The Annual Quality Assurance Report (AQAR) of the IQAC

Part – A

AQAR for the year | 2017-18

1. Details of the Institution

1.1 Name of the Institution | **Nitte Meenakshi Institute of Technology**

1.2 Address Line 1 | **P.B. No 6429, Govindapura,**

Address Line 2 | **Gollahalli, Yelahanka**

City/Town | **Bangalore**

State | **Karnataka**

Pin Code | **560064**

Institution e-mail address | **principal@nmit.ac.in**

Contact Nos. | **080- 22167803**
080- 22167800

Name of the Head of the Institution | **Dr. H.C. Nagaraj**

Tel. No. with STD Code: | **080- 22167803**

Mobile: | **9845275240**

Name of the IQAC Co-ordinator: | Dr. Sanjay H A

Mobile: | 9342560303

IQAC e-mail address: | **sanjay.ha@nmit.ac.in**

1.3 **NAAC Track ID** *(For ex. MHCOGN 18879)*

KACOGN15183

OR

1.4 **NAAC Executive Committee No. & Date:**
(For Example EC/32/A&A/143 dated 3-5-20
This EC no. is available in the right corner- bottom
of your institution's Accreditation Certificate)

EC (SC)/01/A&A/005 dated 5-5-2014

1.5 Website address:

www.nmit.ac.in

Web-link of the AQAR:

www.nmit.ac.in/disclosure.php

For ex. http://www.ladykeanecollege.edu.in/AQAR2012-13.doc

1.6 Accreditation Details

Sl. No.	Cycle	Grade	CGPA	Year of Accreditation	Validity Period
1	**1st Cycle**	**A**	**3.02**	**2014**	**05**
2	2nd Cycle				
3	3rd Cycle				
4	4th Cycle				

1.7 Date of Establishment of IQAC:

26/02/2013

1.8 Details of the previous year's AQAR submitted to NAAC after the latest Assessment and Accreditation by NAAC ((*for example AQAR 2010-11submitted to NAAC on 12-10-2011*)

  i.   **AQAR   05.09.2015**
 ii.   **AQAR   19.10.2016**
iii.   **AQAR   29.11.2017**

1.9 Institutional Status

University   State ☐   Central ☐ Deemed ☐   Private ☐

Affiliated College   Yes ☑   No ☐

Constituent College   ☐ Yes   ☑ No

Autonomous college of UGC   Yes ☑   No ☐

Regulatory Agency approved Institution   Yes ☑   No ☐

(eg. AICTE, BCI, MCI, PCI, NCI)

Type of Institution   Co-education √   Men ☐   Women ☐

Urban √   Rural ☐   Tribal ☐

Financial Status   Grant-in-aid ☐   UGC 2(f) √   UGC 12B ☐

Grant-in-aid + Self Financing ☐   Totally Self-financing √

1.10 Type of Faculty/Programme

Arts ☐ Science ☐   Commerce ☐   Law ☐ PEI (Phys Edu) ☐

TEI (Edu) ☐   Engineering √   Health Science ☐

Management √

Others (Specify) . **MCA**

1.11 Name of the Affiliating University *(for the Colleges)*

Visvesvaraya Technological University.

1.12 Special status conferred by Central/ State Government-- UGC/CSIR/DST/DBT/ICMR etc

Autonomy by State/Central Govt. / University   **YES**

University with Potential for Excellence   **NO**   UGC-CPE   **NO**

DST Star Scheme   **NO**   UGC-CE   **NO**

UGC-Special Assistance Programme   **NO**   DST-FIST   **1**

UGC-Innovative PG programmes   **NO**   Any other (*Specify*)

UGC-COP Programmes   **NO**   **1(VGST-CISEE)**

2. IQAC Composition and Activities

2.1 No. of Teachers   **10**

2.2 No. of Administrative/Technical staff   **03**

2.3 No. of students   **01**

2.4 No. of Management representatives

01

2.5 No. of Alumni

01

2. 6 No. of any other stakeholder and

   Community representatives

01

2.7 No. of Employers/ Industrialists

02

2.8 No. of other External Experts

-

2.9 Total No. of members

20

2.10 No. of IQAC meetings held

03

2.11 No. of meetings with various stakeholder | 10 | Faculty | 06 |

Non-Teaching Staff Students | 02 | Alumni | 02 | Others | |

2.12 Has IQAC received any funding from UGC during the year?   Yes   No

   If yes, mention the amount | | | | | √ |

2.13 Seminars and Conferences (only quality related)

   (i) No. of Seminars/Conferences/ Workshops/Symposia organized by the IQAC

Total Nos. | 10 | International | - | National | - | State | - | Institution Level | 10 |

   (ii) Themes

- Taxonomy of Learning and learning Outcomes
- Technology Enabled Teaching and Learning
- Outcome Based Education with an exercise on CO, PO Computation.
- Research Funding Agencies and Schemes.
- Joy of doing Research.
- Mentoring students: Review and Reforms.
- Role of Regulatory bodies.
- Introduction to Autonomy, Accountability and TEQIP.
- Introduction to Multi-disciplinary research centres and activity.
- NMIT discipline and code of conduct.

2.14 Significant Activities and contributions made by IQAC

- IQAC is working continuously with the department co-ordinators for collecting and collating qualitative and quantitative data from each department. The co-ordinators continuously update information and supply the same to IQAC at the central level.
- The IQAC has ensured regular monitoring activities of the Institute and improve access to data across.
- IQAC ensures timely completion of Academic Audit.
- Preparation of Format for Department Audit
- The Accreditation Activities are monitored by IQAC on regular basis.
- Review of Departmental research activities by IQAC has resulted in filing of patents and publishing quality papers.
- For the academic excellence of the students and enhancing the quality, IQAC enforced every department to nominate faculty members as mentors. Each mentor is allotted around 25 students for the guidance in academics, discipline, personal and other extra-curricular activities. The members counsel the students periodically.
- Every month a college level meeting headed by the principal is conducted along with the HODs of all the departments for reviewing the mentoring activities carried out in their respective departments. A significant improvement in the performance of students has been observed by IQAC.

2.15 Plan of Action by IQAC/Outcome

The plan of action chalked out by the IQAC in the beginning of the year towards quality enhancement and the outcome achieved by the end of the year *

Plan of Action	Achievements
Preparation of format for Department Audit	Department Audit format is ready
To Enhance number of PhDs	With the increase in the number of doctoral degree recipients and new appointments, the number of faculty with doctoral degree has increased to 71 from 56 in the year 2017-18.

To enhance the number and quality of Publications IQAC recommended to publish the paper in Scopus/ SCI/ Thomson Reuters indexed journals/ conferences	As a result 200+ papers have been published and good number of papers has been indexed in Scopus/ SCI/ Thomson Reuters indexed journals/ conferences.
Conduction of orientation programs for students and newly joined faculty.	Conducted orientation program for both students (7th August 2017) and faculty (1st and 2nd august 2017) at the beginning of the academic year.
Conduction of soft skills & personality development programs for students to increase the employability rate.	Conducted series of training programs for pre-final year students to improve their numerical aptitude skills, soft skills and technical skills.
Every month department need to conduct faculty colloquium.	Every department has conducted monthly faculty colloquium.
To enhance copyrights and patent filing	12 patents have been filed in the year 2017-18.
Regular reviewing of the status of R&D activities	Successfully started with a process of monitoring R&D activities of faculty on regular basis
To extend academic help to assist academically weaker students	Performance of academically weaker students is regularly monitored by faculty mentors, mentor coordinators and HODs. Remedial classes have been conducted to these students on need basis for the subjects Mathematics , Elements of Mechanical Engineering , Engineering Mechanics , Basic Electrical Engineering , Engg. Physics Theory , Computer Aided Drawing , Basic Electronics Engineering , Computer Concepts & C Programming, etc. .As a result, there is significant improvement in pass percentage. For fast learners additional exercises have been given to improve their technical skills.
To get funding for the research projects	We are able to get 4 projects from DST and 2

	projects from VGST of worth 2.6 Crores.
To enhance the quality of UG Projects	Plagiarism Check has been carried out and LATEX Based Thesis

The Academic Calendar of the year is enclosed as Annexure-I.

2.15 Whether the AQAR was placed in statutory body   Yes √   No ☐

Management   √   Syndicate ☐   Any other body ☐

Provide the details of the action taken

Approved by IQAC.

