SELF STUDY REPORT

FOR

3rd CYCLE OF ACCREDITATION

BANNARI AMMAN INSTITUTE OF TECHNOLOGY

SATHY-BHAVANI STATE HIGHWAY, ALATHUKOMBAI POST, SATHYAMANGALAM ERODE DT.
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Submitted To

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

BANGALORE

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1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

Bannari Amman Group is one of the largest Industrial Conglomerates in South India with wide spectrum of manufacturing, trading and service activities. Bannariamman Educational Trust was established in the year 1995 by Sri S V Balasubramaniam, the Founder Chairman and Managing Trustee, with a vision to create educational facilities for students in the rural areas. In pursuance of his vision, the Trust started the Bannari Amman Institute of Technology (BIT) as a Self-financing Engineering College in the year 1996 in Sathyamangalam. BIT has a land area of 181 acres with a built-up area of 2,78,709 sq m. BIT is an AICTE approved Institution and affiliated to Anna University, Chennai. The goal of BIT is to provide quality education and to develop transferable skills to the future technocrats and to create Centres of Excellence. The College is now on its success pathway to make the rural community students as quality engineers and useful citizens of tomorrow.

BIT obtained 2(f) status of UGC in the year 2008, 12(B) status of UGC in the year 2015 and UGC conferred Autonomous Status in the year 2008 which is extended up to 2020. BIT is accredited by NAAC with A grade in Cycle I (2009) and Cycle II (2015) with a CGPA of 3.11 and 3.57 respectively. BIT is registered with the Department of Scientific and Industrial Research (DSIR) for the purpose of availing customs duty exemption and is valid up to 31.03.2021. UGC has approved BIT under the scheme of 'Paramarsh' for mentoring NAAC accreditation Aspirant Institutions to promote Quality Assurance in higher education.

The outcomes of I & II Cycle of NAAC Accreditation and other quality measures like Autonomous, NBA have improved the Institution considerably in the academic and administrative areas. The establishment of IQAC helped the Institution to develop a system of conscious, consistent and catalytic improvement in the overall performance.

The Institution has submitted the Annual Quality Assurance Report (AQAR) to NAAC after approval of the Statutory Bodies of the Institution every year. The Institution has focused its attention to Quality Teaching-Learning and Research.

Vision

To be a centre of excellence, providing world-class education that transform individuals into intellectual, empathetic and responsible citizens

Mission

- To provide top of the line infrastructure that is most conducive for learning
- To engage committed members of faculty who will infuse subject knowledge with latest teaching pedagogies
- To provide state-of-the-art facilities to the members of faculty and student fraternity to access and engage in diligent research
- To collaborate the best minds in the industries with the academia of the college thereby empowering the

students to meet the global standards

- To create an enterprising environment for a continual progress and change that respects heterogeneity

1.2 Strength, Weakness, Opportunity and Challenges(SWOC)

Institutional Strength

- Autonomous Status granted by UGC
- Eligible Programmes accredited by NBA
- Curriculum strengthened by scientific and systematic design
- Freedom to introduce new methodology in curriculum
- Outcome based laboratories
- Skill development programme offered to students from first year onwards
- Catering to diverse needs of the students with different backgrounds
- Student-Centric teaching methodology with ICT impact
- Appropriate feedback mechanism for continuous quality improvement
- Providing standard guidelines for setting outcome based question papers
- Conducive atmosphere to carryout research work
- Generous contribution by the Management for Research and Development
- Industry sponsored Cener of Excellence/Laboratories
- Inspire students in entrepreneurship by introducing project learning/learning by doing methodology from first year onwards
- Increased number of Ph.D. research scholars
- State-of-the-art Infrastructure in the Institution
- Special and applied labs
- Comprehensive residential facilities for students and faculty members
- ICT enabled classrooms
- State-of-the-art Library(Learning Centre)
- Solar Power generation
- Good rapport among the stakeholders
- Student participation in Academic and Administrative activities
- 70% of students and 55% of faculty stay inside the campus
- Financial Assistance to needy students
- Industry Linkage for curriculum development, training and placement
- Training students for enhancing employability
- Proactive Management
- IQAC and NBA establish the quality in the Institution as a whole
- Campus-wide implementation of the best practices
- Implementation of sustainability measures
- Maintenance of campus facilities linked with students' activities
- Enhancing the power generation through non-conventional resources reduces the dependency on fossil fuels and SEB for power
- Green energy of biogas, noiseless generators for power generation
- Uninterrupted power and water supply in the campus
- Recycling of water through Modernized Sewage Treatment Plant

Institutional Weakness

- Centralized admission system
- Minimum subsidy in adopting non-conventional energy resources from Government
- Less industrial connectivity due to remote location

Institutional Opportunity

- Promoting Intellectual Property Rights culture among students
- Offering courses through SWAYAM to students and faculty members
- Scope for commercializable research outcomes
- Initiating collaborative research with leading Institutions
- Sustaining and excelling in the research in terms of funds received and outcomes
- Opportunities for more placements
- Scope for enhancing the alumni interaction for Institutional growth
- Offering programmes in frontier areas
- Establishing continuous interaction with industry for mutual growth
- Extending the facilities to the Societies through extension activities
- Extend the extra-curricular activities (NSS / NCC)

Institutional Challenge

- Regulation restrictions of the Parent University (Anna University)
- As a self-financing college, faculty members face difficulty while seeking funds from various agencies
- Obtaining funds from the Industries for research projects
- Rising costs of overheads and resources
- Reading habits of students has reduced due to media intervention
- Lack of interest amongst students for higher studies

1.3 CRITERIA WISE SUMMARY

Curricular Aspects

As an Autonomous Institution, Choice Based Credit System (CBCS) is implemented in all programmes offered. The College has designed the curriculum based on the feedback from the Academicians, Industry experts, Students, Parents and Alumni which aligns with the Institutional Mission. Syllabus revision is carried out in all programmes offered in the Institution on par with developments in the respective domains. More than 80% of the courses have focus on employability, entrepreneurship and skill development. More than 40% of new courses have been introduced across all programmes during the last five years.

With the experience of assessment and accreditation gained in the first two cycles and also the suggestions by the then peer team members, the Office of Autonomy Affairs of the Institution coordinates with all the departments and frame the syllabi following the procedure of UGC, AICTE and Anna University.

The curriculum is designed on the basis of three major components viz. development of Knowledge, Skill and

Attitude. All these components are evaluated through continuous assessment and end semester examination. The curriculum contains core courses, programme electives, open electives, life-skills and project work. In addition, personality development, value added and one-credit courses are offered.

Significances during the last five years

- Introduction of 6 (3 UG & 3 PG) programmes in areas with employment potential (In addition, 4 UG programmes introduced from the academic year 2019-2020)
- Structure of the curriculum is as per AICTE guidelines
- Formulation of PEOs, POs and PSOs for all Programmes
- Focus towards employability and research oriented courses for knowledge enhancement
- Introduced academic flexibilities through core/electives, enrichment and modular courses
- Credit for In-plant training /Internships
- Provision to earn additional credits through add courses
- Credit transfer facility for online courses
- Field visits, Internship and career-oriented training taken care within the curriculum
- Interdisciplinary courses are offered
- Inclusion of one-credit courses based on the contemporary industrial practices and needs
- Facilities to practice life-oriented programmes like yoga and meditation
- Provision to learn multi-languages like German, Japanese, French, Chinese and Hindi

Teaching-learning and Evaluation

The Institution follows transparent admission policies and also maintains reservation policies stated by the Government. 85% of seats are filled on an average over last five years. Structured-orientation programmes are designed for the learner group. Bridge courses, remedial classes and add-on courses are provided to the students. Special provisions for advanced learners is in place. Student centric methods through experiential learning, participative learning and problem solving are practiced. Academic calendar is prepared and available online to learners.

Significances during the last five years

- Implementation of Creative Learning Methodology, Layer-Learning and Learning by Doing
- Use of ICT, e-learning in teaching-learning and use of innovative teaching methods
- Preparation of lesson plans in advance and sharing with students through cloud system
- Supplementing classroom teaching through expert lectures, alumni interaction, seminars, workshops, mini-projects, field work, internship, hands-on training, self-study electives and e-courseware (SWAYAM, MIT, Stanford etc)
- Providing solutions to Industry Defined Problems by students
- System for counseling and healthcare
- Funds for design and fabrication of working models, presentation of projects in International/National competitions
- Teacher-student ratio is of 1:13 with more than 30% of faculty with Ph.D. qualification
- Usage of ICT facilities by all faculty members
- Mentor mentee ratio is 1:19.77

- 111 awards received by the faculty members for research and professional achievements since last accreditation
- Regulation handbook at place
- Continuous evaluation process exists
- Academic audit to ensure the quality
- 100% automation of Examination Management System
- Average pass percentage of students is 88.93% in the current academic year
- Revision of examination system with the inclusion of questions related to higher order thinking skills
- Multiple choice questions to the extent of 20% in Regulations 2015 (UG)
- Better data handling of examination related documents in practice (e-hall ticket, e-transcript, online mark entry, online CO-PO attainment calculation)
- Exam wrapper facility for the students to know their performance in exams
- Success rate is high, which is reflected in the employment
- Feedback helps to plan and execute systematic teaching-learning

Research, Innovations and Extension

The Institution has well defined policy for research and consultancy. Research Committee and Research Advisory Board promote the research activities in the Institution. Research culture among the faculty and students is promoted and encouraged by the Management. State-of-the-art research facilities and centers are available in the Institution. Thrust areas for research are identified and Special Interest Groups (SIGs) are formed among the faculty with three to seven members in each group. Faculty visits the industry, research laboratories and abroad for collaborative research. Innovation ecosystem available in the institution include Technology Business Incubator, Institution Innovation Council(IIC), Udyami E-Cell and Special & Applied labs.

Significances during the last five years

- The first and foremost self-financing college approved by AICTE for starting new QIP centre to offer PhD programme in BioTechnology,CSE and ECE with two seats each
- Budgetary provisions for research in the financial plan
- Appropriate equipment available to teachers and students for research
- Seed money to promote innovative and inter-disciplinary research projects granted by the management every year
- Promoting research activities and providing financial assistance for registration, TA etc to participating faculty members
- 2.5% incentive provided to faculty for funded projects by the management.
- 24 faculty awarded fellowships for advanced studies and research
- Quality improvement of faculty by training and recharge programmes
- 71 research projects worth Rs 692.94 lakhs under execution
- Establishment of 13 Collaborative Centres for Research
- 23% of faculty are recognized as research supervisors by Anna University and 163 Ph.D. awarded
- 532 workshops related to research activities are conducted
- 58 startups incubated in the Institution
- Departments provided with secretarial assistance to prepare research proposal

- 52 Patents published/granted
- 1497 faculty publications in journals
- 2508 books/book chapters/papers presented in the conference proceedings
- Rs 66.66 lakhs generated through consultancy and testing services
- 88 awards received for extension activities
- 314 extension and outreach programs conducted and more than 75% of students participated
- 80 MoUs signed for the benefit of the students
- Institute Social Responsibility (ISR) activities carried out through NCC, NSS, YRC and society oriented clubs
- Recognition for ISR activities from University, State level agencies and NGO
- Representatives of industry collaborators on various committees

Infrastructure and Learning Resources

Since the inception of the College in the year 1996, up to the third cycle of the accreditation, the infrastructure of the college is well established.

- 187 classrooms and 24 seminar halls are ICT enabled
- Lifts, ramps and infrastructure available to facilitate physically disabled students
- Media centre, Recording facility and Lecture Capturing System (LCS) for E-content development available
- 32 Special and Applied labs for innovation established
- Sponsored laboratories available for research in latest developments
- 3255 computers and 1Gbps leased line internet connectivity are available
- IT infrastructure with WiFi connectivity, Cloud for e-governance and e-learning is available and is frequently updated
- Network Maintenance Cell and Test & Repair Centre for maintenance of IT hardware and software
- Establishment of IT laboratories through Industry sponsorship
- Play-grounds, Modern Gym facilities separately for girls and boys
- Availability of indoor and outdoor sports facilities
- 48 clubs to encourage cultural activities of students
- Availability of air-conditioned seminar halls and auditorium
- 5S Workplace Management Certification for Institution
- Establishment of Health Centers with qualified resident Physicians
- Bank ATM, Cooperative Stores, Book Store, Post Box inside the Campus
- Maintenance of campus facilities through qualified engineers and managers, tree plantations
- Automated Hostel kitchens with modern equipment and dining facilities
- Automated laundering facilities and beauty parlour in hostels
- 29 buses, 4 LCV, 8 SUV, 1 Traveller, 5 Battery vehicles, 30 Bi-cycles and Ambulance van

Library (Learning Centre)

- 5-storey building with an area of 7287 sq.m and equipped with high-tech electronic systems providing easy access to learners
- Subscription to 6000 e-journals (IEL, Science direct, Springer, ASCE, ASME, EBSCO, J-GATE, ASTM)
- RFID enabled security system facilitates self-issue / return kiosks

- OPAC for location of various aids
- Average annual expenditure of Rs.89.29 lakhs for purchase of books and journals for the library
- Common Reading Hall, Conference Halls, Discussion Rooms
- Remote access to library is facilitated
- Plug-in-play for laptop internet connectivity
- Printing and reprography are available
- Lift, ramp and hand-rails are provided to differently-abled students and staffs
- Dedicated website www.bitsathy.ac.in/learningcentre/ disseminates facilities provided

Student Support and Progression

The Institution provides facilities for students in terms of scholarships, capability enhancement and development schemes, vocational education and training. The students are provided training for placements and higher education.

Significances during the last five years

- College has 6967 (UG), 278 (PG) and 30 full-time Ph.D. students during the academic year 2019-20
- Student progression is on rising scale and is good in all streams
- Students have flexibility to work during night hours in the lab and develop their skills
- 40% of students benefited by Government and nongovernment scholarships
- More than 50% of students benefited through guidance provided by the institution for competitive examinations and career counseling
- More than 40% of students benefited by vocational education and training
- 117 awards in sports/cultural activities
- 142 sports/cultural activities organized by the Institution
- Provisions for physically disabled students
- Student centric activities have resulted in greater number of placement in campus and good number of entrepreneurs
- An average of 68% students placed
- Alumni are actively involved in placement activities
- 47 Alumni association meetings conducted
- Online student feedback is obtained for Institutional development
- Implementation of Group Insurance to the students and faculty members
- Establishment of Professional Chapters (ISTE, CPC, CSI, IEEE, IETE,…)
- Robust mechanism for identification of extension activities
- Students' progress is intimated to the parents
- Coaching for competitive examinations in the evening hours
- Publication of Department Newsletter, College Magazine and Newsletter
- Students representation in Boards of Studies, Academic Council and other committees
- 80% of students avail hostel facilities
- Dining halls for day scholars
- Modern Gym facilities separately for girls and boys
- Wi-Fi in academic area and hostels
- Library access from 8.30 am to 10.00 pm

Governance, Leadership and Management

The governance of the Institution is reflected through effective leadership. Strategic plan is prepared and is implemented in line with the core competencies of the Institution as per the plan with regular follow up of activities.

Significances during the last five years

- Organization structure and mechanism in place
- Under the guidelines of the UGC and NAAC, all statutory and non-statutory committees are established for smooth functioning of the Institution.
- Eligible programmes accredited by NBA
- Apex Committee to facilitate the decentralization and delegation of powers
- Department Development Plan (DDP)
- E-Governance implemented in planning and development, administration, finance and accounts, examination, student admission and support
- All Committee meetings are conducted regularly
- Faculty participate in decision making bodies of the institution like Governing council, Academic council, Board of studies and other statutory & non-statutory bodies.
- Coordination of Academic and Administrative planning, and implementation have been established through IQAC and NBA guidelines
- Transparency in the Academic and Administrative practices
- Self-appraisal (faculty and students) and feedback systems are in practice
- Monitoring mechanism through Academic audit and API audit
- Feedback analysis, result analysis helps for improvement
- Welfare schemes for promotion/ empowerment of faculty and supporting staff
- Regular internal and external audits for income and expenditure
- Periodic skill enhancement training for non-teaching staff
- 284 professional development training programmes organized for faculty and support staff and more than 65% of staff attended
- Rs.128 lakhs are received from nongovernment bodies, individuals, etc.
- Planning and implementation of all Academic and Administrative activities of IQAC made known to all stakeholder through newsletters (daily news)
- Innovations in the Academics and Administration have been done through recommendations of IQAC
- 72 quality initiatives conducted for promoting quality

Institutional Values and Best Practices

Recognizing autonomy as accountability and responsibility is by itself innovative approach adopted by the College. The first move towards quality in higher education is the realization of the Vision, Mission and Core values of the Institution. Offering wide range of programmes in UG and PG vouches for the innovative approach adopted by the College. Nevertheless, the College takes strenuous steps in making the ambient competitive and innovative with its own benchmark. Idyllic atmosphere maintained in the Campus provide stress-free life with modern amenities to the students and staff. Residential facilities are extended to staff and students on demand inside the campus, besides providing bus facilities to-and-fro nearby areas with the aim to reduce the use of motored vehicles.

Significances during the last five years

- BIT adopts the environment-friendly practices
- 26 gender equity programmes organized
- 31% of energy requirement met through renewable energy sources
- 45% of annual lighting power requirements met through LED bulbs
- Resources available for Divyangjan
- Initiatives taken to engage local community
- Green practices adopted by students and faculty
- Courses offered on professional ethics and human values
- 97 activities conducted for promotion of universal values
- Closer to 14000 trees planted inside the campus and landscape in 20 acres
- Installation of sewage treatment plant
- Environmental awareness given to students and other stakeholders
- Rain water harvesting, collection (5 lakh litres) tank have been established
- Biogas system established in hostel
- Solar water heaters in hostels
- Facilities provided for 3D printing, rapid prototyping, plasma processing, cloud computing and embedded systems
- Scholarship to the needy students by the students themselves through Friend-of-Friendless scheme
- Establishment of video conferencing facilities
- Introduction of surveillance camera through CCTV
- Smoke / fire detectors in the Learning Centre
- E-display facilities to advertise day-to-day events
- Fully automated food preparation system to ensure hygiene
- Flood-lights in Tennis, Basket Ball and Volley Ball courts

2. PROFILE

2.1 BASIC INFORMATION

Name and Address of the College	
Name	BANNARI AMMAN INSTITUTE OF TECHNOLOGY
Address	SATHY-BHAVANI STATE HIGHWAY, ALATHUKOMBAI POST, SATHYAMANGALAM ERODE DT.
City	Sathyamangalam
State	Tamil Nadu
Pin	638401
Website	www.bitsathy.ac.in

Contacts for Communication					
Designation	**Name**	**Telephone with STD Code**	**Mobile**	**Fax**	**Email**
Principal	C PALANIS AMY	04295-226000	9842217170	04295-226666	principal@bitsathy.ac.in
IQAC / CIQA coordinator	P SAMPATH	04295-226073	9443003507	04295-226777	sampathece@bitsathy.ac.in

Status of the Institution	
Institution Status	Private and Self Financing

Type of Institution	
By Gender	Co-education
By Shift	Regular

Recognized Minority institution	
If it is a recognized minroity institution	No

Establishment Details

Date of Establishment, Prior to the Grant of 'Autonomy'	21-10-1996
Date of grant of 'Autonomy' to the College by UGC	27-02-2008

University to which the college is affiliated		
State	**University name**	**Document**
Tamil Nadu	Anna University	[View Document](#)

Details of UGC recognition		
Under Section	**Date**	**View Document**
2f of UGC	07-01-2008	[View Document](#)
12B of UGC	30-12-2015	[View Document](#)

Details of recognition/approval by stationary/regulatory bodies like AICTE,NCTE,MCI,DCI,PCI,RCI etc(other than UGC)				
Statutory Regulatory Authority	**Recognition/Approval details Institution/Department programme**	**Day,Month and year(dd-mm-yyyy)**	**Validity in months**	**Remarks**
AICTE	[View Document](#)	25-04-2019	12	

Recognitions	
Is the College recognized by UGC as a College with Potential for Excellence(CPE)?	No
Is the College recognized for its performance by any other governmental agency?	Yes
If yes, name of the agency	Department of Scientific and Industrial Research
Date of recognition	24-04-2018

Location and Area of Campus				
Campus Type	**Address**	**Location***	**Campus Area in Acres**	**Built up Area in sq.mts.**
Main campus area	SATHY-BHAVANI STATE HIGHWAY, ALATHUKOMBAI POST, SATHYAMANGALAM ERODE DT.	Rural	181	278709

