	Ghosh A., Chakraborty D., Roy R.	IEEE Geoscience and Remote Sensing Magazine	2020	-	yes	-
Fault diagnosis in wireless sensor network using clonal selection principle and probabilistic neural network approach	Mohapatra S., Khilar P.M., Swain R.R.	International Journal of Communication Systems	2019	21	yes	19
Resource aware execution of speculated tasks in hadoop with SDN	Hussain M.W., Hemant Kumar Reddy K., Roy D.S.	International Journal of Advanced Science and Technology	2019	-	yes	-
Robust extended complex Kalman filter	Panigrahi R., Patjoshi R.K.	International Journal on Electrical	2020	-	yes	-

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based LQR control strategy of shunt active power filter		Engineering and Informatics				
A deep learning approach for detection and classification of QRS contours using single-lead ECG	Anuhya A.V., Kolluru V.R., Patjoshi R.K.	International Journal of Pharmaceutical Research	2020	1	yes	1
Flexible BSA MIM capacitor with negative voltage coefficient for RF applications	Kumar P., Guhathakurata S., Choudhury A., Sharma A., Tripathy A.R., Sachin Kumar S., Pancham P.P., Das P., Mahato S.S., Mahata S., Mallik S.	Applied Physics Letters	2020	7	yes	6
Nanoscale dual-gate InAlAs/InGaAs HEMT with improved characteristics	Mohapatra M., Panda A.K.	International Journal of Electronics Letters	2020	1	yes	1
Electric field induced non-linear multisubband electron mobility in V-shaped asymmetric double quantum well structure	Panda A.K., Palo S.K., Sahoo N., Sahu T.	Philosophical Magazine	2020	14	yes	13
Effect of external electric field on multisubband electron mobility in n-V-shaped double quantum well HEMT structure	Panda A.K., Palo S.K., Sahoo N., Sahu T., Tripathy T.C.	Physica Scripta	2020	1	yes	
Study of Indoor Radio Coverage Performance of Dual Technology Co-Existing MIMO Antenna Platform for Low Power Wireless Base Station	Patro S.K.P., Mishra R.K., Panda A.K.	Radio electronics and Communications Systems	2020	1	yes	1
VLSI implementation in biomedical applications: A review	Sowmya N., Rout S.S., Patjoshi R.K.	International Journal of Computer Information Systems and Industrial Management Applications	2020	1	yes	1
Structural asymmetry induced nonmonotonic electron mobility in pseudomorphic double quantum well high electron mobility transistor structure	Panda A.K., Panda S.R., Sahu A., Das S., Sahu T.	Physica Scripta	2020	8	yes	7
Modified ground with 50 Ω step fed WLAN notch 2 × 2 MIMO UWB antenna	Patra P.K., Das M.K.	International Journal of RF & Microwave Computer-Aided Engineering	2020	16	yes	15

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Fast and optimised design of a differential VCO using symbolic technique and multi objective algorithms	Panda M., Patnaik S.K., Mal A.K., Ghosh S.	IET Circuits, Devices and Systems	2019	9	yes	8
Self-heating effects in SiGeheterojunction bipolar transistor with different Ge grading profile	Jena M.R., Panda A.K., Dash G.N.	International Journal of Innovative Technology and Exploring Engineering	2019	6	yes	5
Low power aware standard cells using dual rail multi threshold null convention logic methodology	Suresh M., Panda A.K., Sudhakar J.	Microprocessors and Microsystems	2019	7	yes	6
Nanostructured GaN and AlGaN/GaNheterostructure for catalyst-free low-temperature CO sensing	Mishra M., Bhalla N.K., Dash A., Gupta G.	Applied Surface Science	2019	17	yes	16
Minimizing End-to-End Delay on Real-Time Applications	Mishra T.K., Tripathi S.	Wireless Personal Communications	2019	4	yes	3
A novel modified whale optimization algorithm for load frequency controller design of a two-area power system composing of PV grid and thermal generator	Khadanga R.K., Kumar A., Panda S.	Neural Computing and Applications	2020	68	yes	62
Situational Awareness Index Assessment of Transmission Line Using Fault Tree Approach	Swain K., Mahato S.S., Krishna M.V., Cherukuri M.	Electric Power Components and Systems	2020	6	yes	5
A hybrid shuffled frog-leaping and pattern search algorithm for load frequency controller design of a two-area system composing of PV grid and thermal generator	Khadanga R.K., Kumar A., Panda S.	International Journal of Numerical Modelling: Electronic Networks, Devices and Fields	2020	20	yes	18
Position control of a flexible manipulator using a new nonlinear self-Tuning PID controller	Pradhan S.K., Subudhi B.	IEEE/CAA Journal of AutomaticaSinica	2020	60	yes	57
Modelling and simulation of KHLMS algorithm-based DSTATCOM	Mangaraj M., Panda A.K.	IET Power Electronics	2019	30	yes	27
Two-storage fuzzy inventory model with time dependent demand and holding cost under acceptable delay in payment	Kumar B.A., Paikray S.K., Misra U.	Mathematical Modelling and Analysis	2020	17	yes	16
A note on generalized indexed product	Mishra A., Padhy B.P.,	International Journal of Analysis and	2020	1	yes	-

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summability	Majhi B.K., Misra U.K.	Applications				
Strong Rieszsummability of Fourier series	Jena B.B., Paikray S.K., Misra U.	Proyecciones	2020	1	yes	-
Degree of approximation in the generalized Lipschitz class via (E, q)A- product summability means of Fourier series	Das A.A., Paikray S.K., Parida P., Misra U.K.	Turkish World Mathematical Society Journal of Applied and Engineering Mathematics	2020	1	yes	-
Approximation of signals by general matrix summability with effects of gibbs phenomenon	Jena B.B., Mishra L.N., Paikray S.K., Misra U.K.	Boletim da SociedadeParanaense de Matematica	2020	19	yes	18
Forced convection in a fluid saturated anisotropic porous channel with isoflux boundaries	Karmakar T., Reza M., Sekhar G.P.R.	Physics of Fluids	2019	11	yes	10
On approximation of the rate of convergence of Fourier series in the generalized Hölder metric by Deferred Nörlund mean	Pradhan T., Jena B.B., Paikray S.K., Dutta H., Misra U.K.	Afrika Matematika	2019	16	yes	15
Selling Price Dependent Demand with Allowable Shortages Model Under Partially Backlogged—Deteriorating Items	Sahoo A.K., Indrajit singha S.K., Samanta P.N., Misra U.K.	International Journal of Applied and Computational Mathematics	2019	21	yes	19
An assessment into mechanical properties and microstructural behavior of TIG welded Ti-6Al-4V titanium alloy	Dewangan S., Mohapatra S.K., Sharma A.	Grey Systems	2020	26	yes	24
A study on impact of demographic factors on eco-friendly buying decision	Patnaik A.	Indian Journal of Environmental Protection	2020	62	yes	60
Barrier layer induced switching stability in Ga:ZnOnanorods based electrochemical metallization memory	Panda D., SimanjuntakF. M., Chandrasekaran S., Pattanayak B., Singh P., Tseng T.-Y.	IEEE Transactions on Nanotechnology	2020	17	yes	16
Enhanced Switching Properties in TaOxMemristors Using Diffusion Limiting Layer for Synaptic Learning	Jung P.-Y., Panda D., Chandrasekaran S., Rajasekaran S., Tseng T.-Y.	IEEE Journal of the Electron Devices Society	2020	33	yes	30
A novel synchronous MAC protocol for wireless sensor networks with performance analysis	Sahoo P.K., Pattanaik S.R., Wu S.-L.	Sensors (Switzerland)	2019	19	yes	18