Part – B

Criterion – I

1. Curricular Aspects

1.1 Details about Academic Programmes

Level of the Programme	Number of existing Programmes	Number of programmes added during the year	Number of self-financing programmes	Number of value added / Career Oriented programmes
PhD	**11**	**0**	**11**	**11**
PG	**10**	**0**	**10**	**10**
UG	**7**	**0**	**7**	**7**
PG Diploma				
Advanced Diploma				
Diploma				
Certificate				
Others				
Total	**28**	**0**	**28**	**28**

Interdisciplinary				
Innovative				

1.2   (i) Flexibility of the Curriculum: CBCS/Core/Elective option / Open options
      (ii) Pattern of programmes:

Pattern	Number of programmes
Semester	**17**
Trimester	**NIL**
Annual	**NIL**

1.3 Feedback from stakeholders*   Alumni [√]   Parents [√]   Employer [√]   Students [√]
   (On all aspects)

   Mode of feedback   :   Online [√]   Manual [ ]

   Co-operating schools (for PEI)   [ ]

1.4 Whether there is any revision/update of regulation or syllabi, if yes, mention their salient aspects.

- The curriculum has been revised by keeping in view the industry requirements and involving the experts from Industry in BOS and Academic Council.
- Outcome Based Curriculum.
- It has been revised as indicated below,
- Scheme for 3rd to 8th semester of BE has been revised for 2017 batch syllabus.
- Syllabus for 3rd & 4th semester of B.E. has been prepared
- Minor changes have been made to the syllabus of 2014 scheme for 5th to 8th semesters.
- Scheme for 1st & 2nd Sem B.E. has been prepared for the new credit system of 2018 batch.
- Scheme & Syllabus for PG Programs has been prepared for 2018 Batch
-

The following electives are introduced:

- ➤ Department wise MOOC based electives
- ➤ Machine learning
- ➤ Artificial Intelligence
- ➤ Internet of Things (IoT)
- ➤ ADBMS
- ➤ Mobile Technologies
- ➤ Machine Learning
- ➤ Big Data Analytics
- ➤ Elements of rocket propulsion
- ➤ Introduction to boundary layer theory
- ➤ Aircraft maintenance, repair and overhaul
- ➤ Artificial Neural Networks
- ➤ Advanced Power Electronics
- ➤ Micro and Smart grid
- ➤ Automotive Electronics
- ➤ Android Programming

1.5 Any new Department/Centre introduced during the year. If yes, give details.

Yes, Subex Ltd. has set up the research and development lab in the department of Computer Science and Engineering. The set of students have been trained and they will be doing the research in the IoT and Cyber security, following which they will be working on the live projects.

Criterion – II

2. Teaching, Learning and Evaluation

2.1 Total No. of
permanent faculty

Total	Asst. Professors	Associate Professors	Professors	Others
305	198	53	51	6

2.2 No. of permanent faculty with Ph.D.   71

2.3 No. of Faculty Positions
Recruited (R) and Vacant (V)
during the year

Asst. Professors		Associate Professors		Professors		Others		Total	
R	V	R	V	R	V	R	V	R	V
38		5		9		-		52	

2.4 No. of Guest and Visiting faculty and Temporary faculty   6

2.5 Faculty participation in conferences and symposia:

No. of Faculty	International level	National level	State level
Attended	38	63	60
Presented	81	18	05
Resource Persons	5	15	11

2.6 Innovative processes adopted by the institution in Teaching and Learning:

Institute is practising Outcome Based Learning and Teaching (OBLT).

The following delivery methods are adopted to achieve the Learning Outcomes:

- Demonstration Based Teaching
- App Based Teaching
- Certification Based Learning
- Google Class Rooms
- Tool based teaching
- Lectures interspersed with discussions
- Tutorials
- Course Projects/ Mini Project
- Main Project
- Case Studies
- Industrial/Site Visits
- Programming Assignments
- Seminars
- Debates
- Written Assignments
- Hands on Sessions
- Self study /Internship
- Workshops/Invited Talks/Webinars
- Industrial/ Site visit.
- Open Ended Experiments.

2.7 Total No. of actual teaching days

During this academic year | 228 |

2.8 Examination/ Evaluation Reforms initiated by
     the Institution (for example: Open Book Examination, Bar Coding,
     Double Valuation, Photocopy, Online Multiple Choice Questions)

- **Part of CIE assessment includes:**
  - Multiple Choice Questions (Surprise test).
  - Course Projects.
  - Case Study.
  - Programming Assignment.
  - Seminars/ Debates.
  - Certification Exams.
  - Open Book Test.
  - Take home assignments.
- **Part of CIE is assessed through rubrics.**
- **MSE & SEE Questions are mapped to Course outcomes & Blooms Level**
- **Examination process is automated.**
- **Bar coding technology has been adopted to strengthen the automated process.**

- **OMR technology permits quick and easy entry of marks without any room for error.**
- **Revaluation and photocopy facility is available to address the grievances of the students.**
- **Double valuation for PG Programme.**
- **Anti-plagiarism check for the UG/PG/Ph.D Project work.**

2.9 No. of faculty members involved in curriculum restructuring/revision/syllabus development

102	289	123

as member of Board of Study/Faculty/Curriculum Development workshop

2.10 Average percentage of attendance of students

86%

2.11 Course/Programme wise distribution of pass percentage :

Title of the Programme	Total no. of students appeared	Division				
		Distinction %	I %	II %	III %	Pass %
BE (AE)	67	74.62	10.45	-	-	85.07
BE (CSE)	215	65.12	20.47	5.18	-	90.7
BE (CV)	146	50.68	23.97	2.05	-	76.71
BE (ECE)	181	74.03	13.8	3.3	-	91.16
BE (EEE)	232	136	20	07	01	70
BE (ISE)	122	61	23	0.07	-	93
BE (ME)	198	90	44	06	-	70.7
MBA	103	51	40	9	-	98
MCA	54	39	6	0	9	83.33
M.Tech (CNE)	4	100	-	-	-	100
M.Tech (CSE)	7	85.7	14.3	-	-	100
M.Tech (DCN)	5	80	20	-	-	100
M.Tech (MD)	12	75	25	-	-	100
M.Tech(THER)	-	-	-	-	-	-
M.Tech (VLSI)	8	37.5	62.5	-	-	100
M.Tech (Structural)	26	100	-	-	-	100
M.Tech (RE)	4	100	-	--	-	100

2.12 How does IQAC Contribute/Monitor/Evaluate the Teaching & Learning processes :

- **IQAC closely monitors the teaching & learning processes adopted by various departments.**
- **Organization of orientation, refresher, short term and long term programs**
- **It reviews the academic calendar and time table.**
- **IQAC prepares a schedule for academic audit, Department audit and feedback.**
- **Academic audit committee audits each faculty with various parameters.**
- **Student's feedback on faculty teaching learning process and 360 degree feedback will be taken twice in a semester. The IQAC will review the feedback and take the necessary action to improve the quality of teaching and learning process.**

2.13 Initiatives undertaken towards faculty development

Faculty / Staff Development Programmes	Number of faculty benefitted
Refresher courses	**28**
UGC – Faculty Improvement Programme	**1**
Faculty Improvement Programme	**394**
HRD programmes	**1**
Orientation programmes	**70**
Faculty exchange programme	**5**
Staff training conducted by the university	**9**
Staff training conducted by other institutions	**30**
Summer / Winter schools, Workshops, etc.	**142**
Others	**3**

2.14 Details of Administrative and Technical staff

Category	Number of Permanent Employees	Number of Vacant Positions	Number of permanent positions filled during the Year	Number of positions filled temporarily
Administrative Staff	**20**	-	-	-
Technical Staff	**69**	-	-	-

Criterion – III

3. Research, Consultancy and Extension

3.1 Initiatives of the IQAC in Sensitizing/Promoting Research Climate in the institution

- **Research Council conducted a Ph.D progress review of all research scholars and the report has been submitted to IQAC for the further action.**
- **Organizing orientation programs in the following areas:**
  - o **Research Methodology.**
  - o **Patent filling.**
  - o **Funding agencies & Schemes.**
- **Faculty members are encouraged to publish research papers in journals/ referred national/International Conferences with financial aid.**
- **Faculty carrying out a research project are given complete independence for execution of the research project.**
- **Faculty is encouraged to bring sponsored projects from external funding agencies.**
- **Faculty are provided complete support from the institution in terms of infrastructure, computational facilities, and specially allotted time for carrying out research.**
- **Faculty carrying out a research project have been given some reduction in the work load.**
- **Financial support is given for faculty & student for patenting their work.**
- **Seed money is provided for Young Faculty.**
- **Research associates are appointed and paid by the college.**
- **Faculty members are encouraged to register for fulltime/part-time Ph.D.**

