

# **NATIONAL BOARD OF ACCREDITATION**

## **FORMAT FOR SELF ASSESSMENT REPORT (SAR) FOR ACCREDITATION OF DIPLOMA ENGINEERING PROGRAMMES (TIER-I)**



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# Self Assessment Report (SAR)

## Part A

### Institutional Information

*I.1. Name and address of the institution:*

(Instruction: The name, address of the institution, are to be listed here.)

*I.2. Name, designation, telephone number, and e-mail address of the contact person for the NBA:*

(Instruction: The name of the contact person, along with other details, has to be listed here.)

*I.3. History of the institution (including the date of introduction and number of seats of various programmes of study alongwith the NBA accreditation, if any) in a tabular form:*

Year	Description
.....	Institution started with the following programmes (intake strength)
.....	NBA accreditation visits and accreditation granted, if any
.....	Addition of new programmes, increase in intake strength of the existing programmes and/or accreditation status

(Instruction: History of the institution and its chronological development along with the past accreditation records need to be listed here.)

*I.4. Ownership status: Govt. (central/state) / trust / society (Govt./NGO/private) / private/ other:*

(Instruction: Ownership status of the institute has to be listed here.)

*I.5. Mission and Vision of the Institution:*

(The institution needs to specify its Mission and Vision).

**I.6. Organisational Structure:**

(Organisational chart showing the hierarchy of academics and administration is to be included)

**I.7. Financial status: Govt. (central/state) / grants-in-aid / not-for-profit / private self-financing / other:**

(Instruction: Financial status of the institute has to be mentioned here.)

**I.8. Nature of the trust/society:**

Also list other institutions/colleges run by the trust/society

(Instruction: Way of functioning and activities of the trust/society have to be listed here.)

Name of the Institution	Year of Establishment	Location

**I.9. External sources of funds:**

Name of the external source	CFY	CFY <sub>m1</sub>	CFY <sub>m2</sub>

(Instruction: The different sources of the external funds over the last three financial years are to be listed here.)

**I.10 Internally acquired funds:**

Name of the internal source	CFY	CFY <sub>m1</sub>	CFY <sub>m2</sub>
Students' fee			

(Instruction: The different sources of the internal funds over the last three financial years are to be listed here.)

**I.11 Scholarships or any other financial assistance provided to students**

(Instruction: If any scholarship or financial assistance is provided to the students, then the details of assistance, over the last three financial years, have to be listed here. Also

mention has to be made of the basis for the award of such scholarship).

Details	CFY	CFYm1	CFYm2	CFYm3
Category				
Scholarship Assistance				
Amount				

**I.12 Basis/criterion for admission to the institution:**

10th standard / 12th standard mark sheet / others:

(Instruction: The basis/criterion for student intake has to be listed here.)

**I.13 Total number of students:**

	CAY	CAYm1	CAYm2	CAYm3
Total no. of boys:				
Total no. of girls:				
Total no. of students:				

Total number of other students, if any

(Instruction: Total number of students, both boys and girls, has to be listed here. The data may be categorised in a tabular form for diploma programmes.)

**I.14 Total number of employees**

(Instruction: Total number of employees, both men and women, has to be listed here. The data may be categorised in a tabular form as teaching and supporting staff.)

Minimum and maximum number of staff on roll in the engineering institution, during the CAY and the previous CAYs (1st July to 30th June):

**A. Regular Staff**

Items		CAY		CAYm1		CAYm2	
		Min.	Max.	Min.	Max.	Min.	Max.
Teaching staff in engineering	M						
	F						
Teaching staff in science & humanities	M						
	F						
Non-teaching staff	M						
	F						

(Instruction: Staff strength, both teaching and non-teaching, over the last three academic

years has to be listed here.)

B. Contract Staff

Items		CAY		CAY <sub>m1</sub>		CAY <sub>m2</sub>	
		Min.	Max.	Min.	Max.	Min.	Max.
Teaching staff in engineering	M						
	F						
Teaching staff in science & humanities	M						
	F						
Non-teaching staff	M						
	F						

## II. Departmental Information

*II.1. Name and address of the department:*

*II.2. Name, designation, telephone numbers, and e-mail address of the contact person for the NBA:*

*II.3. History of the department including date of introduction and number of seats of various programmes of study along with the NBA accreditation ,if any:*

Programme	Description
Dipoma in.....	Started with.....seats in..... Intake increased to.....in..... Intake increased to.....in.....