2.2 ACADEMIC INFORMATION

Details of Programmes Offered by the College (Give Data for Current Academic year)						
Programme Level	Name of Programme/Course	Duration in Months	Entry Qualification	Medium of Instruction	Sanctioned Strength	No.of Students Admitted
UG	BE,Aeronautical Engineering	48	HSC for First Year or Diploma for Lateral Entry Admission	English	60	46
UG	BE,Agriculture Engineering	48	HSC for First Year or Diploma for Lateral Entry Admission	English	60	48
UG	BE,Automobile Engineering	48	HSC for First Year or Diploma for Lateral Entry Admission	English	60	43
UG	BE,Biomedical Engineering	48	HSC for First Year or Diploma for Lateral Entry Admission	English	60	51
UG	BE,Civil Engineering	48	HSC for First Year or Diploma for Lateral Entry Admission	English	60	53
UG	BE,Computer Science And Engineering	48	HSC for First Year or Diploma for Lateral Entry Admission	English	240	233
UG	BE,Electronics And Communication Engineering	48	HSC for First Year or Diploma for Lateral Entry Admission	English	240	218
UG	BE,Electrical And Electronics	48	HSC for First Year or Diploma for	English	180	151

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	Engineering		Lateral Entry Admission			
UG	BE,Electronics And Instrumentation Engineering	48	HSC for First Year or Diploma for Lateral Entry Admission	English	120	86
UG	BE,Information Science And Engineering	48	HSC for First Year or Diploma for Lateral Entry Admission	English	60	46
UG	BE,Mechatronics	48	HSC for First Year or Diploma for Lateral Year Admission	English	120	91
UG	BE,Mechanical Engineering	48	HSC for First Year or Diploma for Lateral Entry Admission	English	180	142
UG	BTech,Biotechnology	48	HSC for First Year or Diploma for Lateral Entry Admission	English	120	104
UG	BTech,Computer Science And Business Systems	48	HSC for First Year or Diploma for Lateral Entry Admission	English	60	49
UG	BTech,Computer Technology	48	HSC for First Year or Diploma for Lateral Entry Admission	English	60	57
UG	BTech,Food Technology	48	HSC for First Year or Diploma for Lateral Entry Admission	English	60	47

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UG	BTech,Fashion Technology	48	HSC for First Year or Diploma for Lateral Entry Admission	English	60	37
UG	BTech,Information Technology	48	HSC for First Year or Diploma for Lateral Entry Admission	English	180	163
UG	BTech,Textile Technology	48	HSC for First Year or Diploma for Lateral Entry Admission	English	60	47
PG	ME,Civil Engineering	24	Bachelor of Engineering	English	18	8
PG	ME,Computer Science And Engineering	24	Bachelor of Engineering	English	18	7
PG	ME,Electronics And Communication Engineering	24	Bachelor of Engineering	English	18	11
PG	ME,Electronics And Communication Engineering	24	Bachelor of Engineering	English	18	4
PG	ME,Electrical And Electronics Engineering	24	Bachelor of Engineering	English	18	0
PG	ME,Electrical And Electronics Engineering	24	Bachelor of Engineering	English	18	2
PG	ME,Electronics And Instrumentation Engineering	24	Bachelor of Engineering	English	18	4

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PG	ME,Electronics And Instrumentation Engineering	24	Bachelor of Engineering	English	18	3
PG	ME,Mechatronics	24	Bachelor of Engineering	English	18	5
PG	ME,Mechanical Engineering	24	Bachelor of Engineering	English	18	2
PG	ME,Mechanical Engineering	24	Bachelor of Engineering	English	18	15
PG	ME,Mechanical Engineering	24	Bachelor of Engineering	English	18	4
PG	Mtech,Biotechnology	24	Bachelor of Technology	English	18	10
PG	ME,Information Technology	24	Bachelor of Engineering	English	18	5
PG	MBA,Master Of Business Administration	24	Bachelor Degree	English	60	59
Doctoral (Ph.D)	PhD or DPhil,Civil Engineering	24	Masters Degree in Engineering	English	24	18
Doctoral (Ph.D)	PhD or DPhil,Computer Science And Engineering	24	Masters Degree in Engineering	English	63	35
Doctoral (Ph.D)	PhD or DPhil,Electronics And Communication Engineering	24	Masters Degree in Engineering	English	81	38
Doctoral (Ph.D)	PhD or DPhil,Electrical And Electronics	24	Masters Degree in Engineering	English	73	41

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	Engineering					
Doctoral (Ph.D)	PhD or DPhil,Electronics And Instrumentation Engineering	24	Masters Degree in Engineering	English	27	8
Doctoral (Ph.D)	PhD or DPhil,Mechanical Engineering	24	Masters Degree in Engineering	English	138	74
Doctoral (Ph.D)	PhD or DPhil,Biotechnology	24	Masters Degree in Engineering	English	80	19
Doctoral (Ph.D)	PhD or DPhil,Information Technology	24	Masters Degree in Engineering	English	49	34
Doctoral (Ph.D)	PhD or DPhil,Textile Technology	24	Masters Degree in Engineering	English	8	1
Doctoral (Ph.D)	PhD or DPhil,Master Of Business Administration	24	Masters Degree	English	27	5
Doctoral (Ph.D)	PhD or DPhil,Mathematics	36	Masters Degree in Science	English	5	4
Doctoral (Ph.D)	PhD or DPhil,Physics	36	Masters Degree in Science	English	87	12
Doctoral (Ph.D)	PhD or DPhil,Chemistry	36	Masters Degree in Science	English	86	5

Position Details of Faculty & Staff in the College

Teaching Faculty												
	Professor				Associate Professor				Assistant Professor			
	Male	Female	Others	Total	Male	Female	Others	Total	Male	Female	Others	Total
Sanctioned by the UGC /University State Government				0				0				0
Recruited	0	0	0	0	0	0	0	0	0	0	0	0
Yet to Recruit				0				0				0
Sanctioned by the Management/Society or Other Authorized Bodies				45				52				473
Recruited	34	11	0	45	41	11	0	52	281	192	0	473
Yet to Recruit				0				0				0

Non-Teaching Staff				
	Male	Female	Others	Total
Sanctioned by the UGC /University State Government				0
Recruited	0	0	0	0
Yet to Recruit				0
Sanctioned by the Management/Society or Other Authorized Bodies				308
Recruited	184	124	0	308
Yet to Recruit				0

Technical Staff				
	Male	**Female**	**Others**	**Total**
Sanctioned by the UGC /University State Government				0
Recruited	0	0	0	0
Yet to Recruit				0
Sanctioned by the Management/Society or Other Authorized Bodies				182
Recruited	128	54	0	182
Yet to Recruit				0

Qualification Details of the Teaching Staff

Permanent Teachers										
Highest Qualification	**Professor**			**Associate Professor**			**Assistant Professor**			
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt.	0	0	0	0	0	0	0	0	0	0
Ph.D.	34	11	0	38	11	0	70	27	0	191
M.Phil.	0	0	0	0	0	0	10	21	0	31
PG	0	0	0	3	0	0	201	144	0	348

Temporary Teachers									
Highest Qualification	**Professor**			**Associate Professor**			**Assistant Professor**		
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt.	0	0	0	0	0	0	0	0	0	0
Ph.D.	0	0	0	0	0	0	0	0	0	0
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	0	0	0	0

Part Time Teachers									
Highest Qualification	**Professor**			**Associate Professor**			**Assistant Professor**		
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt.	0	0	0	0	0	0	0	0	0	0
Ph.D.	0	0	0	0	0	0	0	0	0	0
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	0	0	0	0

Details of Visting/Guest Faculties				
Number of Visiting/Guest Faculty engaged with the college?	**Male**	**Female**	**Others**	**Total**
	3	1	0	4

Provide the Following Details of Students Enrolled in the College During the Current Academic Year

Programme		From the State Where College is Located	From Other States of India	NRI Students	Foreign Students	Total
Doctoral (Ph.D)	Male	12	0	0	0	12
	Female	6	0	0	0	6
	Others	0	0	0	0	0
UG	Male	1175	17	0	0	1192
	Female	504	3	0	1	508
	Others	0	0	0	0	0
PG	Male	74	1	0	0	75
	Female	64	1	0	0	65
	Others	0	0	0	0	0

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Provide the Following Details of Students admitted to the College During the last four Academic Years

Programme		Year 1	Year 2	Year 3	Year 4
SC	Male	57	125	116	127
	Female	17	46	38	55
	Others	0	0	0	0
ST	Male	11	3	3	3
	Female	10	4	0	6
	Others	0	0	0	0
OBC	Male	1132	1148	1125	1001
	Female	510	564	549	583
	Others	0	0	0	0
General	Male	66	52	31	58
	Female	37	20	23	22
	Others	0	0	0	0
Others	Male	0	0	0	0
	Female	0	0	0	0
	Others	0	0	0	0
Total		1840	1962	1885	1855

2.3 EVALUATIVE REPORT OF THE DEPARTMENTS

Department Name	Upload Report
Aeronautical Engineering	[View Document](#)
Agriculture Engineering	[View Document](#)
Automobile Engineering	[View Document](#)
Biomedical Engineering	[View Document](#)
Biotechnology	[View Document](#)
Chemistry	[View Document](#)
Civil Engineering	[View Document](#)
Computer Science And Business Systems	[View Document](#)
Computer Science And Engineering	[View Document](#)
Computer Technology	[View Document](#)
Electrical And Electronics Engineering	[View Document](#)
Electronics And Communication Engineering	[View Document](#)
Electronics And Instrumentation Engineering	[View Document](#)
Fashion Technology	[View Document](#)
Food Technology	[View Document](#)
Information Science And Engineering	[View Document](#)
Information Technology	[View Document](#)
Master Of Business Administration	[View Document](#)
Mathematics	[View Document](#)
Mechanical Engineering	[View Document](#)
Mechatronics	[View Document](#)
Physics	[View Document](#)
Textile Technology	[View Document](#)

Extended Profile

1 Program

1.1

Number of programs offered year-wise for last five years

2018-19	2017-18	2016-17	2015-16	2014-15
30	30	30	30	29

File Description	Document
Institutional Data in Prescribed Format	View Document

2 Students

2.1

Number of students year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
7081	6943	6529	6356	6167

File Description	Document
Institutional Data in Prescribed Format	View Document

2.2

Number of outgoing / final year students year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
1825	1667	1500	1665	1601

File Description	Document
Institutional Data in Prescribed Format	View Document

2.3

Number of students appeared in the examination conducted by the Institution, year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
14120	13830	12978	12613	12195

File Description	Document
Institutional Data in Prescribed Format	[View Document](#)

2.4

Number of revaluation applications year-wise during the last 5 years

2018-19	2017-18	2016-17	2015-16	2014-15
58	38	46	48	58

3 Teachers

3.1

Number of courses in all programs year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
1481	1320	1168	1104	1179

File Description	Document
Institutional Data in Prescribed Format	[View Document](#)

3.2

Number of full time teachers year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
570	540	498	470	430

File Description	Document
Institutional Data in Prescribed Format	[View Document](#)

3.3

Number of sanctioned posts year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
570	540	498	470	430

File Description	Document
Institutional Data in Prescribed Format	View Document

4 Institution

4.1

Number of eligible applications received for admissions to all the programs year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
1840	1962	1885	1855	1920

File Description	Document
Institutional Data in Prescribed Format	View Document

4.2

Number of seats earmarked for reserved category as per GOI/State Govt rule year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
1840	1962	1885	1855	1920

File Description	Document
Institutional Data in Prescribed Format	View Document

4.3

Total number of classrooms and seminar halls

Response: 211

4.4

Total number of computers in the campus for academic purpose

Response: 3255

4.5

Total Expenditure excluding salary year-wise during the last five years (INR in Lakhs)

2018-19	2017-18	2016-17	2015-16	2014-15
6936.4410017	4940.9496196	4404.0067989	5335.3080079	5091.3083671

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4. Quality Indicator Framework(QIF)

Criterion 1 - Curricular Aspects

1.1 Curriculum Design and Development

1.1.1 Curricula developed /adopted have relevance to the local/ national / regional/global developmental needs with learning objectives including program outcomes, program specific outcomes and course outcomes of all the program offered by the Institution

Response:

Bannari Amman Institute of Technology (BIT) provides quality education through innovation in curriculum, imparting of knowledge with distinct learning objectives and assessment based on the technological developments in relevance to the regional and global needs. Competency based curriculum with Choice Based Credit System (CBCS) is offered since 2015 with a focus on Outcome Based Education (OBE).

Curriculum Design Process at BIT:

The guidelines given by statutory bodies like AICTE, UGC, NBA and Anna University and structure of curriculum designed by Autonomy affairs of the Institution, suggestions from Stakeholders are considered while framing the curriculum and syllabi. Recommendations from professional societies such as ACM, IEEE, IET, ASME etc., as well as Graduate Attributes prescribed by National Board of Accreditation are considered while framing the Programme Educational Objectives (PEOs), Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and designing the curriculum framework and assigning credits for the curricular components.

Curriculum is designed to enhance the educational experience of the students in finding out methods that help them to solve the problems and challenges of the life. Suggestions for revising and updating the curriculum are collected from the Stakeholders by **IQAC** and reviewed by Department Advisory Board (**DAB**). The Board of Studies (**BoS**) reviews the curriculum and syllabi, and provides suggestions for improvement. The suggestions received in BoS on curriculum and syllabi are updated and passed on to the **Standing Committee**. The Standing Committee reviews the recommendations forwarded by the BoS and collates the common points related to the curriculum (Credits, L-T-P-C pattern, evaluation criteria) to the **Academic Council**. Subsequently the Academic Council reviews and approves the recommendations and if needed, sends back to BoS for review. It is then placed in the **Governing Council** for further course of action. The Board of Studies and Academic Council meetings are conducted twice a year as per the recommendations of the UGC.

The curriculum and syllabi of M.E/M.Tech/MBA programmes are designed to acquire problem solving skills, managerial skills, **entrepreneurial trails**, meet industry requirements and to involve in research oriented activities.

Salient features of curriculum @ BIT

- Choice Based Credit System(CBCS) with outcome based syllabus
- Open Elective courses to improve interdisciplinary learning

- Credits for In-plant training/Internships for experiential learning
- Credit transfer for online courses as per Affiliating University Guidelines
- Skill training and development in laboratories
- Product development through mini projects and projects
- One Credit courses to enhance the **employability skills** of students
- Value added and Add-on courses according to the **interest of students and inclination**.
- Life skill courses
- Technical seminars - Learning platform to enhance presentation and communication skills
- Special labs

The institution is practising the implementation of Learn-Practice-Design-Implement (LPDI) based curriculum framework to solve engineering problems. The process of revision and the redesign of the curriculum are based on the feedback system.

File Description	Document
Any additional information	[View Document]()

1.1.2 Percentage of programs where syllabus revision was carried out during the last five years

Response: 100

1.1.2.1 How many programs were revised out of total number of programs offered during the last five years

Response: 30

1.1.2.2 Number of all programs offered by the institution during the last five years

Response: 30

File Description	Document
Minutes of relevant Academic Council/BOS meeting	[View Document]()
Details of program syllabus revision in last 5 years	[View Document]()

1.1.3 Average percentage of courses having focus on Employability/ Entrepreneurship/ Skill development during the last five years

Response: 84.23

1.1.3.1 Number of courses having focus on employability/ entrepreneurship/ skill development year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
1243	1166	1012	924	926

File Description	Document
Program/ Curriculum/ Syllabus of the courses	[View Document](#)
Minutes of the Boards of Studies/ Academic Council meetings with approvals for these courses	[View Document](#)
Average percentage of courses having focus on employability/ entrepreneurship	[View Document](#)

1.2 Academic Flexibility

1.2.1 Percentage of new Courses introduced out of the total number of courses across all Programs offered during last five years

Response: 42.05

1.2.1.1 How many new courses are introduced within the last five years

Response: 1437

1.2.1.2 Number of courses offered by the institution across all programs during the last five years

Response: 3417

File Description	Document
Minutes of relevant Academic Council/BOS meetings	[View Document](#)
Institutional data in prescribed format	[View Document](#)
Any additional information	[View Document](#)

1.2.2 Percentage of programs in which Choice Based Credit System (CBCS)/Elective course system has been implemented

Response: 100

1.2.2.1 Number of programmes in which CBCS/ Elective course system implemented.

Response: 30

File Description	Document
Minutes of relevant Academic Council/BOS meetings	[View Document](#)
Institutional data in prescribed format	[View Document](#)
Any additional information	[View Document](#)

1.3 Curriculum Enrichment

1.3.1 Institution integrates cross cutting issues relevant to Gender, Environment and Sustainability, Human Values and Professional Ethics into the Curriculum

Response:

Orientation Programmes for first year students, Skill Development, Women Empowerment Programmes and counselling activities are integrated into the curriculum to address cross cutting issues relevant to gender, environment and sustainability, human values and ethics. In addition, the institution has Women Development Cell (WDC), counselling cell, Discipline monitoring committee and anti-ragging committee to deal with the issues relevant to gender, human values and ethics.

Gender :

Gender related courses like social psychology, psychological process and General psychology are offered as one credit courses. Contents like Women's contributions in Industry, work issues faced by women, sexual harassment, and appropriate behaviour for everyone at work are also addressed. Internal Complaints Committee (ICC) is formulated as per vishaka guidelines to address gender related issues.

Environment and sustainability:

The institution has adopted many green cover initiatives, thereby embellishing the eco-friendly ambience of the Campus. The courses like environmental science, waste management, water treatment and green chemistry, etc are introduced to address the issues and solutions related to environment and sustainability.

Human values:

Counselling Cell of the institution, with an emphasis on the need of counselling the young minds, has professional counsellors to address the students' behavioural and academic issues. Courses like Social Psychology, HR analytics, principles of management, stress management, etc are introduced in the curriculum to make students to understand the importance of human values.

Ethics:

The courses like Professional ethics, Total quality management, software project management, Organizational behaviour and management, Internet security, etc are introduced in the curriculum to address the best practices related to ethics in engineering. In curricular aspect, ethics is maintained by checking plagiarism in project reports prepared by the students. Anti-ragging Committee has been formed

as per the guidelines of the AICTE. Anti-Ragging Committee plans the activities like formation of anti-ragging squad, Awareness talk by the officials for curbing the ragging menace and making the students aware of human values and ethics.

File Description	Document
Any additional information	[View Document](#)

1.3.2 Number of value-added courses imparting transferable and life skills offered during the last five years

Response: 150

1.3.2.1 Number of value-added courses are added within the last five years

Response: 150

File Description	Document
List of value added courses	[View Document](#)
Brochure or any other document relating to value added courses	[View Document](#)

1.3.3 Average percentage of students enrolled in the courses under 1.3.2 above

Response: 45.45

1.3.3.1 Number of students enrolled in value-added courses imparting transferable and life skills offered year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
4757	4690	2214	2241	1441

File Description	Document
Any additional information	[View Document](#)

1.3.4 Percentage of students undertaking field projects / internships

Response: 41.49

1.3.4.1 Number of students undertaking field projects or internships

Response: 2938

File Description	Document
List of programs and number of students undertaking field projects / internships	

1.4 Feedback System

1.4.1 Structured feedback received from 1) Students, 2) Teachers, 3) Employers, 4) Alumni 5) Parents for design and review of syllabus Semester wise /year-wise

Response: C. Any 2 of above

File Description	Document
URL for stakeholder feedback report	

1.4.2 Feedback processes of the institution may be classified as follows:

Response: A. Feedback collected, analysed and action taken and feedback available on website

File Description	Document
URL for feedback report	

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Criterion 2 - Teaching-learning and Evaluation

2.1 Student Enrollment and Profile

2.1.1 Average percentage of students from other States and Countries during the last five years

Response: 0.79

2.1.1.1 Number of students from other states and countries year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
86	63	48	39	30

File Description	Document
Institutional data in prescribed format	[View Document](#)

2.1.2 Demand Ratio(Average of last five years)

Response: 59:69

2.1.2.1 Number of seats available year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
2388	2388	2208	2088	2040

File Description	Document
Demand Ratio (Average of Last five years)	[View Document](#)
Any additional information	[View Document](#)

2.1.3 Average percentage of seats filled against seats reserved for various categories as per applicable reservation policy during the last five years

Response: 100

2.1.3.1 Number of actual students admitted from the reserved categories year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
1738	1890	1834	1775	1844

File Description	Document
Average percentage of seats filled against seats reserved	[View Document](#)
Any additional information	[View Document](#)

2.2 Catering to Student Diversity

2.2.1 The institution assesses the learning levels of the students, after admission and organises special programs for advanced learners and slow learners

Response:

Learning Level Assessment:

Students learning levels are assessed through the **Induction program** under various categories such as

- Literary and Pro?ciency Modules through **English Diagnostic test,** based on the results from English Diagnostic test students are categorized into **basic, Intermediate and advanced communicators**.
- Familiarization to Department activities and Innovations through **Skills based training**, based on skill training the domain experts among the participants are identified and subjected to advanced learning program.
- Performance test analysis for various courses under **continuous internal assessment** process through Periodical test 1 and Periodical test 2 to categorize advanced and slow learners.