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Role of precursors mixing sequence on the properties of CoMn2O4 cathode materials and their application in pseudocapacitor	Pattanayak B., Simanjuntak F.M., Panda D., Yang C.-C., Kumar A., Le P.–A., Wei K.–H., Tseng T.–Y.	Scientific Reports	2019	23	yes	21
Enhanced Synaptic Linearity in ZnO-Based Invisible Memristive Synapse by Introducing Double Pulsing Scheme	Chandrasekaran S., Simanjuntak F.M., Panda D., Tseng T.-Y.	IEEE Transactions on Electron Devices	2019	56	yes	51
Improving linearity by introducing Al in HfO2 as a memristor synapse device	Chandrasekaran S., Simanjuntak F.M., Saminathan R., Panda D., Tseng T.-Y.	Nanotechnology	2019	96	yes	93
Potentials of GaP as millimeter wave IMPATT diode with reference to Si, GaAs and GaN	Pradhan J., Swain S.K., Pattnaik S.R., Dash G.N.	Hongwai Yu HaomiboXuebao/Journal of Infrared and Millimeter Waves	2019	4	yes	3
Constraining nuclear physics parameters with current and future COHERENT data	Papoulias D.K., Kosmas T.S., Sahu R., Kota V.K.B., Hota M.	Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics	2020	73	yes	70

3.4.6 h-index of the Institutional Publications during the year. (based on Scopus / Web of science)

Title of the paper	Name of the author	Title of the journal	Year of publication	h-index	Number of citations excluding self-citations	Institutional affiliation as mentioned in the publication
QoS optimization through PBMR algorithm in multipath wireless multimedia sensor networks	Suseela S., Eswari R., Nickolas S., Saravanan M.	Peer-to-Peer Networking and Applications	2020	42	7	yes
Local Traffic Aware Unicast Routing Scheme for Connected Car System	Bhoi S.K., Sahu P.K., Singh M., Khilar P.M., Sahoo R.R., Swain R.R.	IEEE Transactions on Intelligent Transportation Systems	2020	182	13	yes
Clinical ultrasound image standardization using histogram specification	Roy R., Ghosh S., Ghosh A.	Computers in Biology and Medicine	2020	113	7	yes
Activities of the IEEE GRSS Kolkata chapter	Ghosh A., Chakraborty D., Roy R.	IEEE Geoscience and Remote Sensing Magazine	2020	-	-	yes
Fault diagnosis in wireless sensor network	Mohapatra S., Khilar P.M.,	International Journal of	2019	56	19	yes

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using clonal selection principle and probabilistic neural network approach	Swain R.R.	Communication Systems				
Resource aware execution of speculated tasks in hadoop with SDN	Hussain M.W., Hemant Kumar Reddy K., Roy D.S.	International Journal of Advanced Science and Technology	2019	28	-	yes
Robust extended complex Kalman filter based LQR control strategy of shunt active power filter	Panigrahi R., Patjoshi R.K.	International Journal on Electrical Engineering and Informatics	2020	23	-	yes
A deep learning approach for detection and classification of QRS contours using single-lead ECG	Anuhya A.V., Kolluru V.R., Patjoshi R.K.	International Journal of Pharmaceutical Research	2020	26	1	yes
Flexible BSA MIM capacitor with negative voltage coefficient for RF applications	Kumar P., Guhathakurata S., Choudhury A., Sharma A., Tripathy A.R., Sachin Kumar S., Pancham P.P., Das P., Mahato S.S., Mahata S., Mallik S.	Applied Physics Letters	2020	466	6	yes
Nanoscale dual-gate InAlAs/InGaAs HEMT with improved characteristics	Mohapatra M., Panda A.K.	International Journal of Electronics Letters	2020	13	1	yes
Electric field induced non-linear multi-sub-band electron mobility in V-shaped asymmetric double quantum well structure	Panda A.K., Palo S.K., Sahoo N., Sahu T.	Philosophical Magazine	2020	100	13	yes
Effect of external electric field on multi sub-band electron mobility in n-V-shaped double quantum well HEMT structure	Panda A.K., Palo S.K., Sahoo N., Sahu T., Tripathy T.C.	Physica Scripta	2020	91	-	yes
Study of Indoor Radio Coverage Performance of Dual Technology Co-Existing MIMO Antenna Platform for Low Power Wireless Base Station	Patro S.K.P., Mishra R.K., Panda A.K.	Radio electronics and Communications Systems	2020	16	1	yes
VLSI implementation in biomedical applications: A review	Sowmya N., Rout S.S., Patjoshi R.K.	International Journal of Computer Information Systems and	2020	10	1	yes

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		Industrial Management Applications				
Structural asymmetry induced nonmonotonic electron mobility in pseudo-morphic double quantum well high electron mobility transistor structure	Panda A.K., Panda S.R., Sahu A., Das S., Sahu T.	Physica Scripta	2020	91	7	yes
Modified ground with 50 Ω step fed WLAN notch 2 × 2 MIMO UWB antenna	Patra P.K., Das M.K.	International Journal of RF and Microwave Computer-Aided Engineering	2020	43	15	yes
Fast and optimised design of a differential VCO using symbolic technique and multi objective algorithms	Panda M., Patnaik S.K., Mal A.K., Ghosh S.	IET Circuits, Devices and Systems	2019	52	8	yes
Self-heating effects in SiGe hetero-junction bipolar transistor with different Ge grading profile	Jena M.R., Panda A.K., Dash G.N.	International Journal of Innovative Technology and Exploring Engineering	2019	43	5	yes
Low power aware standard cells using dual rail multi threshold null convention logic methodology	Suresh M., Panda A.K., Sudhakar J.	Microprocessors and Microsystems	2019	45	6	yes
Nanostructured GaN and AlGaN/GaN heterostructure for catalyst-free low-temperature CO sensing	Mishra M., Bhalla N.K., Dash A., Gupta G.	Applied Surface Science	2019	219	16	yes
Minimizing End-to-End Delay on Real-Time Applications	Mishra T.K., Tripathi S.	Wireless Personal Communications	2019	75	3	yes
A novel modified whale optimization algorithm for load frequency controller design of a two-area power system composing of PV grid and thermal generator	Khadanga R.K., Kumar A., Panda S.	Neural Computing and Applications	2020	111	62	yes
Situational Awareness Index Assessment of Transmission Line Using Fault Tree Approach	Swain K., Mahato S.S., Krishna M.V., Cherukuri M.	Electric Power Components and Systems	2020	58	5	yes
A hybrid shuffled frog-leaping and pattern search algorithm for load frequency	Khadanga R.K., Kumar A., Panda S.	International Journal of Numerical Modelling:	2020	33	18	yes