*II.4. Mission and Vision of the Department*

(The department is required to specify its Mission and Vision).

*II.5. List of the programmes/ departments which share human resources and/or the facilities of this department/programme (in %):*

(Instruction: The institution needs to mention the different programmes being run in the department which share the human resources and facilities with the department/programme being accredited.)

*II.6. Total number of students:*

Diploma:

others:

*II.7. Minimum and maximum number of staff on roll during the current and two previous academic years (1st July to 30th June) in the department:*

Items	CAY		CAY <sub>m1</sub>		CAY <sub>m2</sub>		CAY <sub>m3</sub>	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Teaching staff in the department								
Non-teaching staff								
Total								

*II.7.1. Summary of budget for the CFY and the actual expenditures incurred in the CFY<sub>m1</sub> and CFY<sub>m2</sub> (for the Department):*

Items	Budgeted in CFY	Actual expenses in CFY (till ...)	Budgeted in CFY <sub>m1</sub>	Actual Expenses in CFY <sub>m1</sub>	Budgeted in CFY <sub>m2</sub>	Actual Expenses in CFY <sub>m2</sub>
Laboratory equipment						
Software						
Laboratory consumable						
Maintenance and spares						
Research & Development						
Travel						
Miscellaneous expenses for academic activities						
Total						



### III. Programme Specific information

*III.1. Name of the Programme*

Diploma in \_\_\_\_\_

(List name of the programme as it appears on the graduate's certificate and transcript, and abbreviation used for the programme.)

*III.2. Title of the Degree*

(List name of the degree title as it appears on the graduate's certificate and transcript, and abbreviation used for the degree.)

*III.3. Name, designation, telephone numbers, and e-mail address of the Program coordinator for the NBA:*

*III.4. History of the programme alongwith the NBA accreditation, if any:*

Programme	Description
Diploma in.....	Started with .....seats in ..... Intake increased to ..... in ..... Intake increased to ..... in ..... Accredited in .....

*III.5. Deficiencies, weaknesses/concerns from previous accreditations:*

*III.6. Total number of students in the programme:*

*III.7. Minimum and maximum number of staff for the current and three previous academic years (1st July to 30th June) in the programme:*

Items	CAY		CAY <sub>m1</sub>		CAY <sub>m2</sub>		CAY <sub>m2</sub>	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Teaching staff with the programme								
Non-teaching staff								

*III.8. Summary of budget for the CFY and the actual expenditure incurred in the CFY<sub>m1</sub> and CFY<sub>m2</sub> (exclusively for this programme in the department):*

Items	Budgeted in CFY	Actual expenses in CFY (till ...)	Budgeted in CFY <sub>m1</sub>	Actual Expenses in CFY <sub>m1</sub>	Budgeted in CFY <sub>m2</sub>	Actual Expenses in CFY <sub>m2</sub>
Laboratory equipment						
Software						
Laboratory consumables						
Maintenance and spares						
Travel						
Miscellaneous expenses for academic activities						
Total						

## **PART B**

### **1. Vision, Mission and Programme Educational Objectives (75)**

#### **1.1. Vision and Mission(5)**

1.1.1. State the Vision and Mission of the institute and department (1)

(List and articulate the vision and mission statements of the institute and department)

1.1.2. Indicate how and where the Vision and Mission are published and disseminated (2)

(Describe in which media (e.g. websites, curricula, books, etc.) the vision and mission are published and how these are disseminated among stakeholders)

1.1.3. Mention the process for defining Vision and Mission of the department (2)

(Articulate the process involved in defining the vision and mission of the department from the vision and mission of the institute.)