3.2   Details regarding major projects

	Completed	Ongoing	Sanctioned	Submitted
Number	**11**	**11**	**02**	**12**
Outlay in Rs. Lakhs	**92.45 lakhs**	**412.67 lakhs**	**36 lakhs**	**1429.9 lakhs**

3.3   Details regarding minor projects

	Completed	Ongoing	Sanctioned	Submitted
Number	**4**	**2**	-	
Outlay in Rs.Lakhs	**6.58L**	**1.2L**	-	

3.4   Details on research publications

	International	National	Others
Peer Review Journals	**106**	**7**	**-**
Non-Peer Review Journals	**15**	**4**	**-**
Conference proceedings	**60**	**11**	**-**
e-Journals	**7**	**3**	**-**

3.5 Details on Impact factor of publications:

Range **1-4.3** Average [   ] h-index 6 Nos. in SCOPUS 36

3.6 Research funds sanctioned and received from various funding agencies, industry and other organisations

Nature of the Project	Duration Year	Name of the funding Agency	Total grant sanctioned (in Rupees)	Received	Dept
Major projects	2016-19	**AICTE, New Delhi.** **(Study& Development of Indium free transparent thin films for electro chromic application.)**	**19L**	**18L**	**PHY, ELE**
	2017-20	**GTRE, DRDO. (Development of Prototype Debris Monitoring System)**	**9.96L**	**4L**	**PHY, ECE, ELE, MECH**
	2017-18	**ISRO**	**3 L**	**3 L**	**ISE**
	2018-2020	**DST (SEED/TIDE/002/2017/C)**	**57.32280 L**	**33.77480L**	**MECH**
	2017-2019	**VGST**	**20 L**	**10L**	**CHEM**
	2016-2019	**DST**	**45.5 L**	**32L**	**CHEM**
	2016-19	**DST, New Delhi**	**66.48L**	**47L**	**CSE**
	2015-18	**Vision Group on Science and Technology, Department of IT,BT and S&T, Govt.of.Karnataka**	**25.69L**	**20L**	**CSE**
	3rd June 2016 – 3rd June 2019 (3Years)	**DST – TIDE**	**46.72L**	**25.63L**	**ECE**
	26th June 2012 – Till date (5years)	**Consortium of 7 Colleges**	**70L**	**35L**	**ECE**
Minor projects	May 2018 Till date (6Months)	**Veterinary Hospital Hassan**	**0.9L**	**0.9L**	**ECE**
Interdisciplinary Projects					

Projects sponsored by the University/ College					
Students research projects	Oct 2017-Feb 2018	**NMIT,Strong Creators,Hi-speed machining India Ltd,Tungaloy Group**	**3.38170L**	**3.38170L**	**MECH**
	Nov 2017-Mar 2018	**NMIT ,Top Notch FashionsPvt,Ltd,Mastrikz,Faraday Power Systems**	**1.50376L**	**1.50376L**	**MECH**
	2017-18	**KSCST**	**0.08L**	**0.08L**	**AERO**
Industry sponsored	July 2017-june 2018	**CyberNetInfocomm, New Jersey**	**4L**	**4L**	**ISE**
	July 2017-june 2018	**Syrasoft,LLC**	**0.5L**	**0.5L**	**ISE**
	July 2017-june 2018	**Evento Plano**	**0.3L**	**0.3L**	**ISE**
	Dec 2017-Jun 2018	**NMIT,TVS,Mayuri,Innovative Study Circle,PTC,Anil Works,NK Sheet,Metal Works**	**0.98191L**	**0.98191L**	**MECH**
Any other (Specify)					
Total			420.3L	285.05L	

3.7 No. of books published   i) With ISBN No.   16

ii) Chapters in Edited Books   8

iii) Without ISBN No.   3

3.8 No. of University Departments receiving funds from

UGC-SAP [ ]   CAS [ ]   DST-FIST [ ]

DPE [ ]   DBT Scheme/funds [ ]

3.9 For colleges   Autonomy [ ]   CPE [ ]   DBT Star Scheme [ ]

INSPIRE [ ]   CE [ ]   Any Other (specify) [01(FIST)]

3.10 Revenue generated through consultancy   [Rs.7,95,000/-]

3.11 No. of conferences organized by the Institution

Level	International	National	State	University	College
Number	01				
Sponsoring agencies	NMIT				

3.12 No. of faculty served as experts, chairpersons or resource persons [43]

3.13 No. of collaborations   International [9]   National [25]   Any other [ ]

3.14 No. of linkages created during this year [40]

3.15 Total budget for research for current year in lakhs :

From Funding agency [184.3]   From Management of University/College [65.65]

Total [249.95]

3.16 No. of patents received this year

Type of Patent		Number
National	Applied	12
	Granted	2
International	Applied	
	Granted	
Commercialised	Applied	
	Granted	

3.17 No. of research awards/ recognitions   received by faculty and research fellows

Of the institute in the year

Total	International	National	State	University	Dist	College
15	-	**8**	**7**	-		

3.18 No. of faculty from the Institution   47
     who are Ph. D. Guides
     and students registered under them   98

3.19 No. of Ph.D. awarded by faculty from the Institution   7

3.20 No. of Research scholars receiving the Fellowships (Newly enrolled + existing ones)

JRF 1   SRF [ ]   Project Fellows 1   Any other [ ]

3.21 No. of students Participated in NSS events:

University level 50   State level [ ]

National level [ ]   International level [ ]

3.22 No. of students participated in NCC events:

University level 54   State level 14

National level 9   International level 1

3.23 No. of Awards won in NSS:

University level [ ]   State level [ ]

National level [ ]   International level [ ]

3.24 No. of Awards won in NCC:

University level 16   State level 3

National level 2   International level 1

3.25 No. of Extension activities organized

University forum [ ]   College forum [ ]

NCC 03   NSS 05   Any other [ ]

3.26 Major Activities during the year in the sphere of extension activities and Institutional Social Responsibility

Si. No.	Activity Title/Banner	Description	Dates
1	Traffic rules awareness program	80 NCC cadets organised and participated in traffic rules awareness program at Devanahalli	14th April 2018
2	Tree plantation	NCC cadets planted 200 sapplings in Gantiganahalli	12th August 2017
3	Cleanliness awareness drive	NCC cadets participated in cleanliness awareness drive in yelahanka, Gantiganahalli and Nandihills.	14th April 2018

Si. No.	Activity Title/Banner	Description	Dates	Number of Participants
01	1 week Special camp	Organized at kaiwara, chinthamani taluk.chikkaballapura district.	19th dec to25th dec2017	Students 50 Staff 04
02	Swatch bharath programme	Kaiwara, ullala village, gantigana halli,harohalli etc.	20th sept 2017, 10th October 2017 Augth 15th 2017 2nd October 2017	Students 60 Staff 05
03	Blood donation camp	Organized at sheshadripuram 1ST grade college yelahanka NMIT campus	10th October 2017 14th November 2017, 26th jan 2018	300 units of blood were mobilised. 300 students and 10 faculty members participated.
04	Cancer awareness marathon programme	From kogilu cross to cyte care hospital.	15th november2017	100 students and 4 faculty members participated.
05	Women empowerment day	Organized at college premises	10th Nov 2017	75 students and 20 faculty members

Criterion – IV

4. Infrastructure and Learning Resources

4.1 Details of increase in infrastructure facilities:

Facilities	Existing	Newly created	Source of Fund	Total
Campus area	**22.16 Acres**	**-**	**Self Financing**	**22.16 Acres**
Class rooms	**93**		**Self Financing**	**93**
Laboratories	**88**	**13**	**Self Financing/Subex/Dassult/PTC/DCS**	**101**
Seminar Halls/Auditorium	**3**	**1**	**Self Financing**	**4**
No. of important equipments purchased (≥ 1-0 lakh) during the current year.		**9**	**NMIT,DST-SERB**	**9**
Value of the equipment purchased during the year (Rs. in Lakhs)		**76.16**	**NMIT,DST-SERB**	**76.16**
Others		**-**	**-**	**-**