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controller design of a two-area system composing of PV grid and thermal generator		Electronic Networks, Devices and Fields				
Position control of a flexible manipulator using a new nonlinear self-Tuning PID controller	Pradhan S.K., Subudhi B.	IEEE/CAA Journal of Automatica Sinica	2020	67	57	yes
Modelling and simulation of KHLMS algorithm-based DSTATCOM	Mangaraj M., Panda A.K.	IET Power Electronics	2019	87	27	yes
Two-storage fuzzy inventory model with time dependent demand and holding cost under acceptable delay in payment	Kumar B.A., Paikray S.K., Misra U.	Mathematical Modelling and Analysis	2020	27	16	yes
A NOTE ON GENERALIZED INDEXED PRODUCT SUMMABILITY	Mishra A., Padhy B.P., Majhi B.K., Misra U.K.	International Journal of Analysis and Applications	2020	5	-	yes
Strong Riesz summability of Fourier series	Jena B.B., Paikray S.K., Misra U.	Proyecciones	2020	15	-	yes
Degree of approximation in the generalized Lipschitz class via (E, q)A-product summability means of Fourier series	Das A.A., Paikray S.K., Parida P., Misra U.K.	Turkish World Mathematical Society Journal of Applied and Engineering Mathematics	2020	9	-	yes
Approximation of signals by general matrix summability with effects of gibbs phenomenon	Jena B.B., Mishra L.N., Paikray S.K., Misra U.K.	Boletim da Sociedade Paranaense de Matematica	2020	19	18	yes
Forced convection in a fluid saturated anisotropic porous channel with isoflux boundaries	Karmakar T., Reza M., Sekhar G.P.R.	Physics of Fluids	2019	195	10	yes
On approximation of the rate of convergence of Fourier series in the generalized Hölder metric by Deferred Nörlund mean	Pradhan T., Jena B.B., Paikray S.K., Dutta H., Misra U.K.	Afrika Matematika	2019	23	15	yes
Selling Price Dependent Demand with Allowable Shortages Model Under Partially Backlogged—Deteriorating Items	Sahoo A.K., Indrajitsingha S.K., Samanta P.N., Misra U.K.	International Journal of Applied and Computational Mathematics	2019	27	19	yes
An assessment into mechanical properties and microstructural behavior of TIG	Dewangan S., Mohapatra S.K., Sharma A.	Grey Systems	2020	20	24	yes

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welded Ti-6Al-4V titanium alloy						
A study on impact of demographic factors on eco-friendly buying decision	Patnaik A.	Indian Journal of Environmental Protection	2020	20	60	yes
Barrier layer induced switching stability in Ga:ZnO nano-rods based electrochemical metallization memory	Panda D., Simanjuntak F.M., Chandrasekaran S., Pattanayak B., Singh P., Tseng T.-Y.	IEEE Transactions on Nanotechnology	2020	90	16	yes
Enhanced Switching Properties in TaOx Memristors Using Diffusion Limiting Layer for Synaptic Learning	Jung P.-Y., Panda D., Chandrasekaran S., Rajasekaran S., Tseng T.-Y.	IEEE Journal of the Electron Devices Society	2020	40	30	yes
A novel synchronous MAC protocol for wireless sensor networks with performance analysis	Sahoo P.K., Pattanaik S.R., Wu S.-L.	Sensors (Switzerland)	2019	219	18	yes
Role of precursors mixing sequence on the properties of CoMn2O4 cathode materials and their application in pseudo capacitor	Pattanayak B., Simanjuntak F.M., Panda D., Yang C.-C., Kumar A., Le P.–A., Wei K.–H., Tseng T.–Y.	Scientific Reports	2019	282	21	yes
Enhanced Synaptic Linearity in ZnO-Based Invisible Memristive Synapse by Introducing Double Pulsing Scheme	Chandrasekaran S., Simanjuntak F.M., Panda D., Tseng T.-Y.	IEEE Transactions on Electron Devices	2019	198	51	yes
Improving linearity by introducing Al in HfO2 as a memristor synapse device	Chandrasekaran S., Simanjuntak F.M., Saminathan R., Panda D., Tseng T.-Y.	Nanotechnology	2019	220	93	yes
Potentials of GaP as millimeter wave IMPATT diode with reference to Si, GaAs and GaN	Pradhan J., Swain S.K., Pattnaik S.R., Dash G.N.	Hongwai Yu Haomibo Xuebao/Journal of Infrared and Millimeter Waves	2019	29	3	yes
Constraining nuclear physics parameters with current and future COHERENT data	Papoulias D.K., Kosmas T.S., Sahu R., Kota V.K.B., Hota M.	Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics	2020	275	70	yes

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3.4.7 Faculty participation in Seminars/ Conferences and Symposia during the year:

No.of Faculty	International level	National level	State level	Local level
Attended Seminars/Workshops	2	12	1	6
Presented papers	25	4	-	-
Resource Persons	1	-	-	1

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)
-	-	-	-

3.5.2 Revenue generated from Corporate Training by the institution during the year

Name of the Consultant(s) & Department	Title of the Programme	Agency seeking training	Revenue generated (amount in rupees)	Number of trainees
-	-	-	-	-

3.6 Extension Activities

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

Title of the Activities	Organizing unit/agency/ Collaborating agency	Number of teachers coordinated In such activities	Number of students participated in such activities
-	-	-	-

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	No. of Students benefited
-	-	-	-

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

Name of the scheme	Organizing unit/ agency/collaborating agency	Name of the activity	Number of teachers co-ordinated such activities	Number of students participated in such activities
One Student One Tree	AICTE	Greenathon	3	192

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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
Summer research internship	1	IISER Berhampur	90 days
Summer research internship	2	Sakura Student Exchange Programme, Japan	15 days
Summer research internship	1	NIT Patna	30 days
Summer research internship	1	IISER Bhopal online	30 days
Summer research internship	1	IIT Jammu online	30 days

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-To)**	Participant
Collaborative Project work and shared research faciliity		Indian Institute of Petroleum Energy Contact person:	July 2019 – June 2020	Dr. Sandipan Mallik Asso Prof, NIST Dr. Dipankar Pal, Asst Prof, Dept. of Chemical Engg, IIPE, Vizag.
Collaborative Project work and shared research faciliity		Dayalbagh Education Institute Contact person:	July 2019 – June 2020	Dr. Sandipan Mallik Asso Prof, NIST Dr. Gufran Ahmad, Asst. Professor, DIE, Agra
Collaborative research facility	Design and testing of metallic structural components for automotive applications.	Guru Ghasi Das Vishwa Vidyalaya	Apr 2019 - onwards	Sushanta Kumar Sahu Asst. Prof., NIST; Murlidhar Patel Student; Dr. Mukesh K Singh Prof, GGU;

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

Organisation	Date of MoU signed	Purpose and Activities	Number of **students/teachers Participated under MoUs**
L&T Technology Services Pvt. Ltd.	October 2019	Research/Internship	-
Marquee Semiconductor	Sep-2019	Research/Internship	-

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CRITERIA - IV

CRITERION IV–INFRASTRUCTURE AND LEARNING RESOURCES (2019-2020)	
4.1. Physical Facilities	
4.1.1. Budget allocation, excluding salary for infrastructure augmentation during the year	
Budget allocated for infrastructure Augmentation (In INR)	Budget utilized for infrastructure development (In INR)
7,50,00,000	7,13,47,054

4.1.2 Details of augmentation in infrastructure facilities during the year		
Facilities	Existing	Newly added
Campus area	37.805 acre	-
Classrooms	86	-
Laboratories	75	-
Seminar Halls	16	-
Classrooms with LCD facilities	14	-
Classrooms with Wi-Fi/LAN	24	-
Seminar halls with ICT facilities	3	-
Video Centre	1	-
No. of important equipment purchased (≥1-0lakh) during the Current year.	-	-
Value of the equipment purchased during the year (Rs. In Lakhs)	-	-
Others		

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 partially)	Version	Year of automation
Online Library Information System	Fully	NIST Developed	1998

4.2.1 Library Services:						
	Existing		**Newly added**		**Total**	
	No.	Value	No.	Value	No.	Value
Text Books	59,879	2,24,79,923	497	3,20,890	60,376	2,28,00,813
Reference Books	708	35,27,405	-	-	708	35,27,405
e-Books	-	-	-	-	-	-
Journals	-	-	-	-	-	-
e-Journals	-	-	-	-	-	-
Digital Database	-	-	-	-	-	-

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CD & Video	253	-	-	-	253	-
Library automation	1	-	-	-	1	-
Weeding (Hard & Soft)	-	-	-	-	-	-
Others(specify)	-	-	-	-	-	-