#### **1.2. Programme Educational Objectives (10)**

1.2.1. Describe the Programme Educational Objectives (PEOs) (1)

(List and articulate the programme educational objectives of the programme considered for accreditation)

1.2.2. State how and where the PEOs are published and disseminated (1)

(Describe in which media (e.g. websites, curricula, books, etc.) the PEOs are published and how these are disseminated among stakeholders)

1.2.3. List the stakeholders of the programme (1)

(List the stakeholders of the programme under consideration for accreditation and articulate their relevance)

1.2.4. State the process for establishing the PEOs (3)

(Describe the process that periodically documents and demonstrates that the PEOs are based on the needs of the programme's various stakeholders. )

1.2.5. Establish consistency of the PEOs with the Mission of the institute(4)

(Describe how the Programme Educational Objectives are consistent with the Mission of the department.)

### **1.3. Achievement of Programme Educational Objectives (25)**

#### **1.3.1. Justify the academic factors involved in achievement of the PEOs (10)**

(Describe the broad curricular components that contribute towards the attainment of the Programme Educational Objectives.)

#### **1.3.2. Explain how the administrative system helps in ensuring the achievement of the PEOs (15)**

(Describe the committees and their functions, working processes and related regulations.)

### **1.4. Assessment of the achievement of the Programme Educational Objectives (30)**

#### **1.4.1. Indicate tools and processes used in assessment of the achievement of the PEOs (10)**

Describe the assessment process that periodically documents and demonstrates the degree to which the Programme Educational Objectives are attained. Also, include information on:

- a) The listing and description of the assessment processes used to gather the data upon which the evaluation of each programme educational objective is based. Examples of data collection processes may include, but are not limited to, employer surveys, graduate surveys, focus groups, industrial advisory committee meetings, or other processes that are relevant and appropriate to the programme;
- b) The frequency with which these assessment processes are carried out.

#### **1.4.2. Provide the evidence for the achievement of the PEOs (20)**

- a) The expected level of attainment for each of the programme educational objectives;
- b) Summaries of the results of the evaluation processes and an analysis illustrating the extent to which each of the programme educational objectives is being attained; and
- c) How the results are documented and maintained.

### **1.5. Indicate how the PEOs have been redefined in the past. (5)**

(Articulate with rationale how the results of the evaluation of the PEOs have been used to review/redefine the PEOs)

## 2. Programme Outcomes (225)

### 2.1. Definition and Validation of Course Outcomes and Programme Outcomes (20)

#### 2.1.1. List the Course Outcomes(COs) and the Programme Outcomes (POs) (2)

(List the course outcomes of the courses in programme curriculum and programme outcomes of the programme under accreditation.)

#### 2.1.2. State how and where the POs are published and disseminated (3)

(Describe in which media (e.g. websites, curricula, books, etc.) the POs are published and how these are disseminated among stakeholders)

#### 2.1.3. Indicate processes employed for defining of the POs (5)

(Describe the process that periodically documents and demonstrates that the POs are defined in alignment with the graduate attributes prescribed by the NBA.)

#### 2.1.4. Indicate how the defined POs are aligned to Graduate Attributes prescribed by the NBA (5)

(Indicate how the POs defined for the programme are aligned with the Graduate Attributes of the NBA as articulated in the accreditation manual.)

#### 2.1.5. Establish the correlation between the POs and the PEOs (5)

(Explain how the defined POs of the programme correlate with the PEOs)

### 2.2. Attainment of Programme Outcomes (50)

#### 2.2.1. Illustrate how the course outcomes contribute to the POs (5)

(Provide the correlation between the course outcomes and the programme outcomes. The strength of the correlation may also be indicated.)

#### 2.2.2. Explain how modes of delivery of courses help in attainment of the POs (10)

(Describe the different course delivery methods/modes (e.g. lecture interspersed with discussion, asynchronous mode of interaction, group discussion, project etc.) used to deliver the courses and justify the effectiveness of these methods for the attainment of the POs. This may be further justified using the indirect assessment methods such as course-end surveys.)

2.2.3. Indicate how assessment tools used to assess the impact of delivery of course/course content contribute towards the attainment of course outcomes/programme outcomes (10)

(Describe different types of course assessment and evaluation methods (both direct and indirect) in practice and their relevance towards the attainment of the POs.)

2.2.4. Indicate the extent to which the laboratory and project course work/industry internship contribute towards the attainment of the POs (25)

(Justify the balance between theory and practical for the attainment of the POs . Justify how the various project works/industry internships/field works carried as part of the programme curriculum contribute towards the attainment of the POs.)