4.2 Computerization of administration and library

- o **My-Gurukul: Online student information and knowledge management collaborative portal for admission, academics, mentoring and examination activities.**
- o **Human Resource Management System (HRMS) portal is used by establishment section.**
- o **Accounts & inventory software packages are also in use.**
- o **Library activities such as Accession, Cataloguing, and Periodicals Management are automated with Open Source Software and Issue & Return are made through Bar Code technology.**
- o **'Open Public Access Catalogue' –OPAC facility to access/search is available in the campus as well as Library collection can be accessed anywhere through Web/OPAC.**
- o **Koha Library Management Software has been deployed to automate the library transactions. Koha has many attractive features such as Supports branch libraries, transfer of items from one branch to another, Search or Retrieve via URL (SRU), full MARC21, and UNICODE, Z39.50, RFID, Discovery tools and CMS. Koha has strong community support like Mailing Lists, IRC etc.**
- o **Digital Library will offer services namely-**
  - ▪ **E-Journals (Online Access)**
  - ▪ **CDs & DVDs**
  - ▪ **Question Papers**
  - ▪ **E-Books indexed in Calibrae software**
  - ▪ **E-Seminar Papers/ Journal Articles –presented/published by the Faculty Members (NMIT);**
  - ▪ **Faculty publications, Newspaper clippings about NMIT , STUDSAT project-accessed through 'DSpace' software.**
- o **Library webpage (https://librarynmit.wordpress.com) gives Links to web portals and Gateways which gives access to E-Books, Dictionaries, Year Books, Encyclopaedias, full text articles of numbers of E-journals. Server set up by Intel, loaded with Courseware (Videos & Notes) of MIT, Berkley and Stanford University and NPTEL – (National Programme for Technology Enhanced Learning, developed by IITs with the assistance of MHRD) comprises of UG and PG Engineering Syllabus, Soft Skills etc.**

4.3   Library services:

Library Collection	Existing		Newly added		Total(Rs)	
	No.s	Values	No.s	Values	No.s	Values
Text Books	37340	11980171.00	7174	1198997.56	41514	13179168.56
E-Books (CRC, Springer and Taylor & Francis)	13139	6,90,000.00			13139	6,90,000.00
Reference Books	5659	2644604.00	320	138540.4	5979	2783144
Journals	130	300137				
E-Journals	6981	25 Lakh				
Digital Database	**NPTEL Courses**					
CD & Video	5**50 CDs/DVDs**					
Others, Specify	--					

4.4 Technology up gradation (overall)

	Total Computers	Computer Labs	Internet	Browsing Centres	Computer Centres	Office	Depart-ments	Others
Existing	**1665**	**1375**	**410**	**60**	**60**	**80**	**145**	**-**
Added								
Total								

4.5 Computer, Internet access, training to teachers and students and any other programme for technology   upgradation (Networking, e-Governance etc.)

- **Computer basics & internet access is part of first year B.E. curriculum.**
- **Conducted training program on "Usage of My-Gurukul: Online student information and knowledge management collaborative portal".**
- **Conducted workshop on "computer fundamentals, Microsoft office, networking and Trouble Shootings" for non-teaching staff.**
- **Senior professors are deputed for the e-Governance workshop organized by TEQIP/DTE/VTU.**
- **Training program on Tally software and Praptha software for staff of account section.**
- **One of the Regional Nodal Centres of IIT-B/ IIT-KGP for faculty development programs under National Mission on Education through ICT (NMEICT), under MHRD, Govt. of India.**
- **Hands on Workshop on Networking for teaching staff, nonteaching staff and students.**
- **Students are trained with SYSSTAT, Advanced Excel, SPSS, Specialization Oriented Certification course & Tally.**
- **NMIT Library services organized the following workshops for the benefits of Faculty and students of NMIT.**

4.6 Amount spent on maintenance in lakhs :

i) ICT

| 5.5 |

ii) Campus Infrastructure and facilities

| 36.3 |

iii) Equipments

| 107 |

iv) Others

| 168 |

Total :

| 316.8 |

Criterion – V
5. Student Support and Progression

5.1 Contribution of IQAC in enhancing awareness about Student Support Services

- **The Institution publishes a handbook especially for the new students at the beginning of every academic year. The Handbook provides details about Research activities of the Institution, OBE, Governing Council, Academic Council, UGC guidelines, VTU guidelines, NMIT regulations, Student discipline, Formal grievance process, Ragging & punishment, Responsibilities of students and the academic and non-academic facilities available for students.**
- **Easily accessible upgraded website [www.nmit.ac.in]through which the student can access all the information he/she is looking for. All the student relevant information is also shared through various meetings/circulars/notifications. The Institution has made provision to send bulk email and SMS to students. The same is facilitated through e-Governance cell of autonomous section.**
- **Organizing separate orientation programs on student support services for UG and PG students.**
- **The student support services are primarily looked after by the group of students. Introduction of student centric welfare schemes, addressing various requirements of residential students and providing necessary support system for student related issues is managed by the group of students in consultation with faculty, wardens of the hostels and student representatives.**
- **The college has a students' council with representatives from different classes/sections. The students' council is actively involved in creating awareness about student services among the students and also involved in organizing the curricular /co-curricular/Extra-curricular activities in the campus with the support/ supervision/ participation of the faculty.**

5.2 Efforts made by the institution for tracking the progression

- **Every student is attached to a faculty advisor/mentor right from the first year.**
- **The faculty advisor will talk to the student/parent on regular basis.**
- **The student is expected to meet the faculty advisor frequently with any queries or problems.**
- **The faculty advisor/mentor will share his/her phone number with the student and the parent.**
- **The faculty advisor/mentor will be helping the student to in his academic problems for the four years that he will be at NMIT. The faculty will be constantly guiding the student on how to address stress related to academics.**
- **If the student feels a particular subject difficult he can be advised to withdraw the subject and take it up during supplementary semester. By doing so he will be able to concentrate well on other subjects during the regular subject and also cope with the difficult subject during the supplementary subject.**
- **On the other hand if a student is a fast learner he can be advised to take up more subjects in a semester and complete the course in 7 semesters itself.**
- **If there are any issues pertaining to indiscipline the faculty advisor/mentor will contact the parent and inform of the same.**
- **If a student needs to take time off from college he will need to inform and take signature of the faculty advisor/mentor.**
- **A student should discuss all academic, college, hostel/mess or personal issues including health with his/her mentor.**
- **The faculty advisor/mentor will work with principal, warden, student counselors/ doctors or dean of student welfare to seek help and resolve issues.**
- **Every faculty advisor/mentor will post comments/suggestions to the students in the website link of Gurukul. The link to this online portal can be accessed through the college website www.nmit.ac.in.**
- **If a student misses a class for three consecutive hours, an automated sms will be sent to the parent and mentor whose mobile number is registered in the website.**

5.3 (a) Total Number of students

UG	PG	Ph. D.	Others
4318	467	103	-

(b) No. of students outside the state

865

(c) No. of international students

266

No	%		No	%	
3518	73.52	Men	1267	26.47	Women

Demand ratio   : 1:1.5   Dropout % : 0.0008%

Last Year						This Year					
General	SC	ST	OBC	Physically Challenged	Total	General	SC	ST	OBC	Physically Challenged	Total
3410	317	73	943	01	4744	3509	319	77	677	2	4785

5.4 Details of student support mechanism for coaching for competitive examinations (If any)

- **A customized English language course with language lab is offered to the students to enhance their communication skills as part of the curriculum.**
- **Every month, guest lectures from experts from Industry/R & D organisations are arranged.**
- **The departments conduct intensive coaching from experts in areas such as logical reasoning, numerical aptitude, soft skills, analytical thinking, and technical aptitude and interview skills.**
- **During course delivery faculty will take up sample questions of reputed competitive examinations like GATE, IES etc.**
- **Various departments are arranging awareness seminars for students to motivate them to participate in competitive examinations like GRE, GATE, etc.**
- **Besides the above, MBA students are trained in aptitude and soft-skills by TIME.**
- **NMIT has an active and dynamic training and placement cell. The placement cell successfully attracts not only a large number of reputed industries for on-campus placements but also conducts training programs in the areas of soft skills, analytical & problem solving abilities and leadership qualities to enhance the competence of students and bridging the gap between the academia and industry.**
- **Books in library for TOFEL, GATE, GRE, GMAT, CAT etc.**