SPECIAL PROGRAMS FOR ADVANCED LEARNERS:

- The students of the Advanced stream in English Diagnostic test can learn any one of the following 5 languages namely, **Chinese, French, German, Hindi and Japanese**, instead of English during second semester

- Advanced learners are encouraged to take up self-study electives and **Add courses** under the guidance of faculty member. Add courses can be taken at the maximum of **6 credits** per semester, in addition to the stipulated credits in a particular semester.

- **Fast track** system enable students to undergo a semester long internship or special training during eighth semester.

- Advanced learners are encouraged to take
    - **One credit** industry driven courses for **15 to 20** hours' duration per semester
    - Online courses like NPTEL in SWAYAM portal

- Students who availed the benefits of extra credits courses and **transferred credits** are encouraged to take up 6 months internship in Industries and Research Organizations to enhance their **employability.**

- Advanced learners are encouraged to **utilize the skill training labs** on the basis of 24X7 hours.

SPECIAL PROGRAMS FOR SLOW LEARNERS:

- In Communicative English Classes after streamlining through **English Diagnostic test, the Basic and Intermediate** level students are identified and encouraged to participate in training programs to improve their language proficiency.

- Based on the performance in **continuous assessment tests** students are identified as slow learners and adequate supports are provided to overcome academic difficulties by arranging additional classes, remedial classes and by providing practice assignments. Faculty advisors and Professor in-charges regularly **review academic progress and counsel** students to improve performance to ensure academic growth. Slow learners will be counselled periodically by their mentors based on their performance in Continuous assessment test for each Course. **Parent teacher meeting** is conducted twice in a semester for those students who scored less marks in exams and irregular to the classes.

- Slow learners identified through skill based training are encouraged to learn the skill with additional coaching classes during **evening hours**.
- Slow learners have the facility to drop courses in a semester and take that courses in subsequent semester

File Description	Document
Any additional information	[View Document](#)

2.2.2 Student - Full time teacher ratio

Response: 323:26

2.2.3 Percentage of differently abled students (Divyangjan) on rolls

Response: 0.01

2.2.3.1 Number of differently abled students on rolls

Response: 1

File Description	Document
Institutional data in prescribed format	[View Document](#)
Any additional information	[View Document](#)

2.3 Teaching- Learning Process

2.3.1 Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences

Response:

Yes

Experiential Learning, Participative Learning and Problem solving methodologies are used for enhancing the learning experiences for students through **Revised Bloom's Taxonomy** (RBT) – An outcome based learning and **Creative Learning Method** with Higher Order thinking skills for all the courses.

Revised Bloom's Taxonomy (RBT)

- For **Experiential Learning,** Courses with Lab Component are offered in the curriculum through Layer-Learning, Internship, skill training, one credit courses, Value added courses / Certificate courses and Project work. On an average 30 to 35% of the courses in the curriculum are under experiential learning.
- **Participative Learning** is enabled for the students through Technical Seminar, Skill training, Participation in labs, Industry related projects, Internships, Participation in Project design contest, Mini projects and project work. 25 to 30% of the courses in the curriculum will provide participative learning.In addition Community radio talk, student extension activities are also facilitated.
- **Problem solving** exercises are designed and specified in the syllabus for each course and **Problem solving methodologies** for these courses are taught in with tutorial sessions, assignments, open book tests. Around 75% of the courses in the curriculum will focus on this learning experience.

Creative Learning Methodology (CLM)

- **Creative Learning Methodology (CLM)** with Higher Order Thinking Skills is a student-centered approach, which has been introduced to engage students in self-learning, group learning, layer learning and development of presentation skills.
- In this approach, the animated videos, Models, Real time examples, Presentations, activity based experiments are used for better learning
- **Course content**, content delivery, mode of teaching and evaluation procedure under CLM for each course is designed and **uploaded in in-house ERP (CAMPS),** in such a way that students can access the details and perform well in academic activities.

File Description	Document
Any additional information	[View Document](#)

2.3.2 Percentage of teachers using ICT for effective teaching with Learning Management Systems (LMS), E-learning resources etc.

Response: 100

2.3.2.1 Number of teachers using ICT

Response: 570

File Description	Document
List of teachers (using ICT for teaching)	[View Document](#)
Provide link for webpage describing the " LMS/ Academic management system"	[View Document](#)

2.3.3 Ratio of students to mentor for academic and stress related issues

Response: 20:1

2.3.3.1 Number of mentors

Response: 358

File Description	Document
Any additional information	[View Document](#)

2.3.4 Preparation and adherence to Academic Calendar and Teaching plans by the institution

Response:

I. Preparation of Academic Calendar and Teaching Plan

Academic Calendar:

The Academic calendar and the teaching plan is prepared by a committee comprising of the Principal, Controller of Examinations (CoE) and Dean-Academics

The process for the preparation of academic calendar and the teaching plan is as follows:

- Academic Calendar comprises of all academic related activities and events
- First level of preparation for Academic calendar involves Principal, CoE and Dean Academics
- At the second level, HoDs are invited to provide their schedule of activities and incorporated in

Academic Calendar
- Final Academic Calendar is prepared by CoE and approved by the Principal
- Approved Academic Calendar is circulated through the institution email ID for HoDs, Faculty members, Students and all cell coordinators and also uploaded in the Institute website

Teaching Plans:

Teaching plan is prepared by the faculty members handling the courses and uploaded in in-house ERP (CAMPS) for access to the students. 50 % of the syllabus for all the courses will be completed during periodical test I and the remaining 50% of the syllabus will be covered within periodical test 2 for both theory and lab courses.

Lesson plan for a particular session of a course contains

- Evocation
- Introduction to the topic
- General and specific objectives
- Mapping of the objectives with the RBT levels
- Summary of the session
- Stimulated questions
- Multiple choice questions

II. Adherence to Academic Calendar and Teaching Plan

All activities are conducted by the respective Faculty members / HoDs / Deans / Controller of Examinations as per the Academic Calendar and Teaching plan. Industry driven courses like one credit courses will be conducted as per the availability of the experts from the respective industries. In rare situations, few scheduled activities are deviated due to some unavoidable circumstances like heavy rain, natural calamities and declaration of holidays by the Government.

2.4 Teacher Profile and Quality

2.4.1 Average percentage of full time teachers against sanctioned posts during the last five years

Response: 100

File Description	Document
Year wise full time teachers and sanctioned posts for 5 years	View Document
List of the faculty members authenticated by the Head of HEI	View Document

2.4.2 Average percentage of full time teachers with Ph.D. during the last five years

Response: 33.4

2.4.2.1 Number of full time teachers with Ph.D. year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
191	184	171	155	138

File Description	Document
List of number of full time teachers with PhD and number of full time teachers for 5 years	[View Document](#)

2.4.3 Teaching experience per full time teacher in number of years

Response: 9.41

2.4.3.1 Total experience of full-time teachers

Response: 5366

File Description	Document
Any additional information	[View Document](#)

2.4.4 Percentage of full time teachers who received awards, recognition, fellowships at State, National, International level from Government, recognised bodies during the last five years

Response: 19.74

2.4.4.1 Number of full time teachers receiving awards from state /national /international level from Government recognised bodies year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
19	18	18	11	7

File Description	Document
Institutional data in prescribed format	[View Document](#)

2.4.5 Average percentage of full time teachers from other States against sanctioned posts during the last five years

Response: 2.44

2.4.5.1 Number of full time teachers from other states year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
16	16	11	11	8

File Description	Document
List of full time teachers from other state and state from which qualifying degree was obtained	[View Document](#)

2.5 Evaluation Process and Reforms

2.5.1 Average number of days from the date of last semester-end/ year- end examination till the declaration of results during the last five years

Response: 12.8

2.5.1.1 Number of days from the date of last semester-end/ year- end examination till the declaration of results year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
18	18	10	9	9

File Description	Document
List of programs and date of last semester and date of declaration of result	[View Document](#)

2.5.2 Average percentage of student complaints/grievances about evaluation against total number appeared in the examinations during the last five years

Response: 0.38

2.5.2.1 Number of complaints/grievances about evaluation year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
58	38	46	48	58

2.5.3 Average percentage of applications for revaluation leading to change in marks during the last

five years

Response: 9.81

2.5.3.1 Number of applications for revaluation leading to change in marks year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
4	4	5	5	6

2.5.4 Positive impact of reforms on the examination procedures and processes including IT integration and continuous internal assessment on the examination management system

Response:

Positive impact of reforms on the examination procedures and processes including IT integration

- Industrial Experts as external examiners for conducting final year (UG) Project & Viva Voce from the academic year 2014- 2015 onwards.
- Entire examination processes are automated through in house software (CAMPS) from the academic year 2015- 2016 onwards.
- Question papers setting based on Higher Order Thinking Skills with 2D assessment of Revised Blooms Taxonomy from the academic year 2015- 2016 onwards.
- Introducing the relative grading system from the academic year 2017 – 2018 onwards.
- Showing the answer papers after evaluation of End Semester Examination to ensure the transparency through exam wrapper activity from the academic year 2017 – 2018 onwards.
- Two level scrutiny system in order to ensure error-free question papers in End Semester Examinations from the academic year 2018 – 2019 onwards.
- Rainbow pattern Teslin Grade Sheets with fifteen security features from the academic year 2018 – 2019 onwards.
- Transcripts services are requested by alumni for higher education purpose through online (iTranscripts) from the academic year 2018- 2019 onwards.

Continuous internal assessment system

- Change in the scheme of assessment of various courses from the academic year 2015 – 2016 onwards
- With reference to BIT Academic regulation, two continuous assessment test and optional test is conducted from the academic year 2015 – 2016 onwards.
- Continuous assessment marks obtained by the student in the first appearance shall be retained and considered valid for one subsequent attempt from the academic year 2015 – 2016 onwards.
- However, from the third attempt onwards, the student shall be declared to have passed the course if he/she secures a minimum of 6 Grade Points (B Grade) in the course prescribed during the End

Semester Examinations

- Change in the scheme of assessment of various courses from the academic year 2018 – 2019 onwards

2.5.5 Status of automation of Examination division along with approved Examination Manual

Response: A. 100% automation of entire division & implementation of Examination Management System (EMS)

File Description	Document
Current manual of examination automation system and Annual reports of examination including the present status of automation	View Document
Current Manual of examination automation system	View Document
Annual reports of examination including the present status of automation	View Document

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 on website and communicated to teachers and students

Response:

Dissemination of Programme outcomes, Programme specific outcomes and course outcomes for all Programmes offered by the institution in Curriculum and Syllabi

The curriculum and syllabi of all the programs are displayed in the Institute website for reference. Students, Faculty members and all stakeholders can access the complete details of POs, PSOs and COs for all programmes offered by the institution in the Institute website. (www.bitsathy.ac.in)

The curriculum and syllabi of all the programs are also available in the in-house ERP (CAMPS) students and faculty members are having access to refer. The PEOs, POs and PSOs are printed and displayed in classrooms, laboratories, Department and important places.

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(www.bitsathy.ac.in)

The curriculum and syllabi of all the programs are also available in the in-house ERP (CAMPS) students

and faculty members are having access to refer. The PEOs, POs and PSOs are printed and displayed in classrooms, laboratories, Department and important places.

2.6.2 Attainment of program outcomes, program specific outcomes and course outcomes are evaluated by the institution

Response:

Yes

Attainment of Course Outcomes:

· Assessment of CO is generated for individual course based on the assessment pattern. The attainment of CO is calculated using the marks scored by the students in each category using direct and indirect assessment methods. Each CO attainment is calculated based on the target fixed by every course coordinator which is approved in the Department Advisory Board (DAB). DAB will review, analyze and take necessary action for CO attainment.

· For the theory courses, the periodical test marks, end semester examination, assignments and innovative practices (Quiz, seminars, open book test and library based assignments) are considered. The course instructor needs to map questions to specific COs in the Assessment-CO matrix.

· For the practical course, the assessment tool is based on the continuous assessment of every experiment. The experiments completed by students are evaluated based on their knowledge in designing, conducting and analyzing the results.

Attainment of POs and PSOs:

· The POs and PSOs attainments are evaluated through direct & indirect measures. For direct attainment measurement, all POs are adequately addressed through the selection of courses and their COs. Target levels of attainment of POs and PSOs are set and the actual attainment of POs and PSOs are reviewed and determined by DAB.

· The indirect methods considered for calculating POs/PSOs are co-curricular activities, extra-curricular activities, program exit survey, alumni survey and employer survey. The survey questionnaires are given in a scale of scores ranging from 1 to 5 and they are mapped to appropriate POs and PSOs. The average score of the questionnaires are calculated as indirect attainment for the mapped POs and PSOs.

· The DAB needs to identify possible ways to improve attainment in terms of desired knowledge and skills in the next academic year by reducing the gap. Based on DAB recommendation further actions are taken to improve the PO attainment every year.

File Description	Document
Any additional information	[View Document](#)

2.6.3 Average pass percentage of Students

Response: 88.93

2.6.3.1 Total number of final year students who passed the examination conducted by Institution.

Response: 1623

2.6.3.2 Total number of final year students who appeared for the examination conducted by the institution

Response: 1825

File Description	Document
List of programs and number of students passed and appeared in the final year examination	View Document
Link for annual report	View Document

2.7 Student Satisfaction Survey

2.7.1 Online student satisfaction survey regarding teaching learning process

Response: 3.49

Criterion 3 - Research, Innovations and Extension

3.1 Promotion of Research and Facilities

3.1.1 The institution has a well defined policy for promotion of research and the same is uploaded on the institutional website

Response: Yes

File Description	Document
Minutes of the Governing Council/ Syndicate/Board of Management related to research promotion policy adoption	[View Document](#)
URL of Policy document on promotion of research uploaded on website	[View Document](#)

3.1.2 The institution provides seed money to its teachers for research (average per year)

Response: 107.17

3.1.2.1 The amount of seed money provided by institution to its faculty year-wise during the last five years(INR in Lakhs)

2018-19	2017-18	2016-17	2015-16	2014-15
0.90	3.03	0	0	0

File Description	Document
Minutes of the relevant bodies of the Institution	[View Document](#)
List of teachers receiving grant and details of grant received	[View Document](#)
Budget and expenditure statements signed by the Finance Officer indicating seed money provided and utilized	[View Document](#)

3.1.3 Number of teachers awarded international fellowship for advanced studies/ research during the last five years

Response: 24

3.1.3.1 The number of teachers awarded international fellowship for advanced studies / research year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
0	0	0	0	0

File Description	Document
List of teachers and their international fellowship details	[View Document](#)
e-copies of the award letters of the teachers.	[View Document](#)

3.1.4 Institution has the following facilities

> 1. **Central Instrumentation Centre**
> 2. **Animal House/Green House / Museum**
> 3. **Central Fabrication facility**
> 4. **Media laboratory/Business Lab/Studios**
> 5. **Research / Statistical Databases**

Response: A. Any four facilities exist

File Description	Document
Institutional data in prescribed format	[View Document](#)

3.2 Resource Mobilization for Research

3.2.1 Grants for research projects sponsored by the non-government sources such as industry, corporate houses, international bodies, endowments,Chairs in the institution during the last five years (INR in Lakhs)

Response: 692.94

3.2.1.1 Total Grants for research projects sponsored by the non-government sources such as industry, corporate houses, international bodies, endowments, Chairs in the institution year-wise during the last five years(INR in Lakhs)

2018-19	2017-18	2016-17	2015-16	2014-15
174.028	195.824	90.36	111.156	121.576

File Description	Document
List of project and grant details	
e-copies of the grant award letters for research projects sponsored by non-government	

3.2.2 Number of research centres recognised by University and National/ International Bodies

Response: 13

3.2.2.1 **Number of research centres recognised by University and National/ International Bodies**

Response: 13

File Description	Document
Names of research centres	
Any additional information	

3.2.3 Percentage of teachers recognised as research guides

Response: 23.11

3.2.3.1 **Number of teachers recognised as research guides**

Response: 116

3.2.3.2 Number of full time teachers worked in the institution during the last 5 years

Response: 502

File Description	Document
Details of teachers recognized as research guide	
Any additional information	

3.2.4 Number of research projects per teacher funded, by government and non-government agencies, during the last five year

Response: 0.7

3.2.4.1 Number of research projects funded by government and non-government agencies during the last five years

Response: 70

File Description	Document
Supporting document from Funding Agency	[View Document](#)

3.3 Innovation Ecosystem

3.3.1 Institution has created an eco system for innovations including Incubation centre and other initiatives for creation and transfer of knowledge

Response:

Incubation centre and other initiatives

1. Technology Business Incubator (BIT-TBI)

BIT-TBI was established during 2007 as a joint venture of DST, Govt. of India & BIT, Sathyamangalam. The shares from government and BIT are 2.19 and 1.92 Crores respectively.

During last 5 years, BIT-TBI has supported innovative idea based commercialization for 58 registered tenants. 43 products have reached beyond Minimum Viable Product stage with about a dozen of them in test market and beyond. 45 incubatees have been graduated up to May 2019. Employment generation by BIT-TBI tenants and graduates is 180 persons. 22 incubatees have established shop floor production lines. The average earning of graduated incubatees is 40 lakhs. BIT-TBI supported incubatees by participating in 09 product exhibitions.

Six IPRs are filed and few IPR preparations are under progress. BIT-TBI incubatees have qualified for Rs. 99.456 lakhs of seed funding mainly through MoMSME schemes. Nine of our incubatees from SC/ST category were supported by AICTE (Samrddhi) scheme for commercialization of innovation idea. BIT-TBI has conducted 8 skill-development / Entrepreneur awareness Camps during last 5 years. BIT-TBI has organized motivational events, capacity building sessions, knowledge sharing sessions, one-to-one and multi mentee mentoring sessions and networking with domain experts, pitch training sessions etc. These activities have been carried out with funding support of Rs. 17.8 Lakhs from various agencies such as EDI-NIMAT, TNSCST, AICTE etc.

During 2018-19, BIT-TBI has been shortlisted by Atal Innovation Mission of NITI Aayog (Govt of India) who is responsible creating /up scaling WORLD CLASS INCUBATION centers across the country. BIT-TBI is envisaged to get Rs. 10.50 Cr of fund utilized in three years compliance and physical verification has been completed by NITI Aayog. BIT-TBI has shortlisted 42 technology driven ideas for consideration in the scaled up TBI. BIT-TBI has also got shortlisted to NIDHI schemes for final presentations during 2019-20 of DST, Government of India.

2. Institution's Innovation Council (IIC)

BIT has established Institution's Innovation Council (IIC) as per the norms of Innovation Cell, Ministry of HRD, of Government of India on 21st November, 2018. The major focus of IIC is to create a vibrant local innovation ecosystem, start-up supporting mechanism andestablish function ecosystem for scouting ideas and pre-incubation of Ideas.

3. Basic and Applied Laboratories

Thirty two basic and applied laboratories have been established to impart skills to the students in emerging areas. Based on the interest, the students will join in any of the laboratories and acquire the skill by developing products. Manufacturing and fabrication facilities have been also created through which the students developed products and participated in national and international events.

4. Udyami Entrepreneurship Cell

Udyami is the student driven and faculty guided Entrepreneurship Cell to facilitate the education and development of students seeking to capitalize on their entrepreneurial spirit. Udyami is marked by its numerous informative and innovative activities and it has been conducting right from its inception, backed by its main motive which is to educate students about the crests and troughs of business and to kindle their entrepreneurial spirit.