### **2.3. Evaluation of the attainment of Programme Outcomes (125)**

2.3.1. Describe assessment tools and processes used for assessing the attainment of each PO (25)

Describe the assessment process that periodically documents and demonstrates the degree to which the Programme Outcomes are attained. Also, include information on:

- a) The listing and description of the assessment processes used to gather the data upon which the evaluation of each the programme outcome is based. Examples of data collection processes may include, but are not limited to, specific exam questions, student portfolios, internally developed assessment exams, project presentations, nationally-normed exams, oral exams, focus groups, industrial advisory committee;
- b) The frequency with which these assessment processes are carried out.

2.3.2. Indicate results of evaluation of each PO (100)

- c) The expected level of attainment for each of the program outcomes;
- d) Summaries of the results of the evaluation processes and an analysis illustrating the extent to which each of the programme outcomes are attained; and
- e) How the results are documented and maintained.

### **2.4. Use of assessment results towards improvement of programme (30)**

2.4.1. Indicate how the results of evaluation used for curricular improvements (5)

(Articulate with rationale the curricular improvements brought in after the review of the attainment of the POs)

2.4.2. Indicate how results of evaluation used for improvement of course delivery and assessment (10)

(Articulate with rationale the curricular delivery and assessment improvement brought in after the review of the attainment of the POs)

2.4.3. State the process used for revising/redefining the POs (15)

(Articulate with rationale how the results of the evaluation of the POs have been used to review/redefine the POs in line with the Graduate Attributes of the NBA.)

### 3. Programme Curriculum (100)

#### 3.1. Curriculum (20)

##### 3.1.1. Describe the structure of the curriculum (5)

Course Code	Course Title	Total number of contact hours				Credits
		Lecture (L)	Tutorial (T)	Practical <sup>#</sup> (P)	Total Hours	
.....	.....					
Total						

<sup>#</sup>Seminars, project works may be considered as practical

##### 3.1.2. Give the Prerequisite flow chart of courses (5)

[\(Draw the schematic of the prerequisites of the courses in the curriculum\)](#)

##### 3.1.3. Justify how the programme curriculum satisfies the programme specific criteria (10)

[\(Justify how the programme curriculum satisfies the programme specific criteria specified by the American professional societies relevant to the programme under accreditation\)](#)

#### 3.2. State the components of curriculum and their relevance to the POs and the PEOs (25)

[Programme curriculum grouping based on different components](#)

Course Component	Curriculum Content (% of total number of credits of the programme )	Total number of contact hours	Total Number of credits	POs	PEOs
Mathematics					
Science					
Computing					
Humanities					
Professional core					
.....					
.....					

### **3.3. Industry interaction/internship (30)**

(Give the details of industry involvement in the programme such as industry attached laboratories and partial delivery of courses and internship opportunities for students)

### **3.4. Curriculum Development (20)**

#### **3.4.1. State the process for designing the programme curriculum (5)**

(Describe the process that periodically documents and demonstrates how the programme curriculum is evolved considering the PEOs and the POs)

#### **3.4.2. Illustrate the measures and processes used to improve courses and curriculum (10)**

(Articulate the process involved in identifying the requirements for improvement in courses and curriculum and provide the evidence of continuous improvement of courses and curriculum)

### **3.5. Course Syllabi (5)**

(Include, in appendix, a syllabus for each course used. Syllabi format should be consistent and shouldn't exceed two pages.)

The syllabi format may include:

- Department, course number, and title of course
- Designation as a required or elective course
- Pre-requisites
- Contact hours and type of course (lecture, tutorial, seminar, project etc.,)
- Course assessment methods (both continuous and semester-end assessment)
- Course outcomes
- Topics covered
- Text books, and/or reference material



## 4. Students' Performance (100)

### 4.1. Admission intake in the programme (25)

#### 4.1.1. Admission intake (10)

Item	CAY	CAYm1	CAYm2	CAYm3
Sanctioned intake strength in the institute (N)				
Number of students, admitted on merit (N1)				
Number of students, admitted on management quota/otherwise (N2)				
Number of total admitted students in the institute (N1 + N2)				