No. of students beneficiaries   73

5.5 No. of students qualified in these examinations

NET [ ]   SET/SLET [ ]   GATE   08   CAT   04

IAS/IPS etc [ ]   State PSC [ ]   UPSC [ ]   Others   95

5.6 Details of student counselling and career guidance

- **Career counselling sessions are organized to guide the students to choose the best career option. Students are motivated to take up the following options based on the individual merits.**
  - o **Higher studies (both technical & non-technical)**
  - o **Appear for various competitive examinations like GATE/ CAT/ GRE/ GMAT/ TOEFL/ JMAT/ IELTS etc.**
  - o **Appear for civil and engineering services examinations.**
  - o **Appear for public sector job openings under both central and state governments like Defence Services, DRDO, ISRO, NAL, BARC, KPSC etc.**
- **The career guidance talks have been organized from the Chopra, Times, Princeton and Manhattans in the year 2016-17.**
- **The talks on "higher studies opportunities in abroad" has been arranged from University of Wisconsin–Milwaukee, NDSU, etc.**

No. of students benefitted   50%

5.7 Details of campus placement

On campus			Off Campus
Number of Organizations Visited	Number of Students Participated	Number of Students Placed	Number of Students Placed
84	777	503	217

5.8 Details of gender sensitization programmes

- **A programme on women assault awareness and sensitizing severity of such issues was initiated for the girl students.**
- **Awareness camp arranged for teaching and student community about the harassments and legal remedies during February, 2017.**
- **A campaign was organized to highlights the importance of gender sensitization and repeated behavioural issues to students.**
- **Orientation program/ counselling for girls students.**
- **Each lady faculty member has been allotted 15 girl-students to take care of gender issues if any under proctor system.**
- **Staff members are informed to wear the dress as prescribed.**
- **Students are informed to follow the dress as prescribed.**
- **There is an anti-sexual harassment committee to take care of any such cases.**

5.9 Students Activities

   5.9.1   No. of students participated in Sports, Games and other events

   State/ University level | 73 | National level | 01 | International level | |

   No. of students participated in cultural events

   State/ University level | 150 | National level | 100 | International level | |

   5.9.2   No. of medals /awards won by students in Sports, Games and other events

   Sports : State/ University level | 24 | National level | | International | |

   Cultural: State/ University level | 13 | National level | 7 | International | |

5.10 Scholarships and Financial Support

	Number of students	Amount
Financial support from institution	647	10.65 Crores
Financial support from government	1261	311.066 Lakhs
Financial support from other sources	4	0.32 Lakhs
Number of students who received International/ National recognitions	4	

5.11   Student organised / initiatives

Fairs   : State/ University level | 11 | National level | 03 | International level | |

Exhibition: State/ University level | 03 | National level | | International level | |

5.12   No. of social initiatives undertaken by the students | 8 |

5.13 Major grievances of students (if any) redressed: NIL

Criterion – VI

6. Governance, Leadership and Management

6.1 State the Vision and Mission of the institution

Vision: To provide India and the World, technical manpower of the highest academic excellence and World class by shaping our youth through holistic and integrated education of the highest quality.

Mission: To develop Nitte Meenakshi Institute of Technology through quality, innovative and State-of-Art educational initiatives into a Centre of Academic Excellence that will turn out youth with well balanced personality & commitment to rich cultural heritage of India and who will successfully face the Scientific and Technological challenges in the fast-evolving global scenario with a high degree of credibility, integrity and ethical standards.

6.2 Does the Institution has a Management Information System

- **Yes, NMIT is using the following information and knowledge management softwares for its effective working:**
  - **My-Gurukul: Online student information and knowledge management collaborative portal.**
  - **Praptha Software: Accounting & invoicing software.**
  - **OPAC: Library Software for search facility.**
  - **KOHA: Library management software.**
  - **HRMS Portal: Payroll Module.**
- **My-Gurukul: The salient features are mentioned below:**
  - **Personalized login and personalized content/information view.**
  - **Online course registration both odd/even semesters with option to select open elective subjects (higher semester) based on first come first serve basis.**
  - **Alerts/messages thro SMS and EMAILS.**
  - **Access to college/ department notice board, calendar of events, holiday list and events.**
  - **Access to syllabus and lesson plan details and question banks.**
  - **Student subject-wise attendance performance details with option to drill down for more information.**
  - **Student CIE performance details including marks obtained in various tests during semester.**
  - **Access to class/department schedules ie. Time-table.**
  - **Access to exam schedules, alerts related exam application form submission, revaluation schedules etc.**
  - **Hall ticket print/download with exam schedule and room information.**
  - **Online Semester End Examination results view with option to print/download provisional grade cards.**
  - **Online supplementary registration and acknowledgement form printing.**
  - **Online assignment submission.**

6.3.1 Curriculum Development

- **Curriculum is designed with focus on improved student learning through Outcome Based Education.**
- **Nitte Meenakshi Institute of Technology revises the Curricula for Engineering Programs at the UG and PG levels so has to meet and address challenges of the work place. The design and development of the curriculum includes:**
    - **Offer conventional Engineering Courses for which there are good job opportunities. The courses are designed keeping in mind Programme Educational Objectives and Programme Outcomes.**
    - **Align courses with requirements of the Industry, the opportunities available in the R&D institutions and the requirements for pursuing higher studies.**
    - **Designing courses, considering curriculum of premier Institutions like IITs, NITs etc. are also considered.**
    - **Refer to the model curriculum defined by Professional Bodies like IEEE, ASME, IETE, AICTE etc.**
    - **Periodically revise course contents to keep them aligned with emerging technologies, and to incorporate feedback from Industries/Associations like NASSCOM/Alumni etc.**
    - **Periodically revise the course contents and introduces the new elective to address the gap in COs, POs & PSOs attainment.**
    - **Introduced program specific and Interdisciplinary Electives based on feedback/Suggestions from stake holders.**
- **The following Boards/Councils/Committees have been formed to design the curricula according to the UGC Norms:**
    - **Board of Governors.**
    - **Academic Council.**
    - **Boards of Studies.**
    - **Departmental Under Graduate & Post Graduate Committees.**
    - **Department Advisory Bodies.**
- **Syllabi has been validated and approved by the Advisory Committee, BOS, and Academic Council which has the representation of all stakeholders.**
- **Board of Studies will meet every year to review the syllabus.**

6.3.2 Teaching and Learning

- **Implementation of Outcome based Teaching & Learning (OBLT).**
- **Implementing the methodologies for world class education by modernizing teaching-learning processes.**
- **Student centric teaching & learning process is had been adopted.**
- **New faculty are trained with pedagogy and other faculty are trained in advanced pedagogy.**
- **Introduction of appropriate delivery methods such as course projects, programming assignments, case studies, flipped class, group discussions, debates, seminars etc for each course.**
- **The following committees will oversee the quality of Teaching & Learning:**
    - **Department Undergraduate & Postgraduate committees.**
    - **Department Program Assessment Committees.**
    - **Department Advisory Bodies.**
    - **IQAC.**
- **Periodically the above said committees will analyse the students' feedback, Course Exit Survey and COs, POs & PSOs attainment levels and suggest changes for Teaching & Learning Methods.**

6.3.3 Examination and Evaluation

- **Academic calendar is prepared well in advance before the start of the semester and made available to all the students, teaching and non-teaching staff and also made available in the college website. The academic calendar includes registration of the courses, CIE schedule, Drop and withdrawal of courses, examination schedule, attendance and CIE submission, last working date, holidays and results announcement date etc.**
- **Every semester the newly recruited faculty is given orientation about the examination process/scheme of evaluation.**
- **In the view of equal weight age for both CIE and SEE, the faculty has been given a complete autonomy to come out with innovative way of evaluating the student especially in the CIE component.**
  - **In addition to the conventional test the students are evaluated through surprise test, quizzes, mini projects, seminars, group discussions, industry case studies etc.**
  - **Effective rubrics have been designed for assessing the course project, the programming assignments, the case studies, the group discussions, debate and seminars in addition to MSE, SEE and surprise test. These assessment methods helped in measuring attainment of POs.**
  - **MSE & SEE questions are mapped to COs & blooms level, which will ensure quality question paper.**
  - **In laboratory courses the faculties are oriented to design experiments which will improve the thinking ability & skills in the students and similar excise is done in the semester end exams.**
  - **MSE question papers are scrutinized by department under & postgraduate committee. SEE question papers are scrutinized by BOE which has external members. This enables to maintain question paper quality.**
  - **In the Semester End Examinations, external examiners also participate in QP setting, evaluations etc. to have transparency and fair evaluation.**
  - **Every department undergo academic audit once in a semester to ensure that the quality is maintained.**
  - **The answer books are bar coded. External examiners also participate in the evaluation of SEE answer books and practical examinations. These processes assure quality and transparency at the institutional level.**
  - **At the department level, CO & PO attainments are computed and analyzed.**
  - **Depending upon GAP analysis, further action will be taken**