4.2.2 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
Dr. B. Sambi Reddy	Engineering Mechanics	YouTube	19th August, 2020

4.3. IT Infrastructure

4.3.1. Technology Upgradation (overall)

	Total Computers	Computer Labs	Internet	Browsing Centers	Computer Centers	Office	Departments	Available bandwidth (MGBPS)	Others
Existing	-	-	-	-	-	-	-	-	-
2019-20	900	14	900	1	1	3	1	1 GBPS	-
Added	-	-	-	-	-	-	-	-	-
2019-20	100	-	100	-	-	-	-	-	-
Total	1000	14	1000	1	1	3	1	1 GBPS	-

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

1 GBPS

4.3.3 Facility for e-content

Name of the e-content development facility	Provide the link of the videos and media center and Recording facility
Photography Club (ATR-318) Atrium mini conference room (ATR-213)	https://nist.edu/IQAC/econtent.html

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

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Assigned budget on academic facilities (in INR)	Expenditure incurred on maintenance of academic facilities (in INR)	Assigned budget on physical facilities (in INR)	Expenditure incurred on maintenance of physical facilities (in INR)
4,25,00,000	4,01,18,311	3,25,00,000	7,13,47,054

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

Link to usage policy document: https://www.nist.edu/about/resource-usage-policy.html

The National Institute of Science and Technology (NIST), supported by the SM Charitable Educational Trust, stands as a premier educational and research institution situated in the southern region of Odisha. NIST operates autonomously across a sprawling 37-acre campus, equipped with a diverse range of infrastructure including classrooms, laboratories, seminar halls, a library, swimming pools, hostels, sports complexes, food courts, and more. Regular inspections are diligently conducted to ensure the maintenance and repair of these facilities in accordance with stringent quality standards. Our dedicated team oversees thorough checks, addressing issues related to infrastructure integrity, equipment functionality, safety features, and overall cleanliness. Timely repairs, replacement of faulty equipment, and the provision of necessary supplies underscore our commitment to minimizing disruptions and sustaining a conducive learning environment. Guided by a set of comprehensive guidelines, the utilization of physical, academic, and campus facilities adheres to the principle of fair allocation, prioritizing the academic and research needs of classrooms and laboratories. Efficient space allocation considers specific requirements such as participant numbers, equipment needs, accessibility, and specialized criteria, ensuring optimal utilization. The institute boasts ample space and facilities to accommodate the routine activities of faculty, staff, and students. We provide certificate courses and training programs, supported by facilities that enhance teaching quality. Dedicated spaces, including research centers, NCC rooms, common rooms, and IQAC rooms, contribute to a holistic educational experience. Our indoor stadium, serving as a sports complex, hosts various activities such as cricket, hockey, and volleyball. These sports activities are complemented by cultural events, providing a well-rounded experience for students, staff, and faculty. Auditoriums, seminar halls, and tutorial rooms serve multiple purposes, facilitating guest lectures, expert talks (both online and offline), student seminars, social activities, placement training, and faculty and staff development programs. Our sports complex operates under well-defined policies and rules to ensure safe and inclusive usage. These guidelines outline proper usage of sports equipment, set behavior expectations during sporting activities, and establish procedures for reporting any incidents or accidents. The food court facilities are meticulously maintained to provide quality and hygienic foods. The library, housing an extensive collection of 60,000 books and a database, operates on a self-developed Online Library Information System. It features four distinct units for different streams, namely central, MBA, MCA, and competitive sections. The library adheres to an internal regulation system for transactions and library circulation. Opening its doors from 9 A.M. to 8 P.M., the library also houses a computer lab for internet browsing, journal searching, and e-content preparation. Clear guidelines govern borrowing materials, accessing electronic resources, using study areas, and maintaining a conducive study environment. We promote responsible behaviors, including maintaining silence, caring for library resources, and adhering to copyright regulations.

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CRITERIA – V

CRITERION V- student support and progression (2019-2020)			
5.1 Student Support			
5.1.1 Scholarship sand Financial Support			
Financial support from institution	Name/Title of the scheme	Number of students	Amount in Rupees
Financial support from other sources			
a) National	Prerana OBC/SEBC	35	4,40,000
	Prerana SC / ST	106	24,50,000
	e-Kalyan Scholarship	458	21,20,000
	e-Medhabruti	12	45,80,000
	NS to Minorities	28	4,80,000
	NS to General Stdnts	9	5,60,000
	AICTE Scholarship	3	4,50,000
	NS to Other Categories	38	60,000
	Bihar Govt. Scholarship	35	3,80,000
b) International	--	--	--

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
Soft skill development & English communication	Feb. 2020	990	Focus 4-D Career Education Pvt Ltd. (FACE), Smart Square Complex, S-02, 2nd, Shri Krishna Temple Rd, Indiranagar, Bengaluru, Karnataka 560038 Mr. Akshaya
Counseling	31-08-2019	529 (2019 Batch 1st Year)	NIST, Berhampur
Mentorship	7-8-2019	555 (2018 Batch 2nd Year)	NIST, Berhampur
Language Lab	31-08-2019	529	NIST, Berhampur
Yoga	31-08-2019	529	NIST, Berhampur
How to prepare an effective presentation using MS. Power point	29-07-2019	167	Dept. of English, NIST

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Personal SWOT analysis	10-03-2020	176	Dept. of English, NIST
Decision making using game theory	19-05-2020	234	Dept. of English, NIST
Problem solving using case method	07-06-2020	46	Dept. of English, NIST

5.1.3Studentsbenefitedbyguidancefor competitive examinations and career counselling offered by the Institution during the year

Year	Name of the scheme	Number of benefited students by Guidance for Competitive examination	Number of students benefited by Career Counselling activities	Number of students who have passed in the competitive exam	Number of students placed
2019	GATE Classes for Civil Engineering	34	-	1	-
2019	GATE Classes for ECE	38	-	-	-
2019	GATE Classes for Mechanical Engineering	80	-	2	-
2019	GATE Classes for EE	90	-	1	-
2019	Preparing resume for better job opportunity	-	61	-	CE 28(31) CSE 136(239) ECE 84(127) EE 39(49) EEE 79(105) EIE 17 (20) ME 37 (44) IT 47 (69) 6 (8) MCA 36 (38) MBA **509 (730)**
	Pre Placement Classes	-	990	-	

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	No. of grievances redressed	Average number of days for grievance redressal
1	1 (Ragging cases)	3
-	0 (Sexual harassment)	-
2	2 (Indiscipline cases)	5 days

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5.2 Student Progression

5.2.1 Details of campus placement during the year 2019-20

Name of Organizations Visited	Number of Students Participated	Number of Students Placed	
		ON Campus	OFF Campus
CoreEl Technologies	135	1	-
Infinite Computer Solutions	89	21	-
Cerebronics Technology Pvt ltd	110	10	-
Infosys Hackathon (HACKWITHINFY)	230	7	-
GGK Tech	75	-	3
TCS Digital / Ninja / Code Vita	228	97	
Value Labs	65	-	4
JARO Education (Phase II)	64	-	2
Uncease Automation	44	1	-
ICICI Bank	60	22	-
Paytm	96	1	-
Madhus Garage Equipments	43	2	-
Indus Ind Bank	59	-	5
SAP Lab India	71	3	-
Infosys Ltd	217	105	-
Wipro TalentNext	223	8	-
Mindtree	175	21	-
TA Digital	93	7	-
Hexaware	115	15	-
Wipro Ltd (NLTH)	161	28	-
Cognizant Technology Services	196	-	44
Symphony Talent	87	1	-
L&T Technology Services	135	19	-
Eurofins	52	2	
Capgemini Ltd. (Diversity)	177	-	7
Capital Via Global Research	50	5	-
eLitmus	45	1	-