File Description	Document
Any additional information	[View Document]()
link for additional information	[View Document]()

3.3.2 Number of workshops/seminars conducted on Intellectual Property Rights (IPR) and Industry - Academia Innovative practices during the last five years

Response: 532

3.3.2.1 Number of workshops/seminars conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
129	115	111	112	65

File Description	Document
List of workshops/seminars during the last 5 years	[View Document]()

3.3.3 Number of awards for innovation won by institution/ teachers/ research scholars/students during the last five years

Response: 363

3.3.3.1 Total number of awards for innovation won by institution/teachers/research scholars/students year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
0	0	0	0	0

File Description	Document
List of innovation and award details	[View Document](#)
e- copies of award letters	[View Document](#)

3.3.4 Number of start-ups incubated on campus during the last five years

Response: 58

3.3.4.1 Total number of start-ups incubated on campus year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
0	0	0	0	0

File Description	Document
List of startups details like name of startup, nature, year of commencement etc	[View Document](#)
e- sanction order of the Institution for the start ups on campus	[View Document](#)

3.4 Research Publications and Awards

3.4.1 The institution has a stated Code of Ethics to check malpractices and plagiarism in Research

Response: Yes

File Description	Document
Institutional data in prescribed format	[View Document](#)
Any additional information	[View Document](#)

3.4.2 The institution provides incentives to teachers who receive state, national and international recognition/awards

Response: No

File Description	Document
e- copies of the letters of awards	
Any additional information	

3.4.3 Number of Patents published/awarded during the last five years

Response: 52

3.4.3.1 Total number of Patents published/awarded year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
0	0	0	0	1

File Description	Document
List of patents and year it was awarded	
Any additional information	

3.4.4 Number of Ph.D.s awarded per teacher during the last five years

Response: 1.41

3.4.4.1 How many Ph.Ds are registered within last 5 years

Response: 163

3.4.4.2 Total number of teachers recognised as guides during the last 5 years

Response: 57

File Description	Document
List of PhD scholars and their details like name of the guide , title of thesis, year of award etc	
Any additional information	

3.4.5 Number of research papers per teacher in the Journals notified on UGC website during the last five years

Response: 2.98

3.4.5.1 Number of research papers in the Journals notified on UGC website during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
97	171	104	111	205

File Description	Document
List of research papers by title, author, department, name and year of publication	[View Document](#)

3.4.6 Number of books and chapters in edited volumes / books published, and papers in national/international conference-proceedings per teacher during the last five years

Response: 1.55

3.4.6.1 Total number of books and chapters in edited volumes / books published, and papers in national/international conference-proceedings year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
30	21	13	16	05

File Description	Document
List books and chapters in edited volumes / books published	[View Document](#)
Any additional information	[View Document](#)

3.4.7 Bibliometrics of the publications during the last five years based on average citation index in Scopus/ Web of Science or PubMed

Response: 2.52

File Description	Document
BiblioMetrics of the publications during the last five years	[View Document](#)
Any additional information	[View Document](#)

3.4.8 Bibliometrics of the publications during the last five years based on Scopus/ Web of Science - h-index of the Institution

Response: 19

File Description	Document
Bibiliometrics of publications based on Scopus/ Web of Science - h-index of the Institution	
Any additional information	

3.5 Consultancy

3.5.1 Institution has a policy on consultancy including revenue sharing between the institution and the individual

Response: Yes

File Description	Document
Soft copy of the Consultancy Policy	
Minutes of the Governing Council/ Syndicate/Board of Management related to Consultancy policy	
URL of the consultancy policy document	

3.5.2 Revenue generated from consultancy during the last five years

Response: 66.66

3.5.2.1 Total amount generated from consultancy year-wise during the last five years (INR in Lakhs)

2018-19	2017-18	2016-17	2015-16	2014-15
43.176	6.757	7.416	5.561	3.746

File Description	Document
List of consultants and revenue generated by them	
Audited statements of accounts indicating the revenue generated through consultancy	

3.5.3 Revenue generated from corporate training by the institution during the last five years

Response: 182.16

3.5.3.1 Total amount generated from corporate training by the institution year-wise during the last five years (INR in Lakhs)

2018-19	2017-18	2016-17	2015-16	2014-15
50	50	30	40	0

File Description	Document
List of teacher consultants and revenue generated by them	View Document
Audited statements of account indicating the revenue generated through training	View Document

3.6 Extension Activities

3.6.1 Extension activities in the neighbourhood community in terms of impact and sensitising students to social issues and holistic development during the last five years

Response:

CLUBS AND SOCIETIES - EXTENSION ACTIVITIES

1. Extension Activities for Community issues

Unnat Bharath Abhiyan, Swatch Bharath - Open Defecation Free campaign, Napkin incinerator implementation, Blood Donation Camp, plantation of Saplings, Painting and Renovation of school buildings, Soil testing, Water testing, Digital literacy, Orphanage and old age home visit has been conducted by NSS. NCC organized awareness programs on road safety, environmental awareness and other community services for the benefit of society. Community radio broadcast programs were organized to local community on spiritual, agricultural, healthy life style and also on recreation in order to improve the community services in and around the college. YRC has conducted camps for eye and stem cell donation, training for school students and voters awareness rally.

2. Extension Activities for Environment issues

The green energy club has conducted awareness programs on conservation of energy and the ways to use energy efficiently. Enviro club conducted awareness program on water conservation, environment, solid waste disposal and anti-plastic. They have also conducted a social survey at Sathyamangalam.

3. Extension Activities for Gender disparity:

Women Development Cell (WDC) has organized various programs to society on women's health, safety issues, problems of working women and health camps. App development club developed a software tools for prenatal and postnatal applications which are donated to primary health centre of Sathyamangalam.

4.Extension Activities for Social Welfare

Red Ribbon Club conducted awareness programs on HIV/AIDS, safe and healthy lifestyles thus by eliminating myths and misconceptions among the society. LEO club organized eye camps, blood donation camp and awareness programs on helmet, cancer and eye donation. Under Poshan Abiyaan, a Nutrition Awareness program was conducted for the society by the department of food technology.

5. Extension Activities for Digital Literacy

Digital literacy programs were conducted for rural people on usage of smart phones, online payment and government web portal services. Software application for road restoration and offensive license has been developed and donated to municipalities. Cyber Security center has provided training to government and non government officials.

6. Curricula Extension Activities through Professional Societies

A Smart Fence for Early Elephant Warning (SFEEW) with the funding from Rufford Organization, UK and IEF, USA was developed by ECE department and that have been installed at hill stations of Tamil Nadu, Karnataka, West Bengal and Nepal. Awareness programs on road safety, fire safety and helmet were conducted by Industrial Safety club and its impact was found in the social life of peoples around Sathyamangalam. Department of Agriculture Engineering has organized a two day symposium on "Sugarcane Mechanisation: Challenges and Opportunities" in association with Indian Council for Agricultural Research to create awareness about mechanization of sugarcane cultivation in which 714 farmers and industry personnel got benefited. The Department of Biotechnology have conducted one week training programme for women of Sathyamangalam region on "Innovative Technology in Agri waste Management to Promote Women Agripreneurs in Sathyamangalam Region" A total of 50 women were trained by successful entrepreneurs in Agrobiogas, Bee keeping, Fly Ash brick making and Mushroom Cultivation.

File Description	Document
link for additional information	[View Document](#)

3.6.2 Number of awards and recognition received for extension activities from Government /recognised bodies during the last five years

Response: 88

3.6.2.1 Total number of awards and recognition received for extension activities from Government /recognised bodies year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
6	19	10	4	1

File Description	Document
Number of awards for extension activities in last 5 years	View Document
e-copy of the award letters	View Document

3.6.3 Number of extension and outreach Programs conducted in collaboration with Industry, Community and Non- Government Organizations through NSS/ NCC/ Red Cross/ YRC etc., during the last five years

Response: 314

3.6.3.1 Number of extension and outreach Programs conducted in collaboration with Industry, Community and Non- Government Organizations through NSS/ NCC/ Red Cross/ YRC etc., year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
97	66	83	43	25

File Description	Document
Reports of the event organized	View Document
Number of extension and outreach programs conducted with industry,community etc for the last five years	View Document

3.6.4 Average percentage of students participating in extension activities with Government Organisations, Non-Government Organisations and programs such as Swachh Bharat, Aids Awareness, Gender Issue, etc. during the last five years

Response: 77.64

3.6.4.1 Total number of students participating in extension activities with Government Organisations, Non-Government Organisations and programs such as Swachh Bharat, Aids Awareness, Gender Issue, etc. year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
6550	6358	6061	3882	3097

File Description	Document
Report of the event	
Average percentage of students participating in extension activities with Government or NGO etc	

3.7 Collaboration

3.7.1 Number of Collaborative activities for research, faculty exchange, student exchange per year

Response: 31.6

3.7.1.1 Total number of Collaborative activities for research, faculty exchange, student exchange year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
2	2	0	0	0

File Description	Document
Number of Collaborative activities for research, faculty etc	

3.7.2 Number of linkages with institutions/industries for internship, on-the-job training, project work, sharing of research facilities etc. during the last five years

Response: 1644

3.7.2.1 Number of linkages for faculty exchange, student exchange, internship, field trip, on-the-job training, research, etc year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
643	465	272	96	71

File Description	Document
Details of linkages with institutions/industries for internship	

3.7.3 Number of functional MoUs with institutions of National/ International importance, Other Institutions, Industries, Corporate houses etc., during the last five years (only functional MoUs with

ongoing activities to be considered)

Response: 80

3.7.3.1 Number of functional MoUs with institutions of national, international importance, other universities, industries, corporate houses etc. year-wise during the last five years (only functional MoUs with ongoing activities to be considered)

2018-19	2017-18	2016-17	2015-16	2014-15
24	21	10	13	12

File Description	Document
e-copies of the MoUs with institution/ industry/ corporate house	View Document
Details of functional MoUs with institutions of national, international importance,other universities etc during the last five years	View Document

Criterion 4 - Infrastructure and Learning Resources

4.1 Physical Facilities

4.1.1 The institution has adequate facilities for teaching - learning. viz., classrooms, laboratories, computing equipment, etc

Response:

Physical Facilities

- **Bannari Amman Institute of Technology (BIT)** has a land area of 181 acres with a built-up area of 2,78,709 sq.m.

Classrooms

- All the 187 classrooms are ICT enabled, equipped with LCD projectors, personal computers, internet connectivity and audio facilities.
- BIT has 157 Under Graduate(UG) class rooms (11,651 sq.m), 30 Post Graduate(PG) class rooms (2226sq.m), Drawing halls (1509 sq.m) and Seminar halls (1587 sq.m).

Laboratories

- 151 laboratories are available with state of the art facilities.
- BIT has UG laboratory (53,540 sq.m), PG laboratory (5949 sq.m), Computer Centre (1154 sq.m), Computation Analytical laboratory (3186 sq.m), Workshop (799 sq.m), Physics laboratory (825 sq.m) and Chemistry laboratory (825sq.m).
- 32 Special and Applied laboratories (1273 sq.m) for innovation are available.
- In addition, 25 Industry Sponsored laboratories in collaboration with the leading industries, research institutions and funding agencies have been established in the frontier area of Science, Engineering and Technology.
- All the laboratories are equipped with First-Aid Box and fire extinguishers.

Computing Equipment

- A total number of 3255 computers, 210 printers and scanners are available.
- Available bandwidth of internet connection in BIT is 1 Gbps with 184 secured Wi-Fi connectivity access points.
- BIT has hosted a live private cloud (BIT Cloud) which is designed, developed, deployed and managed completely by in-house dedicated team.

Library

- The built up area of five storeyed Library is 7287 sq.m and it can accommodate 911 students. It has 94385 volumes, 27624 titles, 110 international journals, 205 national journals in addition to 35 technical magazines and 67 general magazines.
- Digital Library facilitates viewing of e-content from portal of NPTEL / SWAYAM etc, provided with reprographic facility in each floor. Library has 5 different memberships and access to 10

- different database / e-journals
- Prominent among them are *Web of Science*, access to multiple databases by Clarivate Analytics and *Scopus*, Elsevier's abstract and citation database .

Other Infrastructure in BIT

- BIT has Principal room (169 sq.m), HOD's Cabin (169 sq.m), Faculty Rooms (276 sq.m), Controller of Examination Office (5137 sq.m), Principal Office (1154 sq.m), Reception (108 sq.m) and Store Room (868 sq.m).
- BIT has Maintenance Room (2019 sq.m), Dining Hall (17618 sq.m), Hostel (71593 sq.m), Staff Quarters (24885 sq.m), Primary Health Centre (1020 sq.m), Security (76 sq.m), Laundry (522sq.m), Cafeteria (2561sq.m), Training Academy (3446 sq.m).
- BIT has Training & Placement office, Technology Business Incubator(TBI), Language laboratory, Collaborative laboratories and Community radio.

Transport facilities for field visits and industrial visits

- BIT provides transport facilities by plying 13 cars and 29 buses for field visits and Industrial visits.

File Description	Document
Any additional information	[View Document](#)

4.1.2 The institution has adequate facilities for sports, games (indoor, outdoor),gymnasium, yoga centre etc., and cultural activities

Response:

I. Sports

Total area of the BIT play field is 16.33 acres.

A. Outdoor games

- 400 m standard athletic track with 8 lanes
- Football field
- Two kho- kho courts are added in 2014
- Hockey field with kerb
- 65 m radius cricket field (added in 2016)
- Two Volleyball courts(added in 2018)
- Two Ball Badminton Courts(added in 2018)
- Handball Court
- Two Kabaddi Courts
- **Area of outdoor games is 49976 sq.m.**

- The **user rate** is more than **500 students per day**.
- **Sports complex**
- Standard synthetic tennis courts (2 nos.)
- Volleyball court with fencing and floodlight facilities,
- Multipurpose synthetic basketball court with fencing & floodlight facilities (added in 2018)
- Basketball / tennis court.
- **Total area of sports complex is 4496 sq.m.**
- The **user rate** is more than **400 students per day**.

B. Indoor games

BIT provides recreational halls for boys since 2012.

- Table tennis 2 Nos.
- Pool table.
- Carom 4 nos.
- Chess 5 nos.
- **Total area of the indoor games is 390 sq.m.**
- The **user rate** is more than 5**0 students per day.**

C. Boys Hostel Playground

- Badminton court - 14 Nos.
- In 2019 Open gym of 262sq.m is added.
- **Total area of playground including open gym facility is 1778 sq.m**.
- The **user rate** is more than **100 students per day.**

D. Girls Hostel Playground

- Basketball court (synthetic surface with fence) in 2014 flood lights in 2018)
- Volleyball court and flood light in 2014.
- Throw-ball court with flood lighting 2018
- Hockey field established in 2009.
- Badminton court (semi Indoor)- 4 Nos.
- In 2019 Open gym of 318sq.m is added.
- **Total area of Girls hostel play ground is 9011 sq.m.**
- The **user rate** is more than **100 students per day.**

II. Gymnasium

- Gymnasium facilities are available in the boys and girls hostel separately.
- The boys gymasium consist of 4 station multi gym - 3 number , 2 station – 3 numbers, single station - 16 numbers.
- Weight lifting and Power lifting sets are available.
- In girls gymasium, 4 station multi gym - 2 numbers, 2 station - 3 numbers, single station - 6 numbers.
- **Total area of gymnasium facilities is 431 sq.m. withthe total cost of 16.75 lakhs.**
- The **user rate** is more than **100 students/day**.

III. Yoga Centre

- A separate A/C hall of 188.31 sq.m can accommodate 50 students per batch.
- Yoga practice is facilitated in boy's and girl's hostel with area of 201.39 and 47.37sq.m respectively.
- Two qualified yoga instructors, 300 yoga mats, computer and sound system are made available.
- Kriya yoga, Therapeutic Yoga and advanced yoga are taught.
- **54.55%** of students are **trained per semester**.

IV. Clubs and Cultural Activities

- 48 clubs encourage active participation of students in cultural activities and also on national festivals like Independence day and Republic day to enhance the patriotic feeling among the students.

File Description	Document
Any additional information	[View Document]

4.1.3 Percentage of classrooms and seminar halls with ICT - enabled facilities such as smart class, LMS, etc

Response: 100

4.1.3.1 Number of classrooms and seminar halls with ICT facilities

File Description	Document
Number of classrooms and seminar halls with ICT enabled facilities	[View Document]
Any additional information	[View Document]

4.1.4 Average percentage of budget allocation, excluding salary for infrastructure augmentation during the last five years.

Response: 65.78

4.1.4.1 Budget allocation for infrastructure augmentation, excluding salary year-wise during the last five years (INR in Lakhs)

2018-19	2017-18	2016-17	2015-16	2014-15
4484.1774917	2876.9051649	2798.7699389	3796.5623860	3631.7448871

File Description	Document
Audited utilization statements	[View Document](#)

4.2 Library as a Learning Resource

4.2.1 Library is automated using Integrated Library Management System (ILMS)

Response:

Library has 27,637 titles and 94,385 volumes with a built-up area of 7287 sq.m and 911 students can use the facilities at a time. 15 departments have separate department libraries with 6238 books and each department library is managed by a faculty-in-charge.

Library uses CAMPS an ERP software system (developed in house by the Software Development Cell of our Institution) with **RFID scanning facility**, puts it on par with the modern libraries in keeping track of issues and returns in a fool proof manner with Online Public Access Catalogue (OPAC) facility.

- 2014 - First version of ILMS with RFID Library Management System (LMS) introduced; RFID labels were affixed to the all the books since 2013. OPAC facility updated as Web OPAC; Users can avail the OPAC facility from anywhere from any device.
- 2015 - Library ILMS is integrated with student's login page. By this, the user can utilize the ILMS in a single web page log-in.
- 2015 - Online renewal facility added in the ILMS to enable the users to renew themselves.
- 2016 – RFID basic readers were upgraded to advanced version reader.
- 2017 - All the Kiosk antennas were replaced to provide better and quick reading distances.
- 2018 – Started to send SMS alerts for issue and return of books to the users.

RFID Library Management System

The state-of-the-art RFID LMS enables easier transactions and perfectly secures all the library resources. **The RFID based access gate** allows the user to enter the library only by showing RFID based smart card.

Self-Book-Issue Kiosks with "Touch Screen facility" facilitates the users to checkout / issue the library documents on their own.

Automated Drop Box: 24x7 accesses for students to return books. Students get receipt and SMS on the return of books.

Library Web OPAC: 15 Numbers of Computer Systems with Touch Screen facility have been installed to facilitate the users to utilise the OPAC facility. The users can also avail this OPAC facility using internet in any devices from anywhere.

Online Renewal

The user can renew the borrowed books through online by logging in CAMPS, in-house ERP software.

File Description	Document
Any additional information	[View Document](#)

4.2.2 Collection of rare books, manuscripts, special reports or any other knowledge resource for library enrichment

Response:

The Library holds around 152 rare book titles comprising of Biographies, Geographical Guides, Maps, Atlas, Dictionaries and Handbooks. These books are broadly utilized and printed long back. The library holds great assortment relating to writing and religion. The College library approaches e-assets databases specifically e-ShodhSindhu and Shodhganga. By getting to the said assets the library gives data administrations to the under graduate, post graduate students, faculty and research scholars. They download the relevant information from the above said resources for their research activities. The faculty and researcher scholar's access the Shodhganga to know the availability of research reports on their concerned subjects which are available freely for their research pursuits. All the electronic thesis submitted by various universities throughout the country are available on Shodhganga and it guides the prospective researchers to choose the research topic and problems of relevance and quality. The list of rare books (152), proceedings (48) along with other details are added in the additional information.

File Description	Document
Any additional information	[View Document](#)

4.2.3 Does the institution have the following

1. e-journals
2. e-ShodhSindhu
3. Shodhganga Membership
4. e-books
5. Databases

Response: Any 3 of the above

File Description	Document
Details of subscriptions like e-journals,e-ShodhSindhu,Shodhganga Membership etc	[View Document](#)
Any additional information	[View Document](#)

4.2.4 Average annual expenditure for purchase of books and journals during the last five years (INR in Lakhs)

Response: 93.41

4.2.4.1 Annual expenditure for purchase of books and journals year-wise during the last five years (INR in Lakhs)

2018-19	2017-18	2016-17	2015-16	2014-15
110.97	48.31	114.63	90.20	102.93

File Description	Document
Details of annual expenditure for purchase of books and journals during the last five years	[View Document](#)
Audited statements of accounts	[View Document](#)
Any additional information	[View Document](#)

4.2.5 Availability of remote access to e-resources of the library

Response: Yes

File Description	Document
Any additional information	[View Document](#)

4.2.6 Percentage per day usage of library by teachers and students

Response: 23.75

4.2.6.1 Number of teachers and students using library per day over last one year

Response: 1817

File Description	Document
Any additional information	[View Document](#)

4.3 IT Infrastructure

4.3.1 Institution frequently updates its IT facilities including Wi-Fi

Response:

IT facilities including Wi-Fi with date and nature of updation

- BIT provides campus-wide Wi-Fi facilities, private cloud infrastructure built on top of openstack platform and e-governance software for campus management.
- Facilities are backed by in-house data centre of BIT with **1Gbps Leased Line** Internet Connection.
- The networking infrastructure is supported by end to end fibre optic backbone, Gigabit optic modules and cables**(10 Kms),** enterprise class switches, routers.
- Security of the systems are managed by firewalls (Fortigate 1000C and Sophos XG-750)**.**
- 803 cameras handled through backbone networks to ensure the safety and security of students.
- The video data captured is managed through Network Video Recorders (NVR).
- **Additional Cameras are installed at strategical locations in the new buildings.**
- Indigenously developed Campus Stack e-Governance system is implemented.
- Campus stack, an in-house ERP (CAMPS) is **constantly updated**.
- An in-house ERP (CAMPS) fulfils process including Staff Management (Registration, Staff attendance, Leave management, Payroll), Student Management, Curriculum Management, Academic Process Management (Course registration, Timetable, Attendance , Internal marks, Question bank, Lesson plan documents), Examination Management (Hall ticket, Exam scheduling, Result processing , Grade sheets management), Library Management, Stores and Materials Management, Financial Accounting, Documentation Management and Analytics.
- BIT hosted live private cloud delivering real-time services.
- Compute part of BIT Cloud is powered by high configuration 4-socket and 2-socket rack servers.
- **System is updated based on end of support and latest openstack releases**.
- The **backbone servers** that supports Wi-Fi authentication, private cloud infrastructure and e-governance software are **updated every three years**.