6.3.4 Research and Development

- **The college has a research council to monitor and address the issues of research/consultancy. Few recommendations implemented are:**
  - o **Taking up sponsored research projects from external funding agencies.**
  - o **Stress on interdisciplinary research activities**
  - o **Motivating faculty and UG & PG students to involve in sponsored research projects.**
  - o **Encouraging students for publishing their work in National/International Conferences/Journals.**
  - o **To develop innovative products, leading to patents.**
  - o **Faculty carrying out research projects are given complete independence for execution of the research project.**
  - o **Faculty is encouraged to bring sponsored projects from external funding agencies.**
  - o **Faculty are provided complete support from the institution in terms of infrastructure, computational facilities, and specially allotted time for carrying out research.**
  - o **Faculty carrying out research projects have been given some reduction in the work load. Policy has been worked out for giving additional incentives.**
  - o **100% financial support is given for faculty & students for publishing & patenting their work.**
  - o **The faculty undertaking research and development work are given recognition and other incentives.**
  - o **The revenue generated out of consultancy services are shared among the faculty involved. The ratio of sharing depends on the utilization of the resources in the institution.**
  - o **Faculty are deputed to industries for a few months to undergo hands on learning in emerging technologies.**
  - o **Study leave is granted with full salary to faculty pursuing higher studies like post-graduation, Doctoral programmes etc.**
- **The institute has established a Patent Cell to help the faculty & students to file patents and to create awareness.**
- **Apart from the Department's Research Centres, Institute has created 5 Multi-disciplinary Centres of excellence promote multi-disciplinary research in the areas of Small Satellites, Robotics, Nano Technology, Design & Process Simulation and Computational Fluid Dynamics.**
- **The research council review the status of the P.hD Students annually and the report is submitted to**

6.3.5 Library, ICT and physical infrastructure / instrumentation

- **Different committees are responsible for ensuring the quality enhancement of library, ICT and physical infrastructure. The library and computer labs have separate advisory committees comprising of faculty members, library in-charge, lab-in charge and other employees of computer lab and library. The committee ensures continuous up gradation of library and recommends purchase of new books, journals and magazines. The committee responsible for lab up gradation ensures maintenance of computers, purchase of new computers, updation of institute's website etc.**
- **Have separate department library with latest books, journals and journal database, class are equipped with A/V facility, separate internet laboratory for MBA students also with additional package coaching like systat, Advanced Excel, Tally.**
- **KOHA library management software has been deployed to automate the library transactions.**
- **Every user's ID card as well as every item of the Collection has been bar coded & the transaction (Issue/Return) will be done in a few seconds.**
- **Teachers will be encouraged to use ICT in the classrooms for effective teaching & communication between them and the students.**
- **Robust and scalable IT Infrastructure with 1650+ computers, 200 Mbps(1:1) internet connectivity and Wi-Fi facility.**
- **Modern infrastructural facility & laboratories.**
- **Adequate and well maintained infrastructure for curricular, co-curricular and extra-curricular activities.**

6.3.6 Human Resource Management

- **NMIT has well-defined policies and systems for human resource management. HR departments and units in organizations typically undertake a number of activities, including employee benefits/ recruitment/ training and development/ performance appraisal/ rewarding.**
- **The institution encourages the faculty to recharge themselves by attending orientation programmes conducted by other universities, participating in National and International workshops/symposia and presenting/publishing papers in National and International conferences/Journals. They are provided with financial support towards TA, DA, registration fees etc.**
- **The institute mandates the departments to organize faculty development programmes/workshops regularly.**
- **The institute conducts faculty induction/pedagogy programmes for the newly recruited faculty members in association with professional training Institutes.**
- **Since inception the institute has the policy of sponsoring the faculty for qualification improvements (M.Tech/Ph.D/etc) with full salary. Also it encourages the faculty to take up M.Tech/Ph.D programmes on part time basis also.**
- **Institute gives all the support to the faculty in getting the sponsored research projects/consultancy.**
- **NMIT is having faculty performance appraisal system to assess curricular & co-curricular activities:**
  - **College has online feed-back system on teachers by the students wherein the students give their view on teaching methodology adopted by the faculty.**
  - **Faculty will fill Self-Assessment report with HODs remarks.**
  - **The feed-back is addressed at the appropriate level i.e, DUGC, HOD's Dean and Principal based on the kind of information received from the feed-back.**
  - **The faculty is advised to improve the methodology of teaching by adopting new techniques, if needed he/she will be given mentoring/training by the senior faculty.**
- **The students are also advised and supported to present their research papers in the international and national conferences organized annually by the institute. Students have been provided training in the areas that are helpful for the employments like Tally, MS-Excel etc. Sessions on careers, making right choices in life, decision-making, aptitudes, choice of a career and more are conducted by the placement cell.**
- **Institute is having well defined hiring-planning and execution for recruitment of faculty.**

6.3.7 Faculty and Staff recruitment

- **As per AICTE requirement, staff-students ratio is 1:20 for UG. Despite being a young institute this ratio is maintained consistently. A ratio of 1:12 is maintained for PG. This takes care of research activities and executing funded projects. The ratio is maintained in spite of attrition, maternity, study leave etc.**
- **The institution fills up the vacancies as and when created by way of advertising in leading Newspapers and holding interviews by a panel of experts in the disciplines. University nominee and subject experts are invited for interviews for selection of faculty.**
- **Two levels of interviews are conducted. One at the department level and other at the college level.**
- **Similarly, non-teaching posts are also filled through advertisements and internal promotions.**
- **For non – teaching and administrative posts trade tests, written tests and personal interviews are conducted.**
- **The institution also provides opportunities to faculty and staff to upgrade their qualifications, which are required for better performance and career advancement.**
- **The institute management frames the policy and guidelines for appointment as per the AICTE guidelines.**
- **Additional increments are offered at the time of recruitment for candidates with strong teaching/ industry/ R&D experience and qualifications.**
- **Institute is also having well-defined faculty promotional policy.**

6.3.8 Industry Interaction / Collaboration

- **The college has taken several initiatives to closely interact with Industries such as deputation of Students to carry Internship Programs/ Post Graduate students for doing their projects/Inviting Experts from Industries to teach Industry specific courses, etc.**
- **The college has students' chapters of professional societies such as IEEE, ISTE, IETE, CSI, SAE, IE, ACCE(I), ICI etc. which interact with the industry and enable students to undertake collaborative projects.**
- **Being an autonomous institute, industry experts and the alumni are involved in the design of curriculum and the syllabus.**
- **Industry experts are teaching part of the course and Institute encourages adjunct faculty from industry.**
- **Departments are offering industry prescribed courses as electives.**
- **The placement cell arranges lectures and training programs for students in subject areas as well as soft skills through industry personnel.**
- **College mandates every student to either take-up internship programs in well-known industry/R&D departments or to undergo summer/self-study courses or take up minor projects in emerging areas.**
- **College has an E-cell which arranges lectures on entrepreneurship development, patenting, etc through industry personnel, NEN.**
- **College has MOUs with several industries/organisations like Texas Instruments, Infosys, Microsoft, Wipro, Cypress Semiconductors, DELL, EMC2, PIA, SAE, MSME, FKCCI, CMTI, NDRF, L& T Infotech, KPIT.**
- **Good number of students is carrying out their projects in industry.**
- **Companies like Infosys, KPIT, Wipro, TCS etc are regularly conducting faculty development programs on current technologies.**