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CSM Technologies	70	6	-
Spikewell	58	3	-
Marquee Semiconductor	60	2	-
Xoriant	44	-	3
IBM	70	-	10
Raster Engineers	30	-	2
Cape Electrics Pvt Ltd	50	6	-
Mindfire Solutions	75	-	3
Urjanet Energy Solutions	47	-	5
Western Digital	80	2	-
Megha Engineering & Infrastructures Ltd.	150	73	-
New Leaf Dynamic Technologies (P) Ltd.	65	1	-
Eidiko System Integrators ltd	60	-	4
Hyper FilterationPvt Ltd	40	-	2
Bhash Software	75	23	
Jambhekar Automation	25	-	6
Education Asia	60	5	-
Roter Lehmann Partner India	35	-	2
MountBlue Technologies	40	3	
Wipro Ltd (NLTH)	210	-	47
Flipkart	55	-	1
Capgemini Ltd.	180	-	21
RAO IIT Academy	80	17	-
TATA Steel JET	150	5	-
DXC Technologies	95	-	29
Evince Development	85	3	-
		526	**200**
Total		**726**	

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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
2019	11	B.Tech.	EEE, ECE, EE ME	Annexure_2019-20	MS, M.Tech.

5.2.3. Students qualifying in state / national / international level examinations during the year (eg: NET/SET/SLET/GATE/GMAT/CAT/GRE/TOFEL/CivilServices/StateGovernmentServices)		
Items	No. of Students selected/ qualifying	Registration number/roll Number for the exam
NET		Annexure_2019-20
SET		
SLET		
GATE	3	
GMAT		
CAT		
GRE		
TOEFL	1	
IELTS		
Civil Services		
State Government Services		
Any Other		

5.2.4 Sports and cultural activities/ competitions organised at the institution level during the year		
Activity	Level	Participants
SANKALP 2K19	National	2000
Intra college sports fest 2021	Institute	150

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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/ International	Sports	Cultural	Student ID number	Name of the student
2019	--	--	--	--	--	--

5.3.2 Activity of Student Council & representation of students on academic & administrative bodies/committee of the institution (maximum500 words)

Students actively participate in various academic and administrative bodies and committees within the Institute, playing a crucial role in coordinating events related to academics, as well as co-curricular and extra-curricular activities. Their involvement extends to key decision-making forums such as the Curriculum Review Committee and Board of Studies (BOS), where they contribute suggestions for updating syllabi.

Within department associations, students assume roles such as President, Secretary, and Treasurer, taking charge of organizing Intercollegiate Meets, Conferences, and Seminars. In matters related to hostel life, student nominees on the Hostel Welfare and Mess Committee advocate for the concerns of residents to the Warden, actively contributing to the effective functioning of the hostels. Additionally, students represented in the Anti-Ragging Committee, alongside administrators, work diligently to maintain a ragging-free environment on campus.

Class Representatives are tasked with monitoring disciplinary activities within each class and serving as liaisons between students and Heads of Departments (HODs) to address grievances. Students involved in Extension Activities such as National Cadet Corps (NCC), and National Service Scheme (NSS) Units participate in outreach programs aimed at contributing to the welfare of the local community and fostering a sense of social responsibility among students.

Furthermore, students actively engage in various clubs and committees, including the Cloud Computing, Club Excel, Multimedia club, Data Science club, Renewable Energy club, Robotics club, NIST Musical Society, NIST Astronomy club, CAT club, Electronics Hobby club, Civeng's club, NIST Counselling services, Sports Committee, Alumni Association, Sexual Harassment Cell, Library Committee, showcasing their proactive involvement in diverse aspects of campus life.

5.4 Alumni Engagement

5.4.1 Whether the institution has a registered Alumni Association? If yes give details (maximum 500 words):

Yes, Institution has registered Alumni Association named as National Institute of Science & Technology Alumni Association (NISTAA) registered under society Act 1860 on date- 3rd February 2020, having its office inside the

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campus of National Institute of Science & Technology. Every year it is conducting its regular General Body & Governing Body meeting as per its Bye- Law.

The aims and objectives of the society are

1. To promote an active Alumni Association of National Institute of Science & Technology, Berhampur
2. To promote fraternization amongst alumni of the Institute.
3. To promote the Socio-Cultural interaction between the alumni and their family.
4. To build active network of alumni across India
5. To help the institute collaborate with the industry for better student placements and faculty upgrade. To create an awareness about the achievements, contribution, and the rich of heritage of the institute with in the media as well as the industry.
6. To institute and organize scholarship funds to help the needy and deserving students of the institute.
7. To institute prizes and awards for outstanding project work, research papers and other professional activities by the faculty, alumni, and the students of the institute, and to suitably recognize outstanding social and community services rendered by them.
8. To create CHAIRS in the institute for promoting Research and Development.
9. To establish closer interaction amongst members of the society and the industries.
10. To work with like-minded organizations to foster better community building. To mobilize resources for supporting the objectives of the society.
11. To undertake all such activities as are conducive or incidental to the attainment of the above objectives and are beneficial to the interests of the institute of technology and/or its alumni.

5.4.2 No of registered alumni: **0**

5.4.3 Alumni contribution during the year (in Rupees)**: 0**

5.4.4 Meetings/activities organized by Alumni Association**: 7**

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CRITERION VI : GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1 Institutional Vision and Leadership

Vision

Focused on high-quality teaching, creative innovation, entrepreneurship, and universal partnership.

Mission

A research institute committed to academic excellence, fundamental research and innovation, nurturing global citizens, and collaborative engagement.

Core values

Belief: In respect, integrity, compassion, diversity, and teamwork

Excellence: In academics and research

Encouragement: For freedom of thought, expression, and viewpoint

Spirit: of community, nation-building, inclusive growth, and recognition of individual uniqueness.

Truth: In the pursuit, dissemination, and application of knowledge

Leadership

It is guided by the Founder Chairman of the institute, Dr. Sukant K Mohapatra, the leadership team represents diverse functions, and are committed to collaboratively serving significant organizational purposes for which they hold themselves mutually accountable. They bring together and lead staff and faculty and ensure aligned action. The figure.1 indicates the leadership team.

Mention two practices of decentralization and participative management during the last year

The Institute has decentralized and participative management practices. The below-mentioned organizational structure provides concrete information on various levels of decentralization. The institution follows participative management in every functional area of operation such as various academic affairs are taken care of by the head of the department, and controller of examination with the support of deputy controllers. Various groups are formed to **modulate** the decisions taken for effective implementation.