Average percentage of seats filled through approved procedure =

#### 4.1.2. Admission Quality (15)

Divide the total admitted ranks (or percentage-marks of high school –class Xth) into 5 or a few more meaningful ranges

Rank Range/ % range	CAY	CAYm1	CAYm2	CAYm3
.....				
.....				
Admitted without rank				

Assessment = 1.5 x (Average percentage of students admitted through entrance examination/any qualifying examinations)

## 4.2.Success Rate (20)

Provide data for the past seven batches of students

Year of entry (in reverse chronologica l order	Number of students admitted in 1st year + admitted via lateral entry in 2nd year ( $N1$ + $N2$ )	Number of students who have successfully completed*		
		1st year	2nd year	3rd year
CAY				
CAY <sub>m1</sub>				
CAY <sub>m2</sub>				
CAY <sub>m3</sub>				
CAY <sub>m4</sub> (LYG)				
CAY <sub>m5</sub> (LYG <sub>m1</sub> )				
CAY <sub>m6</sub> (LYG <sub>m2</sub> )				

\*successfully completed implies zero backlogs

Success rate =  $20 \times$  mean of success index (SI) for past three batches

SI = (Number of students who graduated from the programme in the stipulated period of course duration) / (Number of students admitted in the first year of that batch and admitted in 2nd year via lateral entry)

Item	LYG (CAYm4)	LYGm1 (CAYm5)	LYGm2 (CAYm6)
Number of students admitted in the corresponding First Year + admitted via lateral entry in 2nd year			
Number of students who have graduated in the stipulated period			
Success index (SI)			

Average SI = .....

Success rate =  $20 \times$  Average SI = .....

### 4.3. Academic Performance (20)

Academic Performance =  $2 * \text{API}$

Where API = Academic Performance Index

= Mean of Cumulative Grade Point Average of all successful

Students on a 10 point CGPA System

OR

= Mean of the percentage of marks of all successful students / 10

Item	LYG (CAYm4)	LYGm1 (CAYm5)	LYGm2 (CAYm6)
Approximating the API by the following mid-point analysis			
9 < Number of students with CGPA < 10.0	0	0	0
8 < Number of students with CGPA < 9.0	18	29	7
7 <= 8	42	63	28
6 <= 7	36	28	17
5 <= 6	5	1	3
Total	101	121	55
Approximating API by Mid-CGPA			
<b>Mean of CGPA/Percentage of all the students (API)</b>	<b>7.72</b>	<b>7.4</b>	<b>7.17</b>

Av. API = 7.43

Academic Performance =  $2 \times \text{Av. API} = 14.86$

#### 4.4. Placement and Higher Studies (20)

$$\text{Assessment Points} = 20 \times (x + 1.25y)/N$$

where,  $x$  = Number of students placed

$y$  = Number of students admitted for higher studies with valid qualifying scores/ranks, and

$N$  = Total number of students who were admitted in the batch including lateral entry subject to maximum assessment points = 20

Item	LYG	LYG <sub>m1</sub>	LYG <sub>m2</sub>
Number of admitted students corresponding to LYG including lateral entry ( $N$ )			
Number of students who obtained jobs as per the record of placement office ( $x_1$ )			
Number of students who found employment otherwise at the end of the final year ( $x_2$ )			
$x = x_1 + x_2$			
Number of students who opted for higher studies with valid qualifying scores/ranks ( $y$ )			
Assessment points			

Average assessment points = \_\_\_\_\_

#### 4.5. Professional Activities (15)

4.5.1. Professional societies / chapters and organising engineering events (3)

(Instruction: The institution may provide data for past three years).

4.5.2. Organisation of paper contests, design contests, etc. and their achievements (3)

(Instruction: The institution may provide data for past three years).

4.5.3. Publication of technical magazines, newsletters, etc. (3)

(Instruction: The institution may list the publications mentioned earlier along with the names of the editors, publishers, etc.).

4.5.4. Entrepreneurship initiatives, product designs, and innovations (3)

(Instruction: The institution may specify the efforts and achievements.)