Wi-Fi

- Wi-Fi with 514 number access points at the cost of 225 lakhs are available in BIT
  - 184 number access points has been installed on 29th November 2014 .
  - 20 numbers access points are added on March 9th 2016.
  - 260 numbers access points are added on 25th June 2016.
  - 50 numbers access points are added on 22nd July 2019

Hardware Firewall

- On 10th August 2018 Sophos firewall XG-750 model is installed for a worth of 24.19 Lakhs.

Firewall license

- Firewall license is renewed periodically.
- Renewals are done on 17th June 2016, 29th June 2017 and 6th January 2018 for 4.37 Lakhs, 5.51 Lakhs and 5.83Lakhs respectively.

Internet Bandwidth

- Internet leased line bandwidth of 200 Mbps is installed on 23rd June 2015 for 30 lakhs which includes installation charges.
- Due to increase in student strength, bandwidth is increased to 500 Mbps on 30th August 2017 for

8.75 lakhs.

- 1 Gbps is purchased on 26th November 2018 for 26 Lakhs and renewed on 1st October 2019 for 6.63 Lakhs.

Servers

- Dell server 3 numbers are purchased for 36.72 Lakhs on 14th July 2016 and is enhanced to 7 numbers on 8th July 2019 for 43.42 Lakhs.

CCTV Camera

- 556 CCTV cameras are installed from 2016 to 2019 at the cost of 30.48 Lakhs.

File Description	Document
Any additional information	[View Document]()

4.3.2 Student - Computer ratio

Response: 124:57

File Description	Document
Any additional information	[View Document]()

4.3.3 Available bandwidth of internet connection in the Institution (Lease line)

Response: ?50 MBPS

File Description	Document
Any additional information	[View Document]()

4.3.4 Facilities for e-content development such as Media Centre, Recording facility, Lecture Capturing System (LCS)

Response: Yes

File Description	Document
Facilities for e-content development such as Media Centre, Recording facility,LCS	[View Document]()
Any additional information	[View Document]()

4.4 Maintenance of Campus Infrastructure

4.4.1 Average Expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component, as a percentage during the last five years

Response: 34.22

4.4.1.1 Expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component year-wise during the last five years (INR in Lakhs)

2018-19	2017-18	2016-17	2015-16	2014-15
2452.26351	2064.0444547	1605.23686	1538.7456219	1459.56348

File Description	Document
Details about assigned budget and expenditure on physical facilities and academic facilities	[View Document](#)
Audited statements of accounts.	[View Document](#)

4.4.2 There are established systems and procedures for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports complex, computers, classrooms etc.

Response:

Budgetary Provision

Institute makes budgetary provision under different funds for maintaining and utilizing the campus infrastructure facilities.

- The details of budget allocation for maintenance and repairing of physical, academic and support facilities during the last five years are mentioned in 4.4.1

Laboratory

- All Laboratories are maintained as per 5S Workplace Management System and monitored by Department 5S coordinators.
- The equipment stock in the laboratory is listed in the stock register and it is maintained and audited.

Library

- Day to day activities of the Library is governed by the Librarian and Assistants.
- The overall monitoring of the Library is governed by a Library committee consisting of Principal, Professor In-charge of Library and Department Level Coordinators and Librarian.

Sports Complex

The Physical Director of the Institute is in-charge of the sports complex and equipment.

- The Physical Director supervises the Grounds man and staff assigned for ground, courts, indoor stadium for maintenance and repair works.

Computer System and IT

- Optimum working condition of all Software / Hardware on the campus is ensured through Test and Repair Centre (TRC).
- Servers and desktop systems are checked for release of new updates and upgraded accordingly.
- All computer systems are checked and antivirus is updated every 6 months. Lab assistants under the supervision of the System administrator maintain the Institute computers and accessories.
- Through CAMPS (in-house ERPsoftware) maintenance associated queries and problems are effectively solved in a speedy time by Software Development Cell (SDC).
- Network Maintenance Cell (NMC) will take care of all kinds of Network related maintenance effectively.

Class Room

The Institute has maintenance committee that oversees the maintenance of buildings, classrooms and laboratories. The maintenance committee is headed by Professor In-charge of Maintenance who in turn monitors the work of the Supervisor at the next level.

- Adequate in-house staff are employed to maintain hygiene, cleanliness and infrastructure on the campus.
- Classrooms, Staffrooms, Seminar halls are cleaned and maintained regularly by maintenance personnel.

Vehicle Transport

Drivers duty itinerary and transport scheduling is carried out by Administrative officer as per the transport policy of Institute.

- Transport fitness certification, maintenance and augmentation of vehicles are done on yearly basis. The Students and Faculty utilising the vehicle facility will be abided by the rules specified in the transport policy.

Campus Maintenance

Campus Maintenance Department shall coordinate the maintenance activities of the Institute.

Organization of Maintenance Department

Please refer additional Information for Organization Chart

Department of Campus Maintenance

Personnel assigned for maintenance shall follow the following instructions.

- Prepare and maintain routine checklist and preventive maintenance schedule (Annexure I).
- Perform routine checks and preventive maintenance as scheduled through Google form. (Annexure II).

Resource Allocation

- The campus maintenance department shall identify and distribute the manpower under the selected supervisors and allocates the roles and responsibilities to complete the tasks assigned as per the schedule.
- Responsibilities for maintaining equipment/facility shall be according to the Appendix I

Maintenance Schedule and Services

- Maintenance services are offered by \campus maintenance. It aims at optimum utilization of various resources in the campus through (i) preventive maintenance, (ii) break-down maintenance
- In-charges / Heads of the campus department shall prepare the detailed list of preventive and break-down maintenance schedules as per given (Annexure I)
-

- Heads of the concerned maintenance Department shall obtain mandatory certification to ensure the safety of systems deployed in the campus such as building safety, electrical safety, fire safety and lift safety, as and when they are due.

Building and Construction

Any building related request like building construction, modification / maintenance is passed to Principal for the approval is accorded by the Governing Council. However minor modificationslike painting and damages in the building will be checked periodically and corrective action will be carried out.

- The Institute ensures optimal allocation and utilization of the available financial recourses for maintenance and upkeep of different facilities by holding regular meetings of various committees.

Electrical Maintenance

Electrical Maintenance receives complaints through CAMPS,an ERP software,Maintenance portal, through class committee reports and letters and tracked for its closure.

- Electrical maintenance department has taken activities for encompassing repairs replacement of defective parts, regular testing of safety lights and systems, and maintenance of lighting fixtures.
- Monitoring and inspection of all electrical works is carried out by Electrical maintenance team in a periodical manner.

Power generation (DG, Solar, Biogas)

- Institute has 1.3MW solar power generation capacity. The solar panel with cleaned water for 2weeks once. The loose connections cable burnout, solar inverter cleaning will be checked for every month.
- The Institute power house has 2 generators with capacity of 250kva and 500kva. Electrical

maintenance light, fan, machinery compliance is rectified and maintained regularly.

Bio Gas

- In Institute campus the bio gas is produced by human waste around 300 cubic meter per day and regularly monitored and maintained by maintenance dept.

Sewage Treatment plant (STP)

- The sludge from clarifier tank is pumped to drying bed for removing the moisture content and the resultant dried sludge is used as organic manure in farm field.
- The new STP plant of 20 lakh litres capacity investment of 250 Lakhs, with advanced technology is under construction.

Rain Water Harvesting

- In Institute campus, three ponds in different locations with 3 crores litres of storage capacity each are available. The environmental issue is addressed by means of chlorification, scheduled periodically.

Hostel - Solar water heater maintenance

- The solar water heater panels are cleaned with water for 2 weeks once. The functioning of the electrical heater in the solar water heater will be maintained 6 months once.

Hazard Analysis and Critical Control Point (HACCP)

Facilities related to HACCP are available in the Institute to tackle potential hazards at specific points.

- Learning centre with Fire Hydrants, Sprinklers, Smoke detectors.

File Description	Document
Any additional information	[View Document](#)

Criterion 5 - Student Support and Progression

5.1 Student Support

5.1.1 Average percentage of students benefited by scholarships and freeships provided by the Government during the last five years

Response: 38.84

5.1.1.1 Number of students benefited by scholarships and freeships provided by the Government year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
2721	2817	2461	2513	2342

File Description	Document
Upload self attested letter with the list of students sanctioned scholarships	[View Document](#)
Average percentage of students benefited by scholarships and freeships provided by the Government during the last five years	[View Document](#)
Any additional information	[View Document](#)

5.1.2 Average percentage of students benefited by scholarships, freeships, etc. provided by the institution besides government schemes during the last five years

Response: 2.77

5.1.2.1 Total number of students benefited by scholarships, freeships, etc provided by the institution besides government schemes year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
145	141	194	237	189

File Description	Document
Any additional information	[View Document](#)

5.1.3 Number of capability enhancement and development schemes –

1. **Guidance for competitive examinations**
2. **Career Counselling**
3. **Soft skill development**
4. **Remedial coaching**
5. **Language lab**
6. **Bridge courses**
7. **Yoga and Meditation**
8. **Personal Counselling**

Response: 7 or more of the above

File Description	Document
Details of capability enhancement and development schemes	View Document
Any additional information	View Document
Link to Institutional website	View Document

5.1.4 Average percentage of students benefited by guidance for competitive examinations and career counselling offered by the institution during the last five years

Response: 50.28

5.1.4.1 Number of students benefited by guidance for competitive examinations and career counselling offered by the institution year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
4977	2996	4226	3019	3265

File Description	Document
Number of students benefited by guidance for competitive examinations and career counselling during the last five years	View Document
Any additional information	View Document

5.1.5 Average percentage of students benefited by Vocational Education and Training (VET) during the last five years

Response: 46.21

5.1.5.1 Number of students attending VET year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
0	0	0	0	0

File Description	Document
Details of of students benefited by Vocational Education and Training (VET)	[View Document]
Any additional information	[View Document]

5.1.6 The institution has a transparent mechanism for timely redressal of student grievances including sexual harassment and ragging cases

Response: Yes

File Description	Document
Minutes of the meetings of student redressal committee, prevention of sexual harassment committee and Anti Ragging committee	[View Document]
Details of student grievances including sexual harassment and ragging cases	[View Document]

5.2 Student Progression

5.2.1 Average percentage of placement of outgoing students during the last five years

Response: 68.57

5.2.1.1 Number of outgoing students placed year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
1336	1135	1177	1094	919

File Description	Document
Self attested list of students placed	[View Document]
Details of student placement during the last five years	[View Document]
Any additional information	[View Document]

5.2.2 Percentage of student progression to higher education (previous graduating batch)

Response: 4.93

5.2.2.1 Number of outgoing students progressing to higher education

Response: 90

File Description	Document
Upload supporting data for student/alumni	[View Document](#)
Details of student progression to higher education	[View Document](#)

5.2.3 Average percentage of students qualifying in State/ National/ International level examinations during the last five years (eg: NET/ SLET/ GATE/ GMAT/ CAT/ GRE/ TOEFL/ Civil Services/State government examinations)

Response: 90.01

5.2.3.1 **Number of students qualifying in state/ national/ international level examinations (eg: JAM/CLAT/NET/ SLET/ GATE/ GMAT/CAT/GRE/ TOEFL/ Civil Services/ State government examinations) year wise during last five years**

2018-19	2017-18	2016-17	2015-16	2014-15
92	70	47	71	35

5.2.3.2 Number of students appearing in state/ national/ international level examinations (eg: NET/SLET/GATE/GMAT/CAT, GRE/TOEFL/ Civil Services/State government examinations) year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
103	75	51	79	41

File Description	Document
Upload supporting data for the same	[View Document](#)
Number of students qualifying in state/ national/ international level examinations during the last five years	[View Document](#)

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) during the last five years

Response: 117

5.3.1.1 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-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
50	31	20	10	6

File Description	Document
Number of awards/medals for outstanding performance in sports/cultural activities at national/international level during the last five years	[View Document](#)
e-copies of award letters and certificates	[View Document](#)

5.3.2 Presence of an active Student Council & representation of students on academic & administrative bodies/committees of the institution

Response:

Student Council:

The student councils are constituted as department associations in the institution. Each Department's Association is led by student as secretary with a group of office bearers as specified in the institution guidelines. The student associations' plans and coordinates events like Guest lectures, workshops, technical symposiums, technical events, placement and training programmes as per the suggestions received from the students and faculty from time to time. The association secretary will be liaising with persons from Industry, Alumni and other stakeholders for the conduct of events. This liaison will explore the opportunities for industry visits, in-plant training, student placement, offering one credit courses, establishment of MoUs etc for the up-liftment of student department/institution.

Academic Committees:

The students are involved in academic governance through mechanisms like Course Committee, class committee, Board of studies, Academic Council and Institution Innovation Committee. In these committee meetings the suggestions for the enrichment of academic activities offered by the students are considered and appropriate action will be taken by the Principal/Deans/HoDs.

Administrative Committees:

The students are also involved in administrative committees like IQAC, Library committee, TBI alumni, Office Bearers of Student Clubs, Hostel committee and Mess committee where the students give their suggestions and feedbacks on day to day activities. The Anti-ragging committee members help the coordinator to create awareness among the students about the consequences of ragging and to curb ragging. The Internal Complaints Committee handles the gender related complaints with the involvement of students. The institution keeps the students updated about the provisions for the students from reserved category through SC-ST Cell. In addition to above, each department has student placement coordinators to work with the placement team of institution and support them in placement activities.

File Description	Document
Any additional information	[View Document](#)

5.3.3 Average number of sports and cultural activities / competitions organised at the institution level per year

Response: 28.4

5.3.3.1 Number of sports and cultural activities / competitions organised at the institution level year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
36	30	32	21	23

File Description	Document
Report of the event	[View Document](#)
Number of sports and cultural activities / competitions organised per year	[View Document](#)

5.4 Alumni Engagement

5.4.1 The Alumni Association/Chapters (registered and functional) contributes significantly to the development of the institution through financial and non financial means during the last five years

Response:

Alumni Association was registered as"ALUMNI ASSOCIATION - BANNARI AMMAN INSTITUTE OF TECHNOLOGY, SATHYAMANGALAM" under the Tamil Nadu Societies Registration Act, 1975 (Tamil Nadu Act 27 of 1975) on 11th May 2015 at the Registrar Office, Gobichettipalayam with 23

Executive Committee Members. In order to strengthen the Alumni network, the Association has decided to start its Chapters at various cities nationally and internationally with **office bearers** and Executive Committee members to drive the Chapter. The following Alumni Chapters were formed and inaugurated. In addition, recently, wehave started UK Chapter.

Chapters in India

1. BIT Parent Chapter – Sathyamangalam

2. Mumbai Chapter

3. Hyderabad Chapter

4. Bangalore Chapter

5. Chennai Chapter

6. Coimbatore Chapter

7. Salem Chapter

8. Karur Chapter

9.Trichy Chapter

10. Madurai Chapter

11. Tirupur Chapter

12. Tirunelveli Chapter

Chapters in Abroad

1. UK Chapter – London, UK

2. Germany Chapter – Frankfurt, Germany

3. Singapore Chapter

For the development of the chapter in all dimensions, funds have been transferred to all the Chapters for conducting Chapter Inauguration, Alumni Conclave, Alumni Get-together, Office Bearers meet and other activities which are beneficial for the students' community. The Parent Chapter also conducts **Executive Committee meeting (yearly twice)** to review the progress of the Chapters and **Annual General Body meeting (yearly once)** for renewal of the association. The Association has a separate **alumni website** and **Google Group** for sharing College News Letters, Magazines, and Job opportunities posted by Alumni members, Alumni Events and other events at BIT. In addition, the association also updates the Alumni member details/Database for all the batches periodically to know the current status of the alumni members. The association has given an opportunity for its members to exhibit their products in the name

"Products of BIT" during the **Alumni Conclave** in order to expand their Business. As per the request made by the members of Alumni, the association has initiated the steps to prepare the Newsletter in the name of "Alumni News". The same is being prepared and circulated twice a year to all the member of alumni and executive committee members of the alumni association. The association is issuing **Alumni ID card** to the members of Alumni. As an alumnus of BIT, the members can use this card to get access into the institute & Library and enjoy the privileges offered by BIT.

Alumni members extend their support to the Institution through (i) permitting the students to visit their industry (entrepreneurs) (ii) offering the Internships to our students   (iii) placement (iv) curriculum development (Member in Boards of Studies) (v) training the students for placement (vi) Alumni of the respective departments regularly visit the institution for interaction with the students regarding placements and Higher studies in abroad and (vii) delivering the Guest lectures, seminars, One credit courses in the current topics to bridge the gap between Industry and Institute. The association also extends its support through scholarships to the financially deprived students for their study and medical expenses for the members of alumni who are in below poverty line.

File Description	Document
Any additional information	View Document

5.4.2 Alumni contribution during the last five years(INR in Lakhs)

Response: ? 15 Lakhs

File Description	Document
Any additional information	View Document
Alumni association audited statements	View Document

5.4.3 Number of Alumni Association / Chapters meetings held during the last five years

Response: 47

5.4.3.1 Number of Alumni Association /Chapters meetings held year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
11	7	14	12	3

File Description	Document
Report of the event	View Document
Number of Alumni Association / Chapters meetings conducted during the last five years	View Document

Criterion 6 - Governance, Leadership and Management

6.1 Institutional Vision and Leadership

6.1.1 The governance of the institution is reflective of an effective leadership in tune with the vision and mission of the institution

Response:

Vision of the Institution

To be a centre of excellence, providing world-class education that transforms individuals into intellectual, empathetic and responsible citizens.

Mission of the Institution

- To provide top of the line infrastructure that is most conducive for learning.
- To engage committed members of faculty who will infuse subject knowledge with latest teaching pedagogies.
- To provide state-of-the-art facilities to the members of faculty and student fraternity to access and engage in diligent research.
- To collaborate the best minds in the industries with the academia of the college thereby empowering the students to meet the global standards.
- To create an enterprising environment for a continual progress and change that respects heterogeneity.

Governance of the Institution

BIT being a self-financing autonomous institution, it follows Autonomous guidelines as per the UGC. The decisions regarding governance of the institution are taken by the trust Chairman who is also the Chairman of Governing Council of the institution. The Chairman has constituted an Apex committee consisting of Trustee, Principal and Deans to meet periodically, at least once in a week to review various aspects of academics and administration and recommend to the Chairman for approval.

The Leaders deploy vision and values to stakeholders through meetings, induction programs, administrative and academic systems involving well documented policies, procedures and systems developed through Internal Quality Assurance System (NAAC, NBA), and Implementation of Workplace Management System (5S).

Effective leadership is reflected in involvement through reinforcing culture of excellence, fostering competencies and inculcating value system among students, promoting technology and quest for excellence in Development of Management Systems, implementation of the system, continuous improvement and interaction with stakeholders.

E-Governance is implemented in the Institution to support all the operational and information needs in Planning and Development, Administration, Finance and Accounts, Student Admission and Support and in Examination process.

Perspective/Strategic Plan

Strategic Plan of the institution is prepared by IQAC in consultation with the Principal, Deans and HoDs; and is implemented systematically in line with the core competencies of the Institution. Department Development Plan (DDP) for all departments prepared by the respective HoD to integrate the Strategic Plan of the institution, Action Plan of Special Interest Groups (SIGs) prepared by the SIG Head; and Action Plan of Individual members of faculty are prepared in the beginning of the academic year. The Principal, Deans, and HoDs review the progress of the activities periodically based on the action plan.

Teachers Participation in the Decision Making Bodies

Teachers participate in decision making bodies including Governing Council, Academic Council, Standing Committee, Board of Studies, Department Advisory Board(DAB) and other Statutory bodies. The administrators provide effective leadership and management at Institutional Level, Department Level, Programme Level and Course Level.

The leadership ensures the compliance of academic and administrative processes and procedures. Continual improvement is ensured through regular systematic audits, checks, and monitoring by well-defined quality assurance methods.