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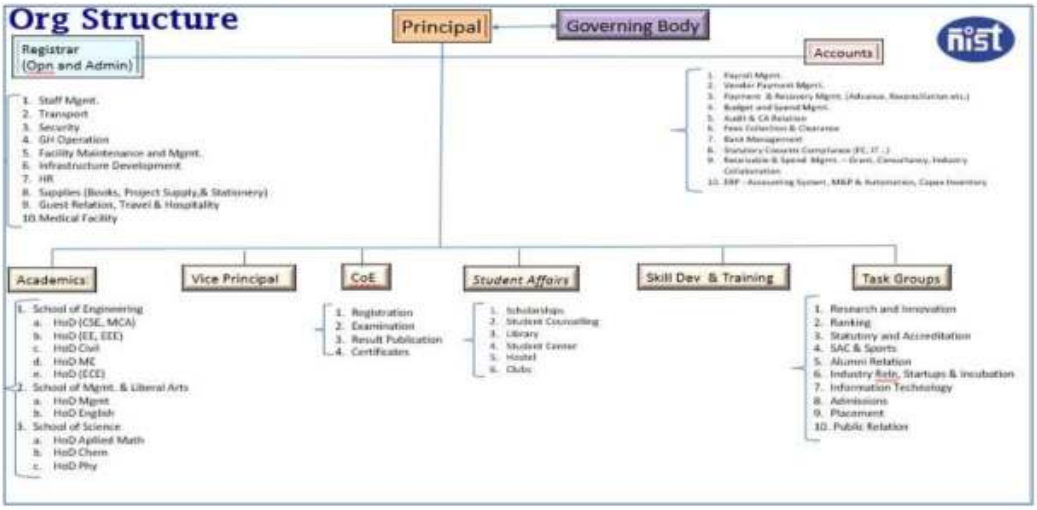

6.1.2 Does the institution have a Management Information System (MIS)?

YES- The link for accessing is pasted below

https://www.nist.edu/nis/index.php

Strategy development and deployment:

The institute formulates a strategic plan to visualize and accomplish its vision and mission, through the formulation of curriculum development, development of teaching and learning strategies, formulation of examination and evaluation policies, policies for library, ICT and physical structure/Instrumentation, emphasis on human resource management practices and policies, industry collaboration and procedure for admission of students.

6.2.1 Quality Improvement Strategies adopted by the Institution for each of the following

Curriculum Development:

Teachers are the key stakeholders who are involved in the process of developing and structuring the curriculum for various subjects. The teachers develop, analyze, and evaluate the course structure and finalize it after proper discussion with the head of the department for further processing. The institute through the conduction of the Board of Studies (Bos) develops the curriculum of the subjects, the board of studies consists of subject experts from the department, with active involvement of alumni in the process. The passed course structure is further submitted to various internal bodies to be implemented.

Teaching and learning: Each subject teacher is required to develop their course file based on the allotted subject. The institute follows a checklist that every teacher needs to maintain, and the departmental head verifies it at the end of each semester.

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Sl No	Item	Remark
1	Syllabus	Subject syllabus page
2	Teaching Plan	As per the format given
3	Time table	Concerned subject timetable only
4	Study Materials	ppts, e-book, Q&A booklet, etc whatever you give to students
5	Case Discussed	As per the lesson plan, One case per module
6	Guest Lecture	One guest lecture per subject. Invitation email, Confirmation email from guest, GI tagged photo of session, thank you letter from the host
7	Mid-semester question paper	With CO-PO
8	Scanned copy of answer scripts	Best 3 and worst 3 full script scans
9	Result analysis	Result of Mid Sem in Excel sheet, analysis of results highlighting the slow learners, Action taken report for slow learners
10	University result analysis	Take a copy from NIS (if available) and keep it
11	Assignment, Quiz, Surprise Test question copies, etc	As per the internal marks composition of the institute
12	Seminar details	Scanned copy of your markings
13	Mentoring details	As submitted to the mentoring coordinator
14	Final mark sheet submitted to CoE	in excel sheet
15	Course completion report	from NIS duly signed by HoD

Examination and Evaluation: The institute has a separate centralized examination cell for the conduction of examination and it is controlled by the controller of examination (CoE), deputy controller, and exam superintendents. For each batch, an exam superintendent is designated to conduct the exam. The central examination cell has a separate process for evaluating the answer scripts. The CoE is responsible for the smooth conduction of exams as per the academic calendar and the evaluation of answer scripts in a proper manner. The CoE adheres to the provided list of paper setters, moderators and examiners duly passed and approved by the Bos.

Research and development: The institute has a research and development cell, headed by a Rand D coordinator. Each department nominates a departmental member to the research and development cell for the smooth conduction and passing of various research activities. The Institute has various research groups such as the Novel Material Research Laboratory, VLSI Embedded System and IOT Group, Nano Science and Technology Group, Microwave and Antenna Group, Embedded System Design, Materials Research & Characterization Group, and various centers of excellence in Industrial Automation, the center of excellence in network vision and network security, the center of excellence in renewable energy, and the center of excellence in mechatronics. The total number of SCOPUS publications in various national /international journals are 45, 4 patents.

- **Library, ICT, and Physical Infrastructure/Instrumentation:** The institute has a central library with a self-developed Online Library Information System. The library has four different units for different streams such as central, MBA, MCA, and competitive sections. The library has an internal regulation system for transactions and

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a library circulation system. The library opens for students from 9 A.M. to 8 P.M. Our library has clear guidelines for borrowing materials, accessing electronic resources, using study areas, and maintaining a conducive environment for studying. The library has a facility of drop box for books to be dropped so that students can have a time-saving approach. The institute has various academic and administrative buildings like the Lecture Hall complex, Galleria, OCTAGON, and ATRIUM.

- **Human Resource Management:** NIST has implemented an ERP system (NIST Information System/ NIS) developed in-house. The same is accessible on the intranet as well as from outside. For effective HR management, the ERP has modules for Leave approval which provide information on leave count, class adjustment, and multi-level leave recommendation/ approval. The attendance is captured with a biometric attendance system (facial and fingerprint). There is an HRD module that gives detailed information about each of the staff and faculty members.

- **Industry interaction/ Collaborations:** NIST has standing MoUs with 5 numbers of Companies/ Industry houses. The scope of the MoUs includes training, collaborative product development, consultancy work, pre-placement offers, etc. Resource persons from the industries have been invited to deliver motivational talks to the newly inducted and outgoing students. They have been actively involved in the syllabus revision/updating activities through the BoS. Some of the industry experts are BoS members and some are invited to provide crucial feedback on market-driven syllabus framing. Students have been availing internships at the partner industries.
- **Admission of students:** NIST intimates the eligibility criteria, fees, and admission process for each course to whoever calls us for an inquiry. NIST receives admissions through OJEE counseling only. A student needs to participate in the OJEE counselling process. Whoever gets the final allotment reports to the institute within the given period. They need to submit the final allotment letter, the original leaving or transfer certificate from the previous institute, and a set of photocopies of the documents uploaded for OJEE counselling. After that, they pay the institute fee and receive the identity card. Students with ID cards are only allowed to attend the classes. The institute intimates their registration numbers after receiving them from the university. For anyone who cancels their admission before the UGC-set deadline, NIST strictly adheres to the UGC refund policy.

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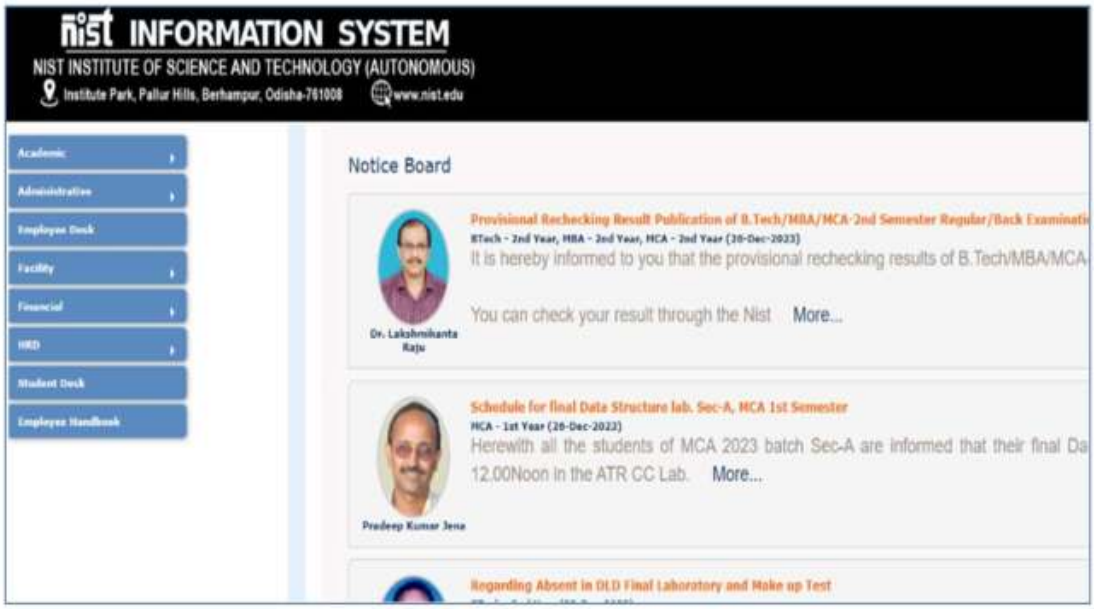
6.2.2 Implementation of e-governance in areas of operations:

NIST has developed its Enterprise Resource Planning (ERP) system which is called as NIST information system. It has various modules such as academic, financial, administrative, facility, employee desk, HRD, and student desk.