4.5.5. Publications and awards in inter-institute events by students of the programme of study (3)

(Instruction: The institution may provide a table indicating those publications, which fetched awards to students in the events/conferences organised by other institutes. A tabulated list of all other student publications may be included in appendix.)

## 5. Faculty Contributions (100)

### **List of Faculty: Exclusively for the Programme/Shared with other Programmes**

Name of the Faculty	Qualification, University and year of graduation	Designation and Date of Joining the Institution	Distribution of teaching load (%-age)			Number of research publications in journals and conference since joining	IPRs/ Patent/ Design	R&D and Consultancy, Testing work with amount	Interaction with Industry
			1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>				
....									
....									

(Instruction: The institution may complete this table for the calculation of the student-teacher ratio (STR).)

### **5.1. Student-Teacher Ratio (STR) (30)**

**STR is desired to be 20 or less**

Assessment =  $30 * 20 / \text{STR}$  :subject to Max. Assessment of 30.

Where STR= Student Teacher Ratio=  $(x+y)/N_1$ ,

Where x= Number of students in 2<sup>nd</sup> year of the programme

y= Number of students in 3<sup>rd</sup> year of the programme

N<sub>1</sub>= Total Number Faculty Members in the programme (by considering fractional load)

Year	X	Y	x+y	N1	STR	Assessment (Max. is 30)
CAYm2						
CAYm1						
CAY						
Average assessment						

**For Item Nos. 5.2 to 5.8, the denominator term (N) is computed as follows:-**

$N = \text{Maximum} \{N_1, N_2\}$

Where N<sub>1</sub>=Total Number of Faculty Members in the programme (Considering the fractional load),

N<sub>2</sub>=Number of Faculty positions needed for Student Teacher Ratio (STR) of 20.

Year	N1	N2	N= Max. (N1, N2)
CAYm2			
CAYm1			
CAY			

## 5.2. Faculty Qualifications (20)

Assessment = 2 \* FQI

Where FQI = Faculty Qualification Index

$$= (10 * x + 8 * y + 6 * z) / N$$

Where x = No. Of faculty members with PhD/M.Tech.Engg., or M.Tech.Ed./ 3Yrs Industrial Experience after PG.

y = No. of faculty members with M.E./M.Tech./NET Qualified/ 2 years Industrial experience after UG.

z = No. of faculty members with B.E./B.Tech./MSc./MCA/M.A

Year	X	Y	Z	N	FQI	Assessment
CAYm2						
CAYm1						
CAY						
Av. Assessment						

## 5.3. Faculty Training (20)

5.3.1. Training in Engineering & Technology/ Education/ Induction Programme from NITTTR like organisations for a duration of at least two weeks (10)

$$\text{Assessment} = 10 * (\text{Number of faculty trained in induction like programmes}) / (N)$$

5.3.2. Training of faculty in last three years from NITTTR like organisations for a duration of at least two weeks in content updation, management, innovation, laboratory etc.(5)

$$\text{Assessment} = 5 * (\text{Number of faculty trained in two week programmes}) / (3 * N)$$

5.3.3. Faculty trained in modular trimester/semester programme in Engineering Edu. (5)

$$\text{Assessment} = 5 * (\text{Number of faculty trained in engineering edu. programmes}) / (N)$$

**5.4. Faculty Retention (5)**

Assessment =RPI/N  
 Where RPI =Retention Point Index  
 =Point assigned to all Faculty

Where points assigned to a faculty = 1 point for each year of continuous service subject to a maximum of 5 points.

Item	CAYm2	CAYm1	CAY
Number of faculty with less than 1y (x0)			
Number of faculty with 1y<=period<2y(x1)			
Number of faculty with 2y<=period<3y(x2)			
Number of faculty with 3y<=period<4y(x3)			
Number of faculty with 4y<=period<5y(x4)			
Number of faculty with more than 5y(x5)			
N			
RPI=x1+2x2+3x3+4y4+5x5			
Assessment			
<b>Av. Assessment</b>			

**5.5. Faculty Research Publications (FRP) (5)**

Assessment of FP = Sum of the Publication Points scored by each Faculty member / N

Guidelines: A faculty member scores at most 5 publication points each year, depending upon the *quality* of the research papers published in the past 3 years.