6.3.9   Admission of Students

- **Admission of students is through common entrance test conducted by Karnataka Government, Comed-K, management and foreign students through EDCIL.**
- **The process of admitting students to various courses is carried out as per the norms laid down by the Department of Higher education, Government of Karnataka and AICTE. The admissions committee constituted for the purpose is entrusted with the task of monitoring the admission processes. The candidates are selected on the basis of merit, interviews and entrance tests. Students from all sections of society irrespective of caste, creed, class and gender are admitted thereby keeping to the objectives of education for all.**
- **75% of the UG seats are filled through Common Entrance Test conducted by KEA/COMED-K.**
- **80% of M.Tech seats are filled through Common Entrance Test conducted by KEA/GATE.**
- **50% of the seats of MBA & MCA are filled through Common Entrance Test conducted by KEA/MAT/CAT/KMAT.**
- **The remaining seats in the respective programs are filled by the managements by giving wide publicity through advertisements in print media, electronic media and through the college website.**
- **Allotment of the management seats is also based on performance of 12th standard examination in the relevant subjects for the UG program and in respect of PG programs based on the merit in the qualifying examination as well as the ranking obtained in the Common Entrance tests conducted by the Government of Karnataka (KEA)/PGCET.**

6.4 Welfare schemes for

Teaching	**Free transportation to all the faculty members.** **Subsidized medical insurance scheme.** **PF benefits.** **Gratuity scheme.** **Loan facility from the VIVIDDHODESHA Multi-purpose co-operative society.** **Subsidized rent for campus staff quarters.** **Group medical insurance scheme.**
Non-teaching	**Free transportation to all the non-teaching staff members.** **Group medical insurance scheme.** **ESI scheme.** **PF benefits.** **Gratuity scheme.** **Loan facility from the VIVIDDHODESHA Multi-purpose co-operative society.** **Subsidized rent for campus staff quarters.**
Students	**Medical insurance scheme.** **Partial tuition fee waved off.** **Fee concession to meritorious and poor students.**

6.5 Total corpus fund generated in INR   347 LAKHS

6.6 Whether annual financial audit has been done   Yes   √   No

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

Audit Type	External		Internal	
	Yes/No	Agency	Yes/No	Authority
Academic	**YES**	**VTU/NPIU/SPFU**	**YES**	**IQAC/AAAC**
Administrative	**YES**	**NPIU/SPFU**	**YES**	**IQAC/AAAC**

6.8 Does the University/ Autonomous College declare results within 30 days?

         For UG Programmes   Yes   √   No

         For PG Programmes   Yes   √   No

6.9 What efforts are made by the University/ Autonomous College for Examination Reforms?

- **Every semester the newly recruited faculty is given orientation about the examination process/scheme of evaluation.**
- **Institute publishes CIE & SEE examinations schedules in advance.**
- **In view of equal weightage being given for both CIE and SEE, the faculty are encouraged to come out with innovative ways of assessments.**
- **In addition to the conventional tests the students are evaluated through surprise tests, quiz, mini projects, seminars, group discussions, industry case studies etc.**
- **In some courses the questions of quiz & surprise test components are also oriented to prepare the students for competitive examinations like GATE/GRE/ UPSC exams.**
- **To improve the quality of the graduating students the faculty is trained to prepare the CIE & SEE question papers which reflect the programme outcomes.**
- **In the laboratory courses the faculty is oriented to design experiments which will improve the thinking ability & skills among the students and similar exercise is done in the semester end exams also.**
- **College has separate examination section for conduction, processing and execution of examination. This section is automated with software which captures the attendance, CIE and SEE marks and generates the records according to the given format. The software generates the list of the eligible students for writing the exams based on the input of attendance and CIE considering all the criteria for the examination.**
- **The software generates an admit card for the student by considering all the eligibility criteria.**
- **Examination process is barcoded.**
- **Software processes the results, SGPA, CGPA & reports are generated in the consolidated form for announcement on notice boards & website. The results are announced within one week of the last examination held.**
- **Software also automatically generates the grade cards, provisional degree certificate and transcripts. The software will keep track of credits earned by each student and prepares the nominal roll for the next academic year after considering criteria for vertical progression.**

6.10 What efforts are made by the University to promote autonomy in the affiliated/constituent colleges?

NA

6.11 Activities and support from the Alumni Association

- **College has Alumni web platform Almashines for Alumni connect.**
- **Every year, institute with the office bearers of alumni association conducts alumni meet.**
- **During alumni meet, alumni share their feedback and suggestions to improve curriculum, facilities, placement, training etc.**
- **Alumni will also participate in Board of Studies, advisory committee; the institute utilizes their experience of the outside world while implementing the Outcome Based Educational activity.**
- **Alumni will assist the institute for getting internship, projects, placements and training etc.**
- **Our alumni students actively take part in delivering guest lecture to our students, who work in top industries.**

6.12 Activities and support from the Parent – Teacher Association

- **The parent and teaching meeting will be conducted once in a semester to update academic status of students.**
- **Institute involves parents in various bodies like anti ragging committee etc. Institute tries to involve parents at different levels like in some events they have been invited as judges. Beside this, parents support by interacting with the various committee members that come for quality enhancement or inspection.**
- **Parents are part of BOS in discussing and framing the curriculum.**
- **Departments send questionnaires to parents on the curriculum / program educational objectives / learning outcomes to improve the curriculum to give outcome based educations, which is the prime focus of NBA"s accreditation process for autonomous colleges.**

6.13 Development programmes for support staff

- **Institute also emphasizes on the enhancement of skill of the support staff by organizing skill based workshops. There exist also the provisions for nominating the support staff members to attend the development workshops organized by other institutions with financial support.**
- **Regular seminars/ workshops/ training are conducted by the departments for continuous up gradation of support staff skills.**

6.14 Initiatives taken by the institution to make the campus eco-friendly

- **Institute in the process of installing 500KVA solar power plant.**
- **The department of electrical has conducted an energy audit in the campus the following steps are initiated to conserve energy.**
- **Bring awareness among students/ staff and faculty to switch off lights /fans when not in use. To use ACs only when it is absolutely necessary.**
- **To operate the campus load near to unity power factors.**
- **All hostels are provided the solar water heaters.**
- **Rain water harvesting is incorporated in all buildings.**
- **Sewage treatment plant is in operation and the treated water is used for the gardens.**

Criterion – VII

7. <u>**Innovations and Best Practices**</u>

7.1 Innovations introduced during this academic year which have created a positive impact on the functioning of the institution. Give details.

> ➢ **Introduced Latex Based Thesis and Plagiarism check for UG projects.**
> ➢ **Introduction of MOOC based Learning Activities.**
> ➢ **Nominating Course wise Lead Teachers to collate the weekly reports from the Course instructors**
> ➢ **Encouraging the Bright Students to undertake Student Immersion Program with North Dakota State University, USA and Long Term Internship in reputed Industries**
> ➢ **Introduction of 360 Degree Feedback & Department Audit**

7.2 Provide the Action Taken Report (ATR) based on the plan of action decided upon at the beginning of the year

- **First year students have been exposed to opportunities they have and the professional competence they must develop during their orientation programs.**
- **Conducted orientation programs for the newly joined faculty.**
- **A course on soft skills, to improve verbal and non-verbal communication skills will be conducted with the support of English language laboratory.**
- **At the commencement of the third year students undergo soft skills/ technical skills/ numerical aptitude training programs/ etc.**
- **Special courses are arranged to bridge the gap between the industry requirements and the subject knowledge acquired in the college.**
- **Course contents are revised to keep them aligned with emerging technologies and to incorporate feedback from industries/alumni/students/academicians.**
- **Introduced many programs specific and interdisciplinary electives based on feedback/ suggestions from stake holders.**
- **Upgraded/modernized the laboratories by procuring equipment which can be used for carrying out experiments in the State-of-the-Art technology and also by removal of obsolescence.**
- **Conduction of Academic Audit , which ensures to Take up sponsored research projects from external funding agencies and Consultancy work from External organizations**
- **Conduction of workshops on IPR & Academic Audit which ensures filing of Indian patents.**
- **The library has been strengthened by renewing the subscription of IEEE and Science Direct e-journals, procurements of latest reference books etc.**
- **Introduction of Plagiarism Check & Latex Based Thesis for UG Projects**

7.3 Give two Best Practices of the institution

<u>Best Practice -1</u>
1. Title of Practice

Multi-disciplinary Research and development.

2. Objective of the Practice

- **Objectives of the higher education in the present context have to be globally relevant. UG & PG students pursuing higher education besides focusing on lecture classes will have to participate in the pursuit of research and innovation.**
- **Pursuit of innovation requires the background of multidisciplinary research.**
- **Multidisciplinary research leads to improved opportunities and flexibility to the students to get better employment.**

3. The context

In the present Indian system of higher education the different disciplines are treated as opaque walls, which hinder quality research and innovation to be part of higher education system. These walls need to be adequately porous so that a student pursuing in any discipline has to necessarily go beyond the frontiers of his own subject which enables him to seriously pursue knowledge of yet another discipline and in such an environment the horizon of research one pursues gets deeper leading to newer and innovative practices.