- **Planning and Development:**

The NIS took a proactive approach and directed its attention towards a wide range of planning and development endeavors, employing diverse methodologies such as the creation and enhancement of multiple modules, including but not limited to procurement and the National Institutional Ranking Framework (NIRF). To ensure comprehensive exploration and examination of the diverse elements entailed in the growth and progress of these

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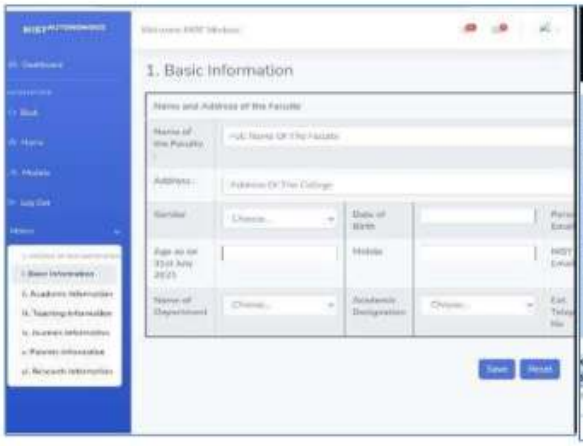
modules, a specialized committee was established, with the primary purpose of engaging in extensive discussions and deliberations on various aspects pertaining to their development.



- **Administration**: The institute under the administrative head maintains information on a bulletin board, which provides information on various notices given by the faculty members and staff members of the institute, it also has various other modules such as a procurement management system. The procurement management system modulates all the requisitions for the procurement of accessories. The project management system maintains information regarding project details, uploading reports, uploading PPTs, maintaining marks, and project clearance. The grievance cell maintains the grievances raised by the students, and faculties and forms various teams the grievances are addressed for timely solutions and appropriate results.

- **Finance and Accounts:** The ERP system of the institute has a module that covers various aspects relating to financial aspects with employee concerns. It has two sub-sections as advanced management system and the

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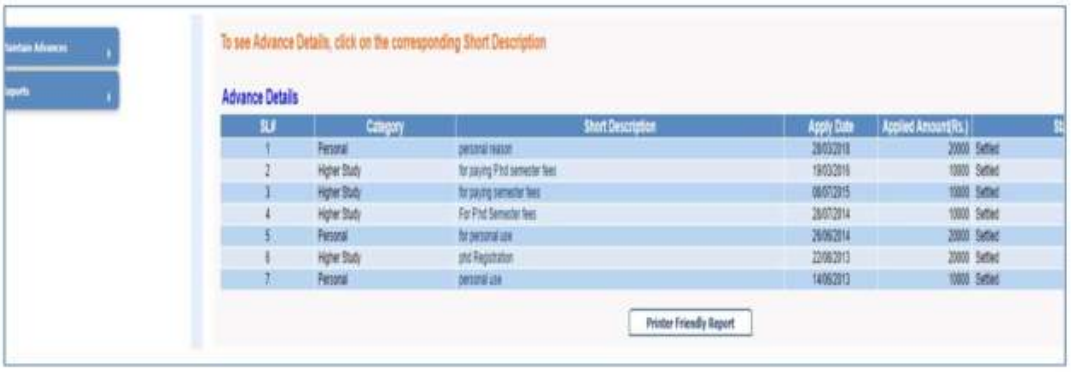
personal advance system. The advanced management system provides advances to the faculties for attending various conferences, FDP, and workshops. The employees who avail advance for attending various conferences, FDP, and workshops need to go for a presentation after coming to the institute which provides a scope for others to have a knowledge-sharing session. The personal advance management system provides loans to employees on various grounds like higher education, purchase of vehicles, and personal loans. It is done through proper verification by the approval authority.



- **Student Admission and Support:** The Institute proactively uses the NIS for various purposes relating to student admission and support such as entering newly enrolled student data, maintaining information on a candidate's background, details with registration of the student, and fees payment. It acts as a comprehensive platform for dealing with various data for students enrolling in a program and also verifying certificates (such as 10th, and 12th examinations) of the enrolled students for smooth functioning of further processes.

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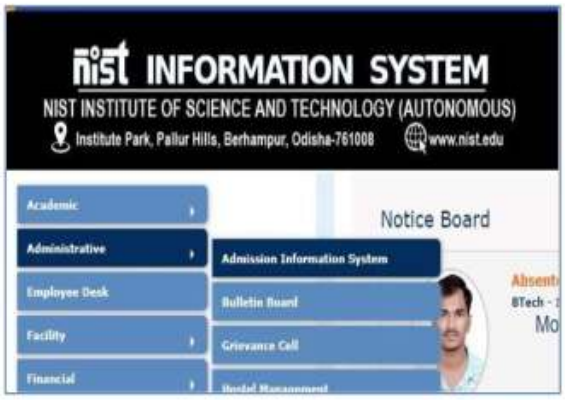

- **Examination :** The institute effectively utilizes the National Institute science and Technology (NIST) information system for a multitude of examination-related endeavors. These endeavors include, but are not limited to, the extraction of diverse reports pertaining to the attendance of students, the uploading of question papers by faculty members, the uploading of marks, as well as the extraction of reports for both internal and external result publication. By harnessing the power of the NIST information system, the examination department is able to streamline and enhance the examination processes, ensuring efficient and accurate record-keeping and reporting.

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6.3 Faculty Empowerment Strategies

6.3.1 Teachersprovidedwithfinancialsupporttoattendconferences/workshopsandtowardsmembershipfee of professional bodies during the year.

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

6.3.2 ***Number of professional development/administrative training programmes organized by the Colleges for teaching and nonteaching staff during the year***

Number of professional development/administrative training programmes organized by the Colleges 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	Dates (from-to)	No. of participants (Teaching staff)	No. of participants (Non-teaching staff)
2019-2020	Soft Computing Techniques and its Application		10/12/2019 20/12/2019	12	
2019-2020	Hands on NLP	Microsoft Office	21/12/2019 31/12/2019	20	8
2019-20	Auto-CAD	Auto-CAD	18/06/2019 29/06/2019	7	5

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

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	Date and Duration (from – to)
Faculty &staff Training Program through ICT mode on "Effective Training"	40	15th July -19th July 2019 organized by Mechanical department
STTP on 'Management Issues of Laboratory and Workshop Class'	43	4th November - 8th November 2019 organized by Mechanical department

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

Faculty and Staff recruitment (no. for permanent recruitment):			
Teaching		Non-teaching	
Permanent	Fulltime	Permanent	Fulltime
18	18	6	5

6.3.5 Welfare schemes

Welfare scheme	
Teaching	ESI , provident fund
Nonteaching	ESI, Provident fund
Students	Student Insurance

6.4 Financial Management and Resource Mobilization

6.4.1 Institution conducts internal and external financial audits regularly

The institute has established an internal and external audit committee. The internal audit committee is composed of four individuals: the principal, who also serves as the chairman of the finance committee, a representative chosen by the governing body, the finance officer of BPUT, and the ex-office member. On the other hand, the external audit is carried out by a chartered accounting firm known as MDC & associate.