File Description	Document
Link for Additional Information	[View Document](#)

6.1.2 The institution practices decentralization and participative management

Response:

Yes

BIT being an Autonomous Institution has formulated the following statutory bodies to ensure proper management of academic, financial and general administrative affairs in accordance to the guidelines given by the UGC.

(a) Governing Body

(b) Academic Council

(c) Board of Studies

(d) Finance Committee

Decentralization and Delegation of Powers

The regular administrative activities are headed by Principal of the Institution. The planning and development of the institute and student affairs are headed by Dean-Planning and Development and

Student affairs (PDS). Dean – Academics, Training & Placement is monitoring the academic functions of college, training and skill development of the students. Professor in-charge Research and Development is taking care of research and development activities of students and faculty.

Case Study

Dean PDS suggested to introduce outcome based experiments in the laboratories replacing the existing list of experiments set up. The basic goal of older laboratory system was to present the knowledge and skills of the faculty to the students, and to provide them with an environment in which to learn, with little attention to whether or not any student ever learns any of the material. By introducing outcome based experiments, the student can clearly focus and organize their learning capabilities related to the outcome of each and every experiment he/she is doing in the laboratory. Also, the outcome of each laboratory course is a project, process or product relevant to that course.

This proposal was discussed in the meetings with the lab handling faculty and advantages and disadvantages of implementing outcome based laboratory was discussed and finalized. The decision of implementing outcome based experiments was suggested by Dean PDS in the Academic Council Meeting for appropriate implementation.

The students also interestingly carried out the outcome based experiments and showed significant improvements.

To mention a few:

In 18EC308-Digital Electronics Lab the students implemented skill through the following products

- 24 hour digital clock
- Hardware voting system
- Security logic with keypad

Similarly, In 18EE308-Electron Devices and Circuits the students implemented mobile phone charger due to the implementation of outcome based laboratory.

File Description	Document
Link for Additional Information	[View Document](#)

6.2 Strategy Development and Deployment

6.2.1 Perspective/Strategic plan and Deployment documents are available in the institution

Response:

Yes

Perspective/Strategic plan focuses on worldwide trends and disrupting forces in higher and technical

education which when adopted can show better performance. It makes an assessment of stakeholders expectations, students, professors, employers, government development needs of the region, etc.,

Strategic Plan is prepared and made available in the institution.

BIT's strategic plan includes the following

- Flexible curriculum
- High quality research
- Industry engagement
- Internationalization of academic & research activities,
- Entrepreneurship
- Alumni engagement
- Social outreach that are linked logically with enablers and final objectives

The activities are planned in the beginning of every academic year through the Academic Calendar and Administrative Calendar.

Activity: Department Development Plan (DDP)

Department Development Plan is a quality initiative which concentrates on the development of the departments in terms of infrastructure, faculty strength, faculty achievement, students' development and student achievement. The plan is finalized by the HODs of all departments in consultation with their faculty members. This plan is then discussed in the HODs meeting with the Principal, followed by approval from the Apex committee.

The target for each department includes the following parameters:

1. Presenting paper at reputed institutes by students
2. Presenting projects at reputed institutes by students
3. Sponsoring students to National/International level events
4. Patent filing
5. Publications in refereed Journals
6. Funding Proposals
7. Participation in Conferences
8. MoU Signed
9. Industry interaction
10. Industrial consultancy projects
11. Industry Collaborative Lab
12. Inviting Experts from reputed research laboratory
13. Workshops/Training Organized
14. Faculty training
15. One Credit Courses
16. Certificate/Value Added Courses
17. Guest Lecture/Leader of the Week/Association Activities
18. Industrial Visits/Field Visits
19. Alumni interaction
20. Purchase of Lab Equipment

21. Purchase of Lab Accessories/Tools/Consumables
22. Software purchase
23. Training of Non-teaching staff
24. Internship
25. Organising Conferences

Target is set based on the sanctioned intake, and a minimum target is fixed for 12 parameters out of the 25 parameters. The details of target fixed are as follows:

- Presenting paper at reputed institute by the students - 8 per class per intake
- Presenting projects at reputed institute by the students - 8 per Class per year (For II,I IIand IV Year students)
- Patent filing- 2 per intake
- Publications in refereed journals – 15 per intake
- Funding Proposals – Rs.6.25 Lakhs per intake
- Industrial consultancy projects- Rs.1.25 Lakhs per intake
- Participation in conferences- all faculty – 1 per year
- Industry collaborative lab- 1 per year
- Faculty and Non-teaching training- minimum 60% in each category
- Guest Lecture/Leader of the Week/Association Activities, Industrial visits/Field visits- 2 per semester per class of 60 students

The review for the DDP is conducted every month to monitor the progress of the department as per DDP. The target fixed and target achieved are reviewed and suggestions are given to the respective department heads for further developments

File Description	Document
Strategic Plan and deployment documents on the website	[View Document](#)

6.2.2 Organizational structure of the institution including governing body, administrative setup, and functions of various bodies, service rules, procedures, recruitment, promotional policies as well as grievance redressal mechanism

Response:

Participative type of Governance System (Council) as per the recommendations of UGC has been implemented (comprising of members from Trust, Government Nominees, UGC Nominee, Faculty Members, Educationists and Industrialists).

The Organogram of the Institute comprises of the Trust Board (Bannariamman Educational Trust - BET), Governing Council, Principal, Deans and Heads of the Departments. The Chairman of the Governing Council is also the Chairman of the college. The Principal is the administrative head of the institute; the responsibilities are equally shared by three deans viz; Dean-Planning and Development and Students affairs, Dean-Academics and Training and Skill Development and Professor In-charge-Research and

Development. The Heads of the Departments cooperate with the Deans and Principal along with their faculty and staff for the day-to-day functioning of the college.

Functions of various bodies

Statutory bodies

Governing Body (Council)

The Governing Body is responsible for guiding the college, approve new programmes of study leading to degrees and/or diplomas and approves annual budget of the college.

Academic Council:

The Academic Council shall have powers to scrutinize and approve the proposals with or without modification of the Boards of Studies.

Board of Studies

The Board of Studies of a Department in the college shall prepare syllabi for various courses, suggest methodologies for innovative teaching and coordinate research and other academic activities in the department/college.

Finance Committee

The Finance Committee will be an advisory body to the Governing Body, to consider budget estimates relating to income from fees, etc. and audited accounts for the above.

Non-Statutory bodies

Planning and Evaluation Committee

The planning and evaluation committee is formed to visualize and formulate perspective plans for the development and growth of the college.

Grievance Redressal Committee

It desires to promote and maintain a conducive and unprejudiced educational environment**.**

Examination Committee

The Examination Committee takes care of the examination and evaluation process and implementation of examination reforms in the Institution.

Admission Committee

The Admission Committee is responsible for the graduate student admissions in the program.

Library Committee

The Library committee is formed to enrich the collection of books with latest editions and journals.

Student Welfare Committee

The purpose of the student welfare committee is to promote student welfare, advice and support.

Sexual Harassment Committee

It is formed to provide assistance to students in lodging complaints, provide mechanisms of dispute redressals and dialogues, protect safety of the complainant,ensure victims and witnesses are not victimized, and ensure prohibition of adverse actions against covered individuals

Extra-Curricular Activities Committee

This committee focuses to nourish students' positive life values and attitudes

Academic Audit Committee

The academic audit committee is responsible for the monitoring of teaching learning process.

File Description	Document
Link to Organogram of the Institution webpage	[View Document](#)

6.2.3 Implementation of e-governance in areas of operation

1. Planning and Development
2. Administration
3. Finance and Accounts
4. Student Admission and Support
5. Examination

Response: All 5 of the above

File Description	Document
Screen shots of user interfaces	[View Document](#)
ERP Document	[View Document](#)
Details of implementation of e-governance in areas of operation Planning and Development,Administration etc	[View Document](#)
Any additional information	[View Document](#)

6.2.4 Effectiveness of various bodies/cells/committees is evident through minutes of meetings and implementation of their resolutions

Response:

Yes

According to the minutes of the 16th Academic Council Meeting dated 27.11.2017, Dr P Thangaraj suggested the modifications to be made in the question paper by framing outcome based questions to incorporate higher order thinking skills. The council accepted and informed him it can be placed in the forum and proceed. This was proposed in 18th Governing Council Meeting dated 28.01.2019 for the approval. After this, the activity was implemented in the department level.

So far most of the questions assess only memory based skills, seldom they cover higher order thinking skills. In order to overcome the challenges faced in preparing outcome based question papers, training for members of faculty was provided in batches. The training focussed on preparing lesson plans based on 2-Dimensional Revised Blooms Taxonomy (2D-RBT), delivery of lectures based on the lesson plan prepared and setting question papers that will enable an average student to score minimum pass mark and securing higher marks could be possible only by competent students.

Standard metrics are followed while setting questions based on real-time applications. Question papers were prepared with three difficulty levels viz, Low, Medium and High in the proportion of 20-30%, 40-50% and 20-30% respectively

6.3 Faculty Empowerment Strategies

6.3.1 The institution has effective welfare measures for teaching and non-teaching staff

Response:

Yes

Welfare measures for teaching faculty:

- Registration Fee, TA/DA for attending conferences

- Incentives for Funded Projects 2.5% of the amount sanctioned from management
- 60/70% of revenue sharing in consultancy projects
- TA/DA for presenting projects for funding
- Long Service Allowance (LSA) for faculty working for more than 10 years
- Reimbursement of NPTEL exam fees for faculty who successfully certify
- Transport facilities to visit industries for consultancy assignments
- 100% filing charges for IPR
- Sponsorship for pursuing Ph.D. (Three year fees is sponsored by the management for part-time Ph.D. scholars)
- Contribution for Public Provident Fund/Employees Provident Fund
- Maternity leave scheme for female faculty
- Group Insurance
- Gratuity Scheme
- Admission to the wards of the faculty in the Schools (State Board & CBSE)
- Admission to the wards of the faculty in the College
- Rent-free fully furnished quarters for Faculty
- Soft loan (without interest) to needy faculty
- Day-care centre for the wards of faculty
- Ambulance Facility

Welfare measures for non-teaching staff:

- Admission to the wards of the faculty in the Schools (State Board & CBSE)
- Admission to the wards of the faculty in the College
- Soft loan (without interest) to needy staff
- Day-care centre for the wards of faculty
- Contribution for Employees Provident Fund
- Long Service Allowance (LSA) for faculty working for more than 10 years
- Maternity leave scheme for female faculty
- Group Insurance
- Rent-free fully furnished quarters for staff
- Ambulance Facility
- Festival advance for needy staff

6.3.2 Average percentage of teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies during the last five years

Response: 26.9

6.3.2.1 Number of teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
126	174	152	70	45

File Description	Document
Details of teachers provided with financial support to attend conferences,workshops etc during the last five years	View Document
Any additional information	View Document

6.3.3 Average number of professional development /administrative training programs organized by the institution for teaching and non teaching staff during the last five years

Response: 56.8

6.3.3.1 Total number of professional development / administrative training programs organized by the Institution for teaching and non teaching staff year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
4	3	2	1	1

File Description	Document
Details of professional development / administrative training programs organized by the Institution for teaching and non teaching staff	View Document
Any additional information	View Document

6.3.4 Average percentage of teachers attending professional development programs viz., Orientation Program, Refresher Course, Short Term Course, Faculty Development Program during the last five years

Response: 66.5

6.3.4.1 Total number of teachers attending professional development programs, viz., Orientation Program, Refresher Course, Short Term Course, Faculty Development Programs year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
254	204	108	80	56

File Description	Document
IQAC report summary	[View Document](#)
Details of teachers attending professional development programs during the last five years	[View Document](#)
Any additional information	[View Document](#)

6.3.5 Institution has Performance Appraisal System for teaching and non-teaching staff

Response:

Yes

Performance Appraisal System for teaching staff is Academic Performance Indicator (API) which is developed in accordance to the UGC guidelines, and for non-teaching staff is Annual Performance Assessment Report (APAR) which prepared with reference to NIT, Pondicherry.

Self appraisal reports are collected from all the teaching staff and audited by a team comprising of HoDs, Auditors (Internal/External) and the scores are considered for their career advancement which includes promotion, additional incentives and prizes

File Description	Document	
Link for Additional Information	[View Document](#)	

6.4 Financial Management and Resource Mobilization

6.4.1 Institution conducts internal and external financial audits regularly

Response:

Yes

BIT has qualified Chartered Accountants (internal auditors) to supervise the internal audits and to ensure that all the procedures and guidelines set by the management are strictly adhered to in the transactions. The chartered accountants also ensure that the recordings of transactions are carried out as per the purchase procedures and approval of purchases by the competent authority. Chartered Accountants carry out the procedural transaction and compliance audit and submit their reports to the management team with their comments, observations and informing the corrective measures that need to be taken, to ensure proper compliance as per their observations. Internal audit and External audit are conducted twice and once in a year respectively. The External and Internal Auditors' reports are reviewed by management and forwarded to the respective internal auditors to bring-in desired improvements in the areas highlighted by them. BIT ensures that proper checks and balances are in place with respect to financial aspects and also ensures that the transactions are recorded in books with proper approvals.

6.4.2 Funds / Grants received from non-government bodies, individuals, Philanthropists during the last five years (not covered in Criterion III) (INR in Lakhs)

Response: 128

6.4.2.1 Total Grants received from non-government bodies, individuals, philanthropists year-wise during the last five years (INR in Lakhs)

2018-19	2017-18	2016-17	2015-16	2014-15
28.98	31.67	27.49	6.87	00.99

File Description	Document
Details of Funds / Grants received from non-government bodies during the last five years	[View Document](#)
Annual statements of accounts	[View Document](#)

6.4.3 Institutional strategies for mobilisation of funds and the optimal utilisation of resources

Response:

Yes

Bannari Amman Institute of Technology being an autonomous private institution, the major source of fund is collected as tuition fees from students, examination fees and management contribution for the effective functioning of the Institution. Apart from this any additional expenditure or any deficient funds will be borne by the Bannariamman Educational Trust.
The Institution maintains audit reports as and by the law of the state government procedures.

6.5 Internal Quality Assurance System

6.5.1 Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing the quality assurance strategies and processes

Response:

The primary goal of the IQAC is to develop a system for conscious, consistent and catalytic improvement in the overall performance of institution. It promotes measures for the functioning of the college towards enhancement of quality through internalization of quality culture and suggestions to implement the best practices.

Activity 1: Special Interest Group (SIG)

SIG aims to bring like-minded researchers from across various disciplines to work together to promote inter-disciplinary research. The concept of Special Interest Groups was initiated in Bannari Amman Institute of Technology in 2017 with a focus on addressing social, industrial and environment challenges through extensive core and multi-disciplinary research activities. The research activities shall include supervision, execution of new researches (both basic and applied), inter-disciplinary and multi-disciplinary research, academic and research collaborations with national and international institutions/Universities, Government /private industry, consultancy assignments and Government Funded / Private Funded projects that might result in the development of new or existing products, processes or theories.

There are 88 SIGs incepted with focus on recent advanced subjects such as Computational Intelligence, Machine learning, Digital image processing, Liquid crystals for optical applications, Signal processing, Functional Foods and Nutraceuticals, Bioprospecting & Diagnostics and Geotechnical Engineering, etc. The SIGs are intended to carry out the tasks and targets that are set by the Institute, through collaborative efforts of their members. Each SIG shall be constituted with a minimum of 3 and maximum of 7 members from across the departments and domains specializations. Seed money of not more than 5 Lakhs is granted to each SIG based on the recommendation of their strategic research plans and committed deliverables. The target (attached as additional information) per year is formulated and circulated to the SIG Coordinators and members after the deliberation with faculty members.

Activity 2: Students Performance Indicators Audit

International engineering committee has constituted certain parameters an engineering graduate must possess. Based on this BIT has evolved performance measures for students, that are monitored through the effectiveness of their participation in various events based on the Students Performance Indicators (SPI). The parameters included for SPI are framed in accordance with the graduate attributes a student should acquire on his/her graduation.

The parameters included for SPI are as follows:

- NSS/NCC/clubs
- Sports (Games/Athletics)
- Class Responsibilities/ Association/FUTURA
- Paper Presentation
- Publication
- Technical Events
- Non-Technical Events
- Industry: Internship/Projects/Out-reach Programmes
- Project Contest
- Patent/IPR
- Image Building
- Courses/Value Added Courses
- R&D Activities
- Placement/ Higher Studies/Entrepreneur

In this regard, periodic reviews for the class advisors are conducted every three months to monitor the improvements in the student's SPI score. The introduction of SPI has motivated the students to participate

in technical/non-technical events across the globe. This fact is evident through the laurels won by them after the implementation of SPI

6.5.2 The institution reviews its teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals through IQAC set up as per norms

Response:

Yes

The institution reviews its teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals through IQAC set up as per norms.

The overall performance is measured through academic and API audit. Hence this process is explained.

1. Audit Process:

Academic Audit

The Academic Audit is a model of reviewing the quality of academic initiatives made by the members of faculty. It is based on discussions faculty, stakeholders and peer reviewers focused on a common goal: to improve quality processes in teaching and learning and thereby enhance student success. During the self-study phase of the Academic Audit, the faculty members analyze the key activities that regularly improve the quality of teaching and learning. Faculty members reflect on how they organize their work and how they use data to make decisions and deliver their lectures. The Academic Audit model involves a review process by Academic Auditor Team. This team reviews a program's self-study report, conducts a site visit, and writes its own report that includes commendations, affirmations and recommendations for continued improvement. The audit is conducted every semester to review the progress.

API Audit

A performance indicator or key performance indicator is a measure of performance which usually defines the success factor. It is a method to measure the degree to which key objectives are achieved.

API score indicates the performance of a faculty / researcher in academics and research.

Various Performance Indicators measured are:

- Teaching quality: credentials, knowledge and experience that the teacher brings with them when they enter the class rooms
- Research: aim to obtain as many projects as possible
- Paper publication: Academic staff must produce publication that confirms their standing as academicians.
- Consultancy: opportunity to obtain an industrial attachment or contribute as an advisor as per requirements.
- Communication skills: The effectiveness of the communication will determine the success of the

teacher.

- Concern for students: The degree at which the teacher contributes to their students learning.
- Co-curricular activity: contribution of a teacher in activities, apart from teaching, for the students overall development.
- Currently updated: The degree at which an academician is updated with the current environment and can link the current happening with his or her teachings.
- Leadership: The ability to lead or guide the students in various areas.
- Class room management: The way an academician manages the class effectively and efficiently.

The API audit is conducted half-yearly and the reports are analyzed to make any appropriate actions if necessary.

2. Learning Management System (LMS)

LMS in BIT is implemented as an in-house development software through CampusStack E-Governance system by the Software Development Cell (SDC) in order to improve the transparency, productivity and efficiency of various academic and advance processes. In-house ERP (CAMPS) of BIT takes care of the entire academic and non academic process including

- Staff Management (Registration, Staff Attendance and Leave Management, payroll)
- Student Management
- Curriculum Management
- Academic Process Management (course registration, timetable, attendance and internal marks, question bank, lesson plan documents)
- Examination Management (hall ticket, exam scheduling, result processing and grade sheets management)
- Library Management
- Stores and Materials Management
- Financial Accounting
- Documentation Management and Analytics

BIT has successfully implemented CBCS since 2015 through its LMS. The student has the facility to select the courses of his/her choice and the faculty for that course through CAMPS. Individual timetable is generated for each student based on his/her choice of courses. Similarly faculty allotment and classroom management is also enabled online to effectively conduct the course. Flexibility to add or drop courses in a semester, based on the student's pace of learning, is also enabled. Once the student passes a course, the credits for the respective course is added to his/her grade sheet.

6.5.3 Average number of quality initiatives by IQAC for promoting quality culture per year

Response: 14.4

6.5.3.1 Number of quality initiatives by IQAC for promoting quality year-wise for the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
24	14	11	15	8

File Description	Document
Number of quality initiatives by IQAC per year for promoting quality culture	View Document
Any additional information	View Document
IQAC link	View Document

6.5.4 Quality assurance initiatives of the institution include

1. **Regular meeting of Internal Quality Assurance Cell (IQAC); timely submission of Annual Quality Assurance Report (AQAR) to NAAC; Feedback collected, analysed and used for improvements**
2. **Academic Administrative Audit (AAA) and initiation of follow up action**
3. **Participation in NIRF**
4. **ISO Certification**
5. **NBA or any other quality audit**

Response: Any 4 of the above

File Description	Document
e-copies of the accreditations and certifications	View Document
Details of Quality assurance initiatives of the institution	View Document
Any additional information	View Document
Annual reports of Institution	View Document

6.5.5 Incremental improvements made during the preceding five years *(in case of first cycle)* **Post accreditation quality initiatives** *(second and subsequent cycles)*

Response:

BIT has adopted effective internal and external quality enhancement mechanisms.