4. The practices

In the context of Indian higher education, if the departments work independently then the solution developed may not be feasible to meet the societal needs. Most of the societal requirements need expertise of several disciplines. In the above context NMIT has initiated the practice of multidisciplinary research. The faculty and students of different disciplines will come together to work towards a common goal. Multiple Center of Excellence in various areas has been established such as Centers of Small Satellites/Robotics/Nano Technology, etc. These centers provide research facilities and training for faculty and students drawn from various disciplines.

5. Evidence of Success

- **Electronics & communication Engineering/Mechanical Engineering /Electrical Engineering /Computer Science Engineering faculty and students are involved in Twin - Satellite Program.**
- **The first Institution to introduce multi-disciplinary course on robotics with laboratory (Lego Mindstorm & Tetrix) as an elective for 3rd semester B.E students on the lines of few US/European Universities.**

- **In the Centre for Nanomaterials and MEMS (CNM) at NMIT, we have dynamic multidisciplinary group of researchers oriented and working for the objectives, in the following research areas:**
    - **Design, Simulation and Development of Micro-Electro-Mechanical systems (MEMS)**
    - **Thin Film Materials Science and Engineering**
    - **NanoMaterials Synthesis**

6. Problems encountered and Resources Required

It is difficult to co-ordinate students drawn from different disciplines to undertake inter-disciplinary research. Since UG students actively participating in R&D work leave the college after their graduation, continuing the projects undertaken requires financial support to retain them after their graduation. This requires some additional financial resources and availability of senior faculty.

<u>Best Practice -2</u>

1. Title of Practice

Facilities for Self-Learning/ Life-long Learning.

2. Objective of the Practice

To enhance the self-improvement through continuous professional development and life-long learning.

3. The context

In order to excel in a professional career, we believe it is essential that graduate need to be true to his/her authentic self and use their own strengths. Developing self-knowledge enhances the abilities of the students and enables them to give their very best.

4. The practices

NMIT has initiated the following practices towards life-long learning

- **Mandatory internship program for UG & PG Students/ self-study course.**
- **Effective Learning Activities like course project/case studies/ assignments/etc..**
- **Introduction of MOOC Based Learning**

5. Evidence of Success

- **The engineer as the professional knowledge worker who is prepared for the changing nature of occupational requirements.**
- **Graduate with ability to learn over a lifetime as a necessary ingredient for success.**

6. Problems encountered and Resources Required

- **Reputed industries are not able to offer internship to the UG students for short duration.**
- **Tight academic schedule which is a hurdle for learning activities.**

7.4 Contribution to environmental awareness / protection

- **The college has developed a lot of greenery in the campus by developing lawns and gardens. It has taken steps to maintain the trees in the campus. It also takes up tree plantation programs.**
- **Solar water heaters are provided for all the hostels to conserve energy.**
- **Has set up a sewage water treatment plant to recycle the waste water for the purpose of gardening.**
- **Rain Water Harvesting**
- **Energy audit has been done to find the leakage and to use energy efficiently by the use of automatic devices / equipment to save energy.**
- **Establishment of Solar power Plant -500 KW (In Progress)**

7.5 Whether environmental audit was conducted?   Yes √   No ☐

7.6 Any other relevant information the institution wishes to add. (for example SWOT Analysis)

Strengths:

S1. Supportive management, committed faculty & staff and motivated students

S2. Strong focus on Excellence in Education, Research and Promotion of Innovation & Entrepreneurship.

S3. Youngest engineering college in the country to be conferred the prestigious Autonomous Status by UGC, New-Delhi. in the year 2007

S4. Accreditation of the college by National Assessment and Accreditation Council (NAAC) for a period of 5 Years starting from 2014-15

S5. Accreditation of eligible UG Programs under Tier-1 scheme (As per Washington Accord) of National Board of Accreditation.

S6. Availability of faculty in all required positions. High qualification experience of the faculty comprising 48 Ph.Ds predominantly from IISc, IITs & NITs. Ongoing PhD work of 84 faculty members & in different research centers of NMIT as well as in other Institutions of Eminence.

S7. Recognition of Ten Departments as Research Centres by VTU / Mysore University

S8. Successfully implementation Out-come based Educational process

S9. Inter-disciplinary research carried out by faculty and students. NMIT is a unique Institution which has established five Multi-Disciplinary Research Centres viz Center for

Small Satellite Research, Center for Robotics Research, Center for Nanomaterial & MEMS, Center for Computational Fluid Dynamics and Center for Design Engineering & Process Simulation.

S10. Sponsored research Projects amounting to Rs. 5.5 Crores sanctioned by different reputed National Funding Agencies such as DST, DIT, AICTE, DRDO, VGST, IEEE, VTU etc.

S11. Innovation and Entrepreneurship Development Cell (DST) and Business Incubator(MSME) have been Established to encourage the entrepreneurship among the students

S12. Collaborations in R&D with North Dakota State University-USA, Indo-Korean Institute of Science & Technology, ISRO, Indian Institute of Science, NITK, Fluidyne etc

S13. Unique Scheme of Deputing UG Students to Industry/R&D Organizations/IISc/IITs/NID for a minimum period of 6 weeks internship qualifying for academic credits

S14. Excellent Industry-Institution Interaction which resulted in placement of 90% of the eligible students.

S15. Adequate and well maintained infrastructure for Curricular, Co-curricular and Extra-curricular activities which include NCC/NSS/Rotract/Sports/Cultural clubs/etc.

S16. Well established Library with adequate books and Journals conforming to AICTE/UGC requirements. Digital Library with subscription to E-Journals through the INDEST consortium. Rich E-learning resources from Stanford, MIT, Berkeley, Purdue, NPTEL etc.

S17. Cordial and harmonious relationship with all stake-holders.

S18. Robust and scalable IT Infrastructure with 1400+ computers, 100 Mbps(1:1) Internet connectivity and Wi-fi facility

S19. Rsidential and has separate Girls & Boys Hostel facility for more than 1700 students with In-house Mess and Faculty Quarters on the campus.

S20. Good participation of students in Co-curricular and extra-curricular activities at International/National Level

Weaknesses:

W1. Admissions based on State Govt. norms results in the admission of some academically weaker students

W2.   PG programs do not attract highly talented students

Opportunities:

O1.   Improve quality of research by increasing interactions with industry and R&D organizations.

O2.   Increasing interaction with reputed institutions by sharing resources and undertaking joint research projects

O3.   Strengthening interaction with Alumni to facilitate more connects with the industry.

O4.   Creating training facilities to improve teaching capabilities of faculty.

O5.   Extending more academic help to assist weaker students especially belonging to SC/ST/OBCs

O6.   Starting new P.G Programs in emerging areas

O7.   Accrediting the remaining few eligible UG & PG Programs

Threats:

T1. Difficulty to attract and retain PhD candidates faculty particularly in the Engineering disciplines.

T2. Lack of interest among bright Engineers to pursue research/teaching as career

T3. Ensuring financial viability of the Institution as the norms for admissions are regulated by the State Govt.

Summary:

It is evident from the above analysis that NMIT has the potential to emerge as a world class provider of technical education. It has strategic intent, requisite facilities and manpower for realizing its Vision of turning out globally competent technical manpower. With its emphasis on quality, Innovation and enterprenurship, NMIT can transform itself into an Institution of choice for budding young and bright minds.

8. **Plans for next year**

After understanding the Strengths, weakness opportunities and threats for NMIT we have following strategic plan for transforming NMIT into a quality technical education institute at the global level

- To provide trained and skilled engineers of the highest quality to meet the global needs

- To provide blended learning environments through Academic and Administration Reforms leading to improved learning outcomes for the students.

- To further improve our Laboratories /Research facilities/ Library to enhance the quality of teaching and learning process

- To enhance the research culture and entrepreneurship among the faculty and students

- To create an environment that enhances the interaction with reputed Indian/international institutions through mutual sharing of resources and joint research projects

- To Extend academic help to assist academically weaker students

- To strengthen the competency of the faculty through Faculty Development Programmes and skills of technical staff and others through periodic training program.

- To Strengthen Industry/ Institute / Alumni Interaction enabling better placements and increased number of internships