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

Name of the nongovernment funding agencies/individuals	Funds/ Grants received in Rs.	Purpose

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6.5 Internal Quality Assurance System

6.5.1 Whether academic and administrative Audit (AAA) has been done?

6.5.1 Whether Academic and Administrative Audit (AAA) has been done?				
Audit Type	External		Internal	
	Yes/No	Agency	Yes/No	Authority
Academic	Yes	NIRF and NBA	Yes	IQAC team
Administrative	Yes	BPUT and AICTE	Yes	

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

- Foundation day Program
- Orientation program for students
- Sankalp (Inter College Tech-fest)

6.5.3 Development programs for support staff (at least three)

- Staff Orientation Program
- Thursday seminar
- All hand meeting

6.5.4 Post-accreditation initiative(s) (mention at least three)

- The course file checklist prepared last academic year was followed by faculty members.
- Student online feedback survey opened in NIST Information System where a student is supposed to give feedback about the tutors.
- A happiness index information gathering is a regular practice in NIST. To assess employee job satisfaction, NIST conducts this survey during with its performance appraisal process.

6.5.5 Other accreditation agency

a. Submission of Data for AISHE portal :(Yes /No) Yes

b. Participation in NIRF :(Yes/No) Yes

c. ISO certification :(Yes /No) NO

d. NBA or any other quality audit :(Yes/No) Yes

6.5.6 Number of Quality Initiatives undertaken during the year

Year	Name of quality initiative by IQAC	Date of conducting Activity	Duration (from-to)	Number of participants
2020	How to meet company expectation and be the role model'	6th June 2020	6th June 2020	50
2020	FDP on 'HR Analytics'	8th,9th August,2020	8th,9th August,2020	40

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CRITERIA – VII

CRITERION VII–INSTITUTIONAL VALUES AND BEST PRACTICES (2019-20)			
7.1-Institutional Values and Social Responsibilities			
7.1.1 Gender Equity (Number of gender equity promotion programs organized by the institution during the year July 2019 to June 2020			
Title of the program	**Period (from to)**	**Participants**	
		Female	Male
International Women's Day Program	8th March 2020	160	30

7.1.2 Environmental Consciousness and Sustainability/Alternate Energy initiatives such as the percentage of the power requirement of the College met by the renewable energy sources:

1. A three-month free Surya Mitra Skill development program was organized by NIST in collaboration with MNRE on 20th Jan 2020
2. TEAM NSS NIST initiated the Gopalpur Beach (Bay of Bengal coastline) Clean Up Drive at Gopalpur on 29th Dec.2019
3. NIST consumes an average of 54,468 KWh from the grid per month & 11501 KWh is collected from renewable resources (Solar, Wind, Biogas etc). Hence the total 17.43 % of power requirement was met by renewable resources.

7.1.3 Differently-abled (Divyangjan) friendliness

Items Facilities	Yes / No	No of Beneficiaries
Physical facilities	Yes	-
Provision for lift	Yes	-
Ramp/Rails	Yes	-
Braille Software/facilities	No	-
Rest Rooms	Yes	-
Scribes for examination	Yes	-
Special skill development for differently bled students	No	-
Any other similar facility (Wheel Chair facilities are available)	Yes	-

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7.1.4 Inclusion and Situatedness						
Enlist the most important initiatives taken to address locational advantages and disadvantages during the year						
Year	**Number of initiatives to address location advantages and disadvantages**					
2019-20	1	1	Date and duration of the initiative	Name of the initiative	Issues addressed	Number of participating students and staff
		Disadvantage: NIST is situated 180 km away from off-campus interview venue at Bhubaneswar, which is difficult for our students to participate in campus drive organized at capital city Bhubaneswar.	September 2019	Fleet buses are provided for our students to reach Bhubaneswar to attend the campus placement	Placement activities	200 students (Approax)

7.1.5 Human Values and Professional Ethics		
Code of conduct (handbooks) for various stakeholders		
Title	Date of Publication	Follow-up (Maximum 100 words)
EMPLOYEE HANDBOOK (Rules and Regulations Version 2.0)	July, 2019	The effective implementation and adherence to the "Employee Handbook" at NIST entail collaboration among diverse stakeholders, with responsibilities distributed across various roles. Designated individuals and groups are tasked with ensuring the proper execution. The principal holds overall responsibility for institute affairs, overseeing day-to-day management. Furthermore, the HR Department, the Staff Welfare Committee, the Performance Evaluation and Appraisal Committee, and the Ethics Committee actively

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		contribute to the successful implementation of the Employee Handbook. This collective effort fosters a comprehensive approach to employee guidelines and welfare within the organization.
STUDENT HANDBOOK Rules and Regulations B.Tech | M.Tech | MBA| MCA| PhD Version 1.1	June 2019	NIST maintains a Disciplinary Committee (DC) led by a chairperson appointed by the Institute, comprising faculty members. This committee addresses complaints, scrutinizes evidence, and proposes appropriate sanctions. Recommendations, including suggested punishments for proven guilt, are submitted to the principal for implementation. Unlike a court of law, the standard of proof may vary. Additionally, the institute establishes various committees/cells, such as the Women Grievance Cell, Anti-ragging Cell, and NIST Counselling Service etc. to uphold human values and professional ethics. These entities collectively contribute to fostering a secure and ethical environment within the institution and proper implementation of the policies mentioned in the handbook

7.1.6 Activities conducted for the promotion of universal Values and Ethics

Activity	Duration (From 2019 - 2020)	
Transformative Leadership	15 and 16 Nov 2019	NA

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

1. Monthly Cleaning by NSS students
2. Awareness campaign for Clean & Green Campus
3. Cleaning the pond
4. Massive plantation (Vanmahostav)
5. Recycling the wastewater for plantation
6. Making a decomposition pit for converting organic waste to manure
7. Segregation of waste for proper disposal

7.2 Best Practices

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.

Best Practice-1 (NTCS: NIST Technology and Consulting Services)

https://nist.edu/IQAC/best-practices.html #2019-20

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https://www.nist.edu/RnD/ntcs.html

NTCS is operated as an in-house software company exploring latest technological advances, developing software catering to the user base in and around the state. The potential clients could be any personal or institutional user consuming IT services such as academic institutes, hostels, industry houses etc. Students have shown phenomenal success being placed in several top IT companies.

Best Practice-2 (NIST Counseling Service)

https://nist.edu/IQAC/best-practices.html #2019-20-2

https://www.nist.edu/Student/student.html#SERVICES

NIST adopted a student driven counseling system (NIST Counseling System: NCS) to better connect with the freshers. It was adopted broadly on the model of IIT Kanpur. It was a student driven program overseen by a full-time clinical psychologist. Topper students from 4th year, 3rd year and 2nd year were selected through self-nomination and screening who worked in a hierarchy to help the freshers cope up with the new environment. The cases of students experiencing depression or facing difficulty came down.

7.3 Institutional Distinctiveness
Provide the details of the performance of the institution in one area distinctive to its vision, priority and thrust. Provide the web link of the institution in not more than 500 words
https://nist.edu/IQAC/distinctiveness.html#2019-20

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