Academic Domain

- Implementation of CBCS since 2015 with OBE template
- Scientific approach in curriculum design is done through 2D RBT with Systematic approach incorporated in curriculum as learner centric design.
- MoU with International Universities
- Introduction of open electives, add-on, fast track and value added courses in the curriculum from 2015 onwards

- Add/drop facility in courses implemented
- 2 UG and 1 PG programmes were introduced
- Product development through mini-project and project
- Increase in intake of NRI students
- Additional security features incorporated in grade sheet issued to students
- In-house ERP (CAMPS) for processing examination related information
- E-hall ticket issued to students
- CO-PO attainment is calculated using in-house software
- Online feedback system implemented
- Seed money upto Rs.5 Lakhs is provided for SIG
- Increase in students participation in national and inter-national events
- Strategic Plan is revised and implemented
- Open book tests conducted to enhance higher order thinking
- Exam wrapper implemented since 2017
- Credit transfer facility for students who have completed online courses (SWAYAM/NPTEL) since 2016
- Video lectures by faculty to enable offline learning for students
- 88 Special Interest Groups established
- Students are asked to prepare short videos to enhance their communication skills and social networking

Administration Domain

- Decentralization of powers
- Open office system implemented
- DDP implemented
- SIG implemented
- Facebook workplace ids created for all students and faculty to share daily activities
- Professional development programs for teaching and non-teaching staff are conducted
- Execution Time Optimization and Code optimization in camps is enhanced
- Faculty events recorded using activity id in camps
- Dynamic data linked to the institute website through in-house software
- grand mobile application development workshop was organised where 1000 apps were developed in a day
- Administrative calendar developed

Criterion 7 - Institutional Values and Best Practices

7.1 Institutional Values and Social Responsibilities

7.1.1 Number of gender equity promotion programs organized by the institution during the last five years

Response: 26

7.1.1.1 Number of gender equity promotion programs organized by the institution year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
4	5	5	3	5

File Description	Document
Report of the event	[View Document](#)
List of gender equity promotion programs organized by the institution	[View Document](#)
Any additional information	[View Document](#)

7.1.2 Institution shows gender sensitivity in providing facilities such as
a) Safety and Security
b) Counselling
c) Common Room

Response:

Yes

The institution shows gender sensitivity in providing facilities for safety & security, counselling and common room as mentioned below

a) Safety and Security
• Institute provides safe environment to the girls and boys students by providing multi-layer safety features
• Entire campus is kept safe from intruders by maintaining concrete compound walls with physical and electronic security systems
• Surveillance camera and biometric systems are installed in the main gate, hostel gates to ensure safe check-in and check-out of boys and girls whenever they leave / enter the campus
• Matrons available in the hostels are trained in first aid assistance
• Full time doctors (Male and Female) are available in the hostels for boys and girls 24X7
• Dispensary with diagnostic and sick-room facilities are available within the campus. Each Department /

Laboratory is provided with the first-aid kits
* Stores available for OTC drugs
* Ambulance is available inside the campus (24X7)
* College has access to the Health Centre and Pharmacy
* Security Guards monitor on 24*7 basis by complete security patrolling over the campus
* Both Male and Female security guards are appointed to ensure adequate security in the hostels and campus areas
* Anti-Ragging committee formed eradicates the ragging activities inside the campus
* Women Development Cell is available for the welfare of the women students/faculty/staff

b) Counselling
* Mentors are allotted for every class of students for academic and personal related activities
* Mentor is allotted for every 15 –20 students. They provide personal and psycho-socio guidance to the student
* Class committee meetings are conducted thrice in every semester to convey the needs of the students and their grievances if any, which are addressed immediately
* Professional Counsellors are available for attending specific cases on need basis
* Matrons and supervisors have been appointed in the hostels to address the needs of boys and girls

c) Common Room
 Each Department block is provided with

* Space for the visitors near HoD cabin
* Separate wash rooms for boys and girls students
* Exclusive washrooms for the physically challenged
* Separate wash rooms for male and female faculty and staff in the academic block.
* Huts are provided in the girl's hostel to meet their visitors and parents for a short discussion.
* Recreation rooms are available for the faculty members

File Description	Document
Link for Additional Information	[View Document](#)

7.1.3 Percentage of annual power requirement of the Institution met by the renewable energy sources

Response: 31

7.1.3.1 Annual power requirement met by renewable energy sources (in KWH)

Response: 1702242

7.1.3.2 Total annual power requirement (in KWH)

Response: 5491105

File Description	Document
Details of power requirement of the Institution met by renewable energy sources	View Document
Any additional information	View Document

7.1.4 Percentage of annual lighting power requirements met through LED bulbs

Response: 45.41

7.1.4.1 Annual lighting power requirement met through LED bulbs (in KWH)

Response: 498658

7.1.4.2 Annual lighting power requirement (in KWH)

Response: 1098221

File Description	Document
Details of lighting power requirements met through LED bulbs	View Document
Any additional information	View Document

7.1.5 Waste Management steps including:
- **Solid waste management**
- **Liquid waste management**
- **E-waste management**

Response:

Solid waste management

- Human night soil and urines are collected and sent to digestors for production of bio-gas in a centralized location
- With a view to conserving the environment, the Bannari Amman Institute of Technology has installed two biogas plants (120 m³ & 90 m³ capacities) to make use of human and kitchen wastes. Both the plants have been functioning since 2010 and the gas generated is used for cooking
- Dead leaves are sent to the bio composting yard instead of burning and food wastes of about 400 kgs are digested in biogas plant. It produces bio-compost from the plant leaves and kitchen vegetable wastes collected in the campus. Once in three months, 5 to 6 tonnes of bio-manures are prepared and used for the cultivation of organic vegetables

Liquid waste management

 Sewage water treatment plant with a capacity of 20, 00, 000 L/day to treat the waste water has been

installed. The water from the hostels and the college is treated and pumped back. This water is used for the irrigation and gardening purposes

E-waste management

Test and Repair Centre (TRC) functioning in the college collects the e-waste from all the departments once in every year and outsource the unused components (Computers, UPS and Printing systems) to external agency. Reusable components will be repaired and upgraded by the TRC and returned to the departments.

File Description	Document
Link for Additional Information	[View Document](#)

7.1.6 Rain water harvesting structures and utilization in the campus

Response:

Rain water harvesting structures and utilization in the campus

All the buildings in the campus are provided with facilities to collect the rain water and re-charge the ground water and use them for various purposes

- 7 Bore wells (6 inch, 400 feet) are recharged with rain water with filter arrangements in key locations in the campus
- Rain water collection is done in a tank with a storage capacity of 5,00,000 Litres
- 3 Gravity-pond has been constructed to collect the rain water through gravity flow with a capacity of 1.20 Crore Litres
- In addition, Sewage water treatment plant with a capacity of 20, 00, 000 L/day to treat the waste water has been installed
- Chlorination will be carried out in the Gravity-pond to avoid the spread of vector borne diseases and inspected by local municipality corporation

A deep well has been mined at the lowest elevation to collect the draining water or runoff from the campus. The runoff from the terrace of the college building is channelized into recharge wells located at different locations. The runoff from the unpaved area is intercepted at the ways near the roads by a collection trench. From here the runoff eventually drains into an abandoned open well, which facilitates groundwater recharge.

The proper bund was constructed near the wells to restrict the flow of water before filtration. The roads surrounding the College, Cafe, Staff quarters and Hostels have been excavated and new slope in order to collect all the water that drains from the surrounding areas. This is collected by pipes that open into the wells.

File Description	Document
Link for Additional Information	<u>View Document</u>

7.1.7 Green Practices
- **Students, staff using**
a) **Bicycles**
b) **Public Transport**
c) **Pedestrian friendly roads**
- **Plastic-free campus**
- **Paperless office**
- **Green landscaping with trees and plants**

Response:

The college campus is surrounded by trees. In front of the college, there is a well-maintained garden with numerous Big trees and shrubs. There are several potted plants in the college campus. There is a medicinal garden in our college campus. The college has a Clean Technology club, Energy Conservation Club, Enviro Club and Green Energy Clubs with an assigned staff and interested students to maintain the greenery in the campus. Our Institution won AICTE National Level Clean and Smart Campus Awards-2019 for the best practices followed in our Institution.

Transportation

- BIT supports the use of bicycles by students, faculty and staff for travelling to and around the college campus.
- Vehicles are prohibited in the academic area beyond the barricades available near the main and back gate to avoid carbon neutrality.

- **Electric vehicles are available inside the campus for transportation.**
- Emergency vehicles/Ambulance is only allowed around the academic block at the time of emergency.
- College provides transportation to the students and the faculty members .
- Faculty members staying in the Staff Quarters are encouraged to walk to reach the academic area (which also promotes their health).

Plastic Free Campus

The college is a plastic free zone. Use of one-time plates, papers and plastic cups has been banned inside the campus. Provision for RO water has been given at many places for drinking water, thereby reducing the use of (PET) bottled water.

Paperless Office

Departments, staffs and students use BIT-Internal ERP (CAMPS portal) to view and maintain the documents in electronic form. Printout taken only on essential situations. Submission of lesson, student attendance, faculty attendance, issuing circulars and posting necessary information are carried out

electronically thereby avoiding the use of papers inside the campus.

Green landscaping with trees and plants

College campus has 16,950 no. of trees out of which 5350 no. of trees are planted with a spacing of 3 feet distance in Miyawaki method in 1.25 acres and shrubs of 260 no. of varieties. Grass landscaping using Korean Mexican Grass covering an area of 13 acres. The college has an appointed staff to maintain the greenery in the campus. They regularly waterthe plants and prune them whenever required.

College organizes programmes through GREEN ECO club every year to inculcate awareness on green environment. Environmental awareness given to students and other stakeholders. Geo Club and Enviro Club take care of environmental consciousness and distribute booklets to the students. Awareness programmes are organized time to time to sensitize NSS students .

Solar Power

Solar power plants are installed on the rooftops widely with the capacity of 1.3 MW production.

- Solar PV system capacity - 1300 kW
- Battery backup system- 100 kW
- Local grid tie-up system - 1200 kW
- Power generation - Average 4500 units/day.

LED Bulbs

All the newly constructed buildings and the street lights available are equipped with LED bulbs.Existing CF Lamps inside the campus are replaced with LED bulbs whenever replacement is required.

7.1.8 Average percentage expenditure on green initiatives and waste management excluding salary component during the last five years

Response: 3.64

7.1.8.1 Total expenditure on green initiatives and waste management excluding salary component year-wise during the last five years(INR in Lakhs)

2018-19	2017-18	2016-17	2015-16	2014-15
368	446.77	103.85	80.22	9.12

File Description	Document
Green audit report	[View Document](#)
Details of expenditure on green initiatives and waste management during the last five years	[View Document](#)
Any additional information	[View Document](#)

7.1.9 Differently abled (Divyangjan) Friendliness Resources available in the institution:

1. **Physical facilities**
2. **Provision for lift**
3. **Ramp / Rails**
4. **Braille Software/facilities**
5. **Rest Rooms**
6. **Scribes for examination**
7. **Special skill development for differently abled students**
8. **Any other similar facility (Specify)**

Response: A. 7 and more of the above

File Description	Document
Resources available in the institution for Divyangjan	[View Document](#)
Any additional information	[View Document](#)
link to photos and videos of facilities for Divyangjan	[View Document](#)

7.1.10 Number of Specific initiatives to address locational advantages and disadvantages during the last five years

Response: 68

7.1.10.1 Number of specific initiatives to address locational advantages and disadvantages year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
8	3	5	5	7

File Description	Document
Number of Specific initiatives to address locational advantages and disadvantages	[View Document](#)

7.1.11 Number of initiatives taken to engage with and contribute to local community during the last five years (Not addressed elsewhere)

Response: 68

7.1.11.1 Number of initiatives taken to engage with and contribute to local community year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
6	4	1	2	1

File Description	Document
Report of the event	[View Document](#)

7.1.12
Code of conduct handbook exists for students, teachers, governing body, administration including Vice Chancellor / Director / Principal /Officials and support staff

Response: Yes

File Description	Document	
URL to Handbook on code of conduct for students and teachers , manuals and brochures on human values and professional ethics	[View Document](#)	

7.1.13 Display of core values in the institution and on its website

Response: Yes

File Description	Document	
Any additional information	[View Document](#)	
Provide URL of website that displays core values	[View Document](#)	

7.1.14 The institution plans and organizes appropriate activities to increase consciousness about national identities and symbols; Fundamental Duties and Rights of Indian citizens and other constitutional obligations

Response: Yes

File Description	Document
Details of activities organized to increase consciousness about national identities and symbols	[View Document](#)

7.1.15 The institution offers a course on Human Values and professional ethics

Response: Yes

File Description	Document
Provide link to Courses on Human Values and professional ethics on Institutional website	[View Document](#)

7.1.16 The institution functioning is as per professional code of prescribed / suggested by statutory bodies / regulatory authorities for different professions

Response: Yes

File Description	Document
Provide URL of supporting documents to prove institution functions as per professional code	[View Document](#)

7.1.17 Number of activities conducted for promotion of universal values (Truth, Righteous conduct, Love, Non-Violence and peace); national values, human values, national integration, communal harmony and social cohesion as well as for observance of fundamental duties during the last five years

Response: 97

7.1.17.1 Number of activities conducted for promotion of universal values (Truth, Righteous conduct, Love, Non-Violence and peace); national values, human values, national integration, communal harmony and social cohesion as well as for observance of fundamental duties year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
3	5	4	5	0

File Description	Document
List of activities conducted for promotion of universal values	[View Document](#)

7.1.18 Institution organizes national festivals and birth / death anniversaries of the great Indian personalities

Response:

Yes

Bannari Amman Institute of technology regularly celebrates National festivals as well as important days of great Indian personalities. The following are the events conducted regularly:

* Teacher's Day celebrations

* Gandhiji's Birthday

* Kamarajar's Birthday

* Bharathiyar's Birthday

* Dr.APJ Abdul Kalam's Birthday

* Martyrs' Day

* Engineer's Day

* Independence day

* Republic Day,etc.

The Institute celebrates the national festivals like **Pongal, Navarathri, Christmas**, etc. Clubs of BIT organize these events with wide participation from the students and faculty members. Competitions and rallies are held during these events to create awareness among the students and public. *Pongal* is celebrated for a period of 3 days and is celebrated in the month of January,every year.

7.1.19 The institution maintains complete transparency in its financial, academic, administrative and auxiliary functions

Response:

Yes

Transparency in Financial Functions

All the financial transactions are carried as per the book-entry and book-keeping system of accounting. Financial transactions are audited at regular intervals by the qualified auditors and financial statements are prepared as per statutory requirements of Accounting Practices and certified by the practising Chartered

Accountant.

Transparency in Academic Functions

Based on the aggregate score of Higher Secondary Examination marks in

- Mathematics, Physics and Chemistry subjects, a rank list is prepared by the Anna University and is published in all leading newspapers.
- Admission to 65% of sanctioned strength is carried out by Anna University through a single window process. Admission to 35% of sanctioned strength is carried out through Association of Management of Anna University Affiliated Colleges through entrance test.
- List of the admitted students are sent to Directorate of Technical Education (DoTE) for verification and validation of the admission

Transparency in Administrative and Auxiliary Functions

- Governing Council
- Appointments of faculties
- Apex committee
- Open Office

7.2 Best Practices

7.2.1 Describe at least two institutional best practices (as per NAAC Format)

Response:

Following are the best practices followed in our Institution

1. E-Governance Software - In house ERP(CAMPS)
2. Skill Development Program
3. Social Relevant Projects
4. Exam Wrapper
5. Organic Farming
6. Competitive Exam Centre
7. Facilitation for Patent filing
8. Unveiling Students Creativity
9. Daily Challenge – Problem Solving (Hacker rank)
10. Budbringer – Newspaper Weekly Digest
11. FSSAI and 5S certification for Boys/Girls Hostel food

1.Title of the practice: E-Governance Software –Inhouse ERP(CAMPS)

1.1 The context that required the initiation of the practice (100 – 120 words)

Maintaining the records for all the academic activities from the student entry to campus still exit is a

tedious process. Documents such as mark sheets, fee details and personal details should be updated if maintained through hard copies. This will create more records and in turn very difficult for someone to search the required details. Files for each student /faculty should be maintained. As a result, bunch of files will occupy the space.

1.2. Objectives of the practice (50 – 60 words)

- To develop in house ERP (CAMPS)portal for all the academic and management activities in order to implement paper less office.
- To Maintain all the records belonging to students and faculty members in a confidential manner

1.3 The Practice (250 – 300 words)

Software Development Cell of BIT takes care of development and maintenance of CampusStack (code named camps), an integrated information management system covering the following functional areas: Staff Management (Registration, Staff Attendance and Leave Management, payroll - Student Management - Curriculum Management - Academic Process Management (course registration, timetable, attendance and internal marks, question bank, lesson plan documents) - Examination Management (hall ticket, exam scheduling, result processing and grade sheets management) - Library Management - Documentation Management and Analytics.

CampusStack Promotes Open Standards using open source technologies to build INTEGRATED Information Management System to provide "the best experience" for faculty and students in an academic organization.

1.4. Obstacles faced if any and strategies adopted to overcome them (150 – 200 words)

Private cloud is required to manage the large volume of data

1.5. Strategies to overcome:

- College is upholding a private data centre for maintain the camps software
- Employees are appointed for Software Development cell separately for software maintenance and upgradation process.

1.6. Impact of the practice (100 – 120 words)

- Total organization is working with paperless office to maintain the records.
- Any record can be retrieved using the authentication (Roll number) of the student.
- All the faculty records are maintained confidentially.
- Faculty members can apply leave, view the salary and tax paid and avail for other facilities like vacation through the software.
- Faculty members can submit the course related documents, track student attendance and submit the internal marks.

1.7. Resources required

Data Centre, Employees with Open CV skill.

2 Title of the practice: Skill Development Program

2.1 The context that required the initiation of the practice (100 – 120 words)

Almost four decades, the focus of the education system was to impart knowledge for graduates rather than to improve their skills. The technical engineering syllabus was designed accordingly so that students gain more of theoretical knowledge when compared to practical knowledge. This state existed in laboratories as well. The students attend 650 contact hours in a semester on the coverage of syllabus as against 350 hours mandated by syllabus. Thus, skill deficiency prevailed among engineering graduates which is a national problem.

The graduates find it difficult to be placed in companies since they lack in practical skills. The industry requires practical skills with supporting theoretical knowledge in their concerned field. Understanding the need of the hour, and to prepare ready-for-industry graduates, the Skill Development Program was initiated at Bannari Amman Institute of Technology from 2018 batch onwards.

2.2 Objectives of the practice (50 – 60 words)

Skill is a kind of knowledge that requires ability, critical knowledge, creativity, practice and experience to perform a job successfully. Specific skill set areas include human relations, research and planning, accounting, leadership, management and computer skills. Acquiring the skill set will help the students to acquire jobs matching their skills to their required profession, or enhance the skill set for further career progression.

2.3 The Practice (250 – 300 words)

After the introduction of Skill Development program, the timetable has been revised and optimized to 350 contact hours of theoretical classes and 300 hours has been earmarked to newly designed skill development training. The skills required in the industry have been identified and grouped and the syllabus is framed accordingly for each branch of study for the first four semesters. The grouping is a gradual progression from simple to high end levels. Besides, the prerequisite knowledge, skill levels have been taken into account while tabulating the skills.

The laboratory experiments are designed to improve their skills and the students will be assessed on the effective use of the skills. Detailed compendiums of experiments that are necessary to impart these skills with detailed protocols have been developed. This becomes a good source for reference to faculty members. This protocol will help in uniform compliance by all faculty members. Experiments and detailed protocols have been developed to assess the acquisition of skills by the students at the end of each semester. To have a uniform pattern in the implementation of skill set, each department has prepared a 'source book for skills'. The skill set syllabus is designed to meet all the skills expected by the industry.

2.4 Obstacles faced if any and strategies adopted to overcome them (150 – 200 words)

Obstacles that we overcame are the difficulty to meet the exact requirement the industry needs from graduates, to create infrastructure for practicing the skill training sessions for all students and to employ resource persons from all domain areas to train the students.

2.5 Strategies to overcome

Internal training sessions are arranged for faculty members.

2.6 Impact of the practice (100 – 120 words)

The students attain knowledge in their core subjects and are skilled in practical knowledge to compete with any kind of jobs in their respective field.

2.7 Resources required

Resources such as industry trained skilled persons to train engineering students, laboratory facilities for assembling, dismantling and testing of equipment's, laboratory facilities for designing, fabricating and manufacturing of engineering products, preparation of manuals for each skill training program and to standardize the world skills setup in the campus for executing the skill training program were required.

Note: Two best practices are given above and the remaining best practices are given as additional information.

File Description	Document
Any additional information	[View Document](#)

7.3 Institutional Distinctiveness

7.3.1 Describe/Explain the performance of the institution in one area distinctive to its vision, priority and thrust

Response:

Bannari Amman Institute of Technology has a vision of becoming centre of excellence providing world class education by providing state of the art facilities to members of faculty and student fraternity.

To achieve the goal, BIT **has established 32 Special and Applied laboratories** with state-of-the-art facilities within the campus for practicing the **5P's.** These labs provide 24x7 access for training in the relevant fields/skills. The institution practices 5**P** model- **P**ractice of skills for latest technological development, **P**articipation in International/ National technical/ non-technical events, **P**roduct Development, **P**atent filing and **P**roviding solutions to societal problems through Consultancy to achieve the vision through the mission of the institution.

These facilities have been created to promote, inspire and educate future generations of scientists, engineers and technologists to transform their ideas and to develop new innovative products.

To enhance the professional development of students, they are provided on-duty, full sponsorship for component purchase, full time technical experts guidance, opportunity for participating in national/ international competitions/ revenue generation through industrial consultancy/ development of Commercial product/ Filing patents etc. The faculty in these labs motivate and guide the students to achieve more in various domains. These efforts have paid rich dividends through excellent results in all the events where

the students of BIT participated.

List of Special and Applied Labs

1. App Development Cell

2. UUV Lab

3. Sensors & Instrumentation

4. Next Generation Networks Research Lab

5. Electrical Product Development Lab

6. Data Science Lab

7. Embedded Systems Lab

8. Software Hackathon Lab

9. Hardware Hackathon Lab

10. UAV Lab

11. Electronic Product Development Laboratory

12. Augmented Reality and Virtual Reality

13. Industrial Automation Lab

14. Modeling And Prototyping Lab

15. World Skills Training Centre

16. Cloud Computing Lab

17. IoT Lab

18. Communication Protocol Lab

19. Drives and Actuators Lab

20. Energy Storage and Conversion Lab

21. Manufacturing and Fabrication Lab

22. Programming Lab

23. Vision Engineering Lab

24. Process & Circuit/Controllers

25. Image Processing

26. Next Generation Networking

27. Opensource

28. 5G Lab

29. Computer Vision

30. Bio-prospecting Lab

31. Micro prototyping Lab

32. Robotics Lab

1.App Development Cell

The vision of App development cell is to provide an ideal surrounding to develop applications for use on mobile devices such as smart phones, tablets and smart watches.

2.UUV Lab

UUV lab is the developer of autonomous underwater vehicle and underwater robotic inspection. The objective of the lab to promote students in various national and international competitions and also to provide submersible robotic inspection and survey solutions using Remotely Operated Vehicles (ROVs).

3.Sensors & Instrumentation

The objective of the lab is to enhance student's skill in sensors and instrumentation and apply them across a variety of multi-disciplinary applications.

4.Next Generation Networks Research Lab

The next-generation network (NGN) is a packet-based network which can provide key architectural changes in telecommunication core and access networks.

5.Cyber Security Lab

Cyber cell holds the primary objective of educating students and creating awareness, global participation of our students in cyber security events, developing cyber based products i.e antivirus app, security app, consultancy services and involving students in research.

6.Electrical Product Development Lab

Electrical Product Development Lab working on developing innovative products, optimization of existing products by increasing its performance with additional features and providing hands on training for the students under various domain.

7.Data Science Lab

Data Science lab investigates a range of thrust areas related to machine learning/Deep Learning and their applications for defense , health care, language processing, information retrieval and more.

8.Industrial Automation Lab

To incorporate autonomous features to the integrated system in industrial environment to carry out the manufacturing task or services in more efficient and high response through innovative approaches.

9.Modeling And Prototyping Lab (MPL)

To train the students in various CAD software for participating in National/International Design competition as well as for preparing industry expectation drawings / CAD models.

10.World Skills Training Centre (WSTC):

WSTC inspire young people to develop a passion for skills and pursuing excellence, through competitions and promotions.It emphasis to raise the profile and recognition of skilled student.

11.Cloud Computing Lab

BIT provides cloud facilities (academics, research, consultancy), private cloud infrastructure built on top of OpenStack platform. These facilities are backed by in-house data center hosted in BITCLOUD. The entire design, development, deployment and maintenance is being managed completely in house by a dedicated team.

12.IoT Lab

The IoT Applied Lab was started to create an environment for research, design, development and testing of IoT devices and to provide the skills necessary for the development of products with control logics, processing and display of data there by to create innovative applications for country's needs such as Smart City, Smart Health, Smart Manufacturing, Smart Agriculture, Smart Buildings, etc.

13.Communication Protocol Lab

Communication protocol lab is a basic lab provides solutions to the wireless connectivity problems for student projects. This enables students to do interdisciplinary projects from different backgrounds.

14.Drives And Actuators Lab

Drives & Actuators Lab works on Design and development of Electric Drive circuit for different motors. To impart knowledge and provide solution for various issues on electrical driver circuit for controlling stepper, servo, permanent DC, brushless DC and DC geared motors in various applications.

15.Energy Storage And Conversion Lab

Energy storage and conversion lab works on different types of batteries and selection of batteries for particular application and different energy conversion methods such as AC to DC, DC to AC,DC to DC and their control techniques.

Outcome from Special and Applied Labs

Students participation in National /International events count suddenly raised after the initiation of Basics and Applied Labs. More than 100 training sessions were organized by the special labs for providing additional training in the advanced topics. Hence the students actively participated in 128 competitions and received cash prizes and medals. In addition, the faculty members leading the special labs are motivated to do consultancy projects by collaborating with industries.

File Description	Document
Link for Additional Information	View Document

5. CONCLUSION

Additional Information :

Achievements and Awards

- 'Clean & Smart Campus Award 2019' for the best practices carried out in the Institute premises by AICTE.
- Received appreciation for the significant contribution in 'Jal Shakthi Abiyan' initiative by AICTE, 2019.
- Sri VVR Seshadari Rao, Gudlavelleru Engineering College National Award for the Best Private Engineering College from ISTE, New Delhi, 2019.
- Recognized with the National award under the category 'Top Performing Engineering College - Research and Development' by Society for Engineering Education Enrichment, Noida.
- CFBP - Jamnalal Bajaj Uchit Vyavahar Puraskar - 2018-19 - Trophy in the category of Service Enterprises - SME for the year 2018-19
- Ranked one among the Top 100 Best Engineering Colleges in India by NIRF 2019, Ministry of Human Resource Development, Govt. Of India
- Milestone Merits Recognition 2018 - Leadership Category - IMC Ramakrishna Bajaj National Quality Award Trust, IMC Chamber of Commerce and Industry
- CII 5S 2019 - First place in the CII SR 5S Excellence Award under the Small scale, Service category
- National award under the category " Top Performing Engineering College - Research and Development & by Society for Engineering Education Enrichment", Noida in 2019
- Tamil Nadu Government Environmental Awards 2017 - Environmental Protection and Management Award 2017.
- CII Southern region - 5S excellence award 2017 - Awarded with 'Award of commendation' received on 03.08.2018
- Secured 76th Rank in NIRF - MHRD India Ranking 2018
- AICTE – CII SURVEY OF INDUSTRY Linked Technical Institutes – 2018 rated BIT in the Platinum category.
- CII - 5S Excellence Award 2016 - Special Recognition
- Certificate of Accreditation was granted in recognition for being a National Resource Centre of National Cyber Security Program (NCSP) for the academic year, 2016-17.
- Secured 62nd rank in NIRF - MHRD India Ranking 2016
- National Entrepreneur Network awarded Honour Roll in Entrepreneurship week held on 05.03.2016.
- Recognised with IMC RBNQ Performance Excellence Trophy under Education Category of IMC Ramkrishna Bajaj National Quality Awards 2015

Concluding Remarks :

The Institution has created the right environment for promoting entrepreneurship among students through layer learning by doing projects from first year onwards. The Institution has established Incubation Centre and Innovation Cell to foster innovation, research and entrepreneurial activities. The Institution has established special and applied labs to promote skill and product development. The students are given complete flexibility and freedom, benefitted by the expertise, courses of study and infrastructure available. The Institution promoted measures for Institutional functioning towards quality enhancement through internalization of quality culture and institutionalization of the Best Practices.

Future Plans:

1. To start new programmes to cater the needs of latest developments
2. To set up more special and applied labs
3. To have collaborative research arrangement
4. To promote startups in the Institution

6.ANNEXURE

1.Metrics Level Deviations

Metric ID	Sub Questions and Answers before and after DVV Verification

1.4.1	Structured feedback received from 1) Students, 2) Teachers, 3) Employers, 4) Alumni 5) Parents for design and review of syllabus Semester wise /year-wise
	
	        Answer before DVV Verification : A. Any 4 of above
	        Answer After DVV Verification: C. Any 2 of above
	    Remark : 1)HEI input edited as per HEI clarification response. 2) DVV will not consider feedback form other than curriculum.

2.1.3	Average percentage of seats filled against seats reserved for various categories as per applicable reservation policy during the last five years
	
	    2.1.3.1. Number of actual students admitted from the reserved categories year-wise during the last five years
	        Answer before DVV Verification:
	
		2018-19	2017-18	2016-17	2015-16	2014-15

---	---	---	---	---
1840	1962	1885	1855	1920 | Answer After DVV Verification : | 2018-19	2017-18	2016-17	2015-16	2014-15
---	---	---	---	---
1738	1890	1834	1775	1844	 Remark : HEI input edited as per given document.

2.4.4	Percentage of full time teachers who received awards, recognition, fellowships at State, National, International level from Government, recognised bodies during the last five years
	
	    2.4.4.1. Number of full time teachers receiving awards from state /national /international level from Government recognised bodies year-wise during the last five years
	        Answer before DVV Verification:
	
		2018-19	2017-18	2016-17	2015-16	2014-15

---	---	---	---	---
29	25	23	15	7 | Answer After DVV Verification : | 2018-19	2017-18	2016-17	2015-16	2014-15
---	---	---	---	---
19	18	18	11	7	 Remark : HEI input edited as per attached documents and SOP.

3.1.2	The institution provides seed money to its teachers for research (average per year)

3.1.2.1. The amount of seed money provided by institution to its faculty year-wise during the last five years(INR in Lakhs)

Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
149.84	141.78	117.01	93.87	33.37

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15
0.90	3.03	0	0	0

Remark : Input edited because DVV consider amount of seed money provided by institution to its faculty for research projects only as per SOP.

3.1.3	Number of teachers awarded international fellowship for advanced studies/ research during the last five years

3.1.3.1. The number of teachers awarded international fellowship for advanced studies / research year-wise during the last five years

Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
5	10	4	4	1

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15
0	0	0	0	0

Remark : Input edited because required document not provided by HEI.

3.3.3	Number of awards for innovation won by institution/ teachers/ research scholars/students during the last five years

3.3.3.1. Total number of awards for innovation won by institution/teachers/research scholars/students year-wise during the last five years

Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
108	77	69	76	33

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15

0	0	0	0	0

Remark : HEI input edited because DVV will consider only innovation awards.

3.3.4	Number of start-ups incubated on campus during the last five years

3.3.4.1. Total number of start-ups incubated on campus year-wise during the last five years
Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
17	14	11	10	6

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15
0	0	0	0	0

Remark : Input edited because provided data is not relevant.

3.4.2	The institution provides incentives to teachers who receive state, national and international recognition/awards

Answer before DVV Verification : Yes
Answer After DVV Verification: No
Remark : Input edited because provided incentives not for awards.

3.4.3	Number of Patents published/awarded during the last five years

3.4.3.1. Total number of Patents published/awarded year-wise during the last five years
Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
20	14	5	9	4

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15
0	0	0	0	1

Remark : Input edited because DVV will consider only Patents published/awarded during the last five years.

3.4.4	Number of Ph.D.s awarded per teacher during the last five years

3.4.4.1. How many Ph.Ds are registered within last 5 years
Answer before DVV Verification : 163

	Answer after DVV Verification: 163 3.4.4.2. Total number of teachers recognised as guides during the last 5 years Answer before DVV Verification : 116 Answer after DVV Verification: 57 Remark : Input edited because DVV will consider only Ph.D.s awarded per teacher during the last five years.
3.4.5	Number of research papers per teacher in the Journals notified on UGC website during the last five years 3.4.5.1. Number of research papers in the Journals notified on UGC website during the last five years Answer before DVV Verification:
	<table><tr><td>2018-19</td><td>2017-18</td><td>2016-17</td><td>2015-16</td><td>2014-15</td></tr><tr><td>409</td><td>366</td><td>237</td><td>265</td><td>220</td></tr></table> Answer After DVV Verification : <table><tr><td>2018-19</td><td>2017-18</td><td>2016-17</td><td>2015-16</td><td>2014-15</td></tr><tr><td>97</td><td>171</td><td>104</td><td>111</td><td>205</td></tr></table> Remark : HEI input edited because DVV will not consider research papers without ISSN number.
3.4.6	Number of books and chapters in edited volumes / books published, and papers in national/international conference-proceedings per teacher during the last five years 3.4.6.1. Total number of books and chapters in edited volumes / books published, and papers in national/international conference-proceedings year-wise during the last five years Answer before DVV Verification:
	<table><tr><td>2018-19</td><td>2017-18</td><td>2016-17</td><td>2015-16</td><td>2014-15</td></tr><tr><td>235</td><td>196</td><td>142</td><td>94</td><td>112</td></tr></table> Answer After DVV Verification : <table><tr><td>2018-19</td><td>2017-18</td><td>2016-17</td><td>2015-16</td><td>2014-15</td></tr><tr><td>30</td><td>21</td><td>13</td><td>16</td><td>05</td></tr></table> Remark : HEI input edited because DVV will consider only publications with unique ISBN number.
3.5.3	Revenue generated from corporate training by the institution during the last five years 3.5.3.1. Total amount generated from corporate training by the institution year-wise during the last five years (INR in Lakhs)

Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
51.01	53.71	36.84	40.60	0

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15
50	50	30	40	0

Remark : The clarification documents "Detailed program report for each training program and Letter from the corporate receiving the training along with the honorarium details" are not provided. No clear information is obtained from the document.

3.6.2   Number of awards and recognition received for extension activities from Government /recognised bodies during the last five years

3.6.2.1. Total number of awards and recognition received for extension activities from Government /recognised bodies year-wise during the last five years

Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
25	22	16	13	12

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15
6	19	10	4	1

Remark : HEI input edited because DVV will consider only the awards for extension activities to the institution and not to the individual.

3.7.1   Number of Collaborative activities for research, faculty exchange, student exchange per year

3.7.1.1. Total number of Collaborative activities for research, faculty exchange, student exchange year-wise during the last five years

Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
50	35	32	32	9

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15
2	2	0	0	0

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	Remark : HEI input edited because required document not provided by HEI.
3.7.2	Number of linkages with institutions/industries for internship, on-the-job training, project work, sharing of research facilities etc. during the last five years 3.7.2.1. Number of linkages for faculty exchange, student exchange, internship, field trip, on-the-job training, research, etc year-wise during the last five years Answer before DVV Verification: Answer After DVV Verification : Remark : Input edited as per given document by HEI.
4.1.3	Percentage of classrooms and seminar halls with ICT - enabled facilities such as smart class, LMS, etc 4.1.3.1. Number of classrooms and seminar halls with ICT facilities Answer before DVV Verification : 211 Answer after DVV Verification: 0 Remark : HEI input edited because geotagged photos not showing classrooms and seminar halls with ICT - enabled facilities.
4.2.3	Does the institution have the following 1. e-journals 2. e-ShodhSindhu 3. Shodhganga Membership 4. e-books 5. Databases Answer before DVV Verification : Any 4 of the above Answer After DVV Verification: Any 3 of the above Remark : HEI edited as per given document by HEI.
5.1.4	Average percentage of students benefited by guidance for competitive examinations and career counselling offered by the institution during the last five years 5.1.4.1. Number of students benefited by guidance for competitive examinations and career counselling offered by the institution year-wise during the last five years Answer before DVV Verification:

Inside 3.7.2.1, Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
688	490	291	101	74

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15
643	465	272	96	71

2018-19	2017-18	2016-17	2015-16	2014-15
3349	2996	4226	2750	3265

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15
4977	2996	4226	3019	3265

Remark : HEI input edited as per document given by HEI.

5.1.5	Average percentage of students benefited by Vocational Education and Training (VET) during the last five years

5.1.5.1. Number of students attending VET year-wise during the last five years
Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
3330	4483	3673	3157	833

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15
0	0	0	0	0

Remark : 1)HEI input edited because DVV will consider programs which are of a duration of three months or more. 2)Documents given by HEI not shown time duration. 3)Yoga program shows 6days duration and CCNA training -150hrs which is not consiterable.

6.3.2	Average percentage of teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies during the last five years

6.3.2.1. Number of teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies year-wise during the last five years
Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
131	225	215	74	47

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15
126	174	152	70	45

Remark : HEI input edited as per document given by HEI.

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6.3.3	Average number of professional development /administrative training programs organized by the institution for teaching and non teaching staff during the last five years

6.3.3.1. Total number of professional development / administrative training programs organized by the Institution for teaching and non teaching staff year-wise during the last five years

Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
78	64	65	51	26

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15
4	3	2	1	1

Remark : HEI input edited because DVV will consider only professional development /administrative training programs.

6.3.4	Average percentage of teachers attending professional development programs viz., Orientation Program, Refresher Course, Short Term Course, Faculty Development Program during the last five years

6.3.4.1. Total number of teachers attending professional development programs, viz., Orientation Program, Refresher Course, Short Term Course, Faculty Development Programs year-wise during the last five years

Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
424	503	348	226	202

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15
254	204	108	80	56

Remark : Input edited as per given document by HEI.

6.4.2	Funds / Grants received from non-government bodies, individuals, Philanthropists during the last five years (not covered in Criterion III) (INR in Lakhs)

6.4.2.1. Total Grants received from non-government bodies, individuals, philanthropists year-wise during the last five years (INR in Lakhs)

Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
28.98	31.67	27.49	6.87	32.99

	Answer After DVV Verification :				
	2018-19	2017-18	2016-17	2015-16	2014-15
	28.98	31.67	27.49	6.87	00.99

Remark : HEI input edited because DVV consider Grants received during the last five years only.

7.1.1	Number of gender equity promotion programs organized by the institution during the last five years

7.1.1.1. Number of gender equity promotion programs organized by the institution year-wise during the last five years

Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
5	6	6	3	6

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15
4	5	5	3	5

Remark : HEI input edited as per document provided by HEI.

7.1.8	Average percentage expenditure on green initiatives and waste management excluding salary component during the last five years

7.1.8.1. Total expenditure on green initiatives and waste management excluding salary component year-wise during the last five years(INR in Lakhs)

Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
368	446.77	103.85	70.41	9.12

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15
368	446.77	103.85	80.22	9.12

Remark : HEI input edited as per document given by HEI.

7.1.10	Number of Specific initiatives to address locational advantages and disadvantages during the last five years 7.1.10.1. Number of specific initiatives to address locational advantages and disadvantages year-wise during the last five years Answer before DVV Verification:

20-01-2021 01:58:39

2018-19	2017-18	2016-17	2015-16	2014-15
22	16	14	7	9

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15
8	3	5	5	7

Remark : HEI input edited because DVV will not consider NSS and NCC activities. Only specific initiatives to address locational advantages and disadvantages will be considered.

| 7.1.11 | Number of initiatives taken to engage with and contribute to local community during the last five years (Not addressed elsewhere) |

7.1.11.1. Number of initiatives taken to engage with and contribute to local community year-wise during the last five years

Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
22	16	14	7	9

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15
6	4	1	2	1

Remark : HEI input edited because DVV will consider only the initiatives taken to engage with and contribute to local community.

| 7.1.17 | Number of activities conducted for promotion of universal values (Truth, Righteous conduct, Love, Non-Violence and peace); national values, human values, national integration, communal harmony and social cohesion as well as for observance of fundamental duties during the last five years |

7.1.17.1. Number of activities conducted for promotion of universal values (Truth, Righteous conduct, Love, Non-Violence and peace); national values, human values, national integration, communal harmony and social cohesion as well as for observance of fundamental duties year-wise during the last five years

Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
18	20	20	19	20

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15

3	5	4	5	0

Remark : HEI input edited as per document provided by HEI.

2.Extended Profile Deviations

Extended Profile Deviations
No Deviations