The faculty publications considered include the research papers/chapters/books (i) which can be located on the internet and/or are included in hard-copy volumes/Conference proceedings, published by well known publishers, and (ii) wherein the faculty member’s affiliation, in the published paper/chapter/book, is of the current institution.

Include a list of all such publications along with details of DOI, impact factor, publisher, month/year, etc.

Name of faculty (contributing to FP)	FP Points (Max. 5 per year per faculty)		
	CAYm2	CAYm1	CAY
...			
.....			
.....			
Sum			
N(Number of faculty positions required for an STR of 20)			
Assessment FRP=Sum/N			
<b>Av. Assessment</b>			



### 5.6. Faculty Intellectual Property Rights (FIPR) (5)

Assessment of FIPR = Sum of the FIPR points scored by each Faculty member /N

Guidelines: A faculty member scores at most 5 FIPR points each year. FIPR includes awarded patents, books, designs and copyrights for technical contribution..

Name of faculty (contributing to FIPR)	FIPR Points (Max. 5 per year per faculty)		
	CAYm2	CAYm1	CAY
...			
.....			
.....			
Sum			
N			
Assessment FIPR= Sum/N			
Av. Assessment			

### 5.7. Funded R&D Projects, Consultancy and Testing(FRDCT) Work (5)

Assessment of Faculty R&D , Consultancy and Testing Work  
= Sum of FRDCT by each faculty / N

Guidelines: A faculty member gets at most 5 points each year, depending upon the amount and/or the contribution made. A suggestive scheme is given below for a minimum amount of Rs. 1 lac.,:-

- 5 points for funding by National Agency,
- 4 points for funding by State Agency,
- 3 points for funding by private sector, and
- 2 points for funding by the sponsoring Trust/Society
- 2 points for routine testing

Name of faculty (contributing to FRDCT)	FRDCT Points (Max. 5 per year per faculty)		
	CAYm2	CAYm1	CAY
...			
.....			
.....			
Sum			
N			
Assessment FRDCT=2xSum/N			
Av. Assessment			

### 5.8. Faculty Interaction with Outside World (10)

FIP = Faculty interaction points

$$\text{Assessment} = 2 \times (\text{Sum of FIP by each faculty member})/N$$

(Instruction: A faculty member gets maximum five interaction points, depending upon the type of institution or R&D laboratory or industry, as follows)

Five points for interaction with a reputed institution abroad, institution of eminence in India, or national research laboratories.

Three points for interaction with institution/industry (not covered earlier).

Points to be awarded, for those activities, which result in joint efforts in publication of books/research paper, pursuing externally funded R&D / consultancy projects, service to community programmes/workshops and/or development of semester-long course / teaching modules.

Name of faculty member (contributing to FIP)	FIP points		
	CAY <sub>m2</sub>	CAY <sub>m1</sub>	CAY
.....			
.....			
Sum			
<i>N</i>			
Assessment of FIP = $2 \times \text{Sum}/N$			
Average assessment			

## 6. Facilities and Technical Support (100)

Description of class rooms, tutorial rooms, laboratories, examination halls, faculty rooms, seminar and conference halls: (Entries in the following table are sample entries)

Room Description	Usage	Shared/Exclusive	Capacity	Rooms Equipped with PC, Internet, Book rack, ....	Adequacy as per norms
No. of class room	Class room for 2 <sup>nd</sup> year				
....					
Laboratories / Workshop					
Tutorial rooms					
Examination hall					
No. of seminar room	....				
No. of meeting room	....				
No. of faculty rooms			....		

### 6.1. Classrooms in the Department (10)

6.1.1. Adequate number of rooms for lectures (core/electives), seminars, tutorials, etc., for the programme (4)

(Instruction: Assessment based on the information provided in the preceding table.)

6.1.2. Teaching aids---multimedia projectors, etc. (3)

6.1.3. Acoustics, classroom size, conditions of chairs/benches, air circulation, lighting, exits, ambience, and such other amenities/facilities (3)

(Instruction: Assessment based on the information provided in the preceding table and the inspection thereof.)

### 6.2. Faculty Rooms in the Department (10)

6.2.1. Availability of individual faculty rooms (4)

(Instruction: Assessment based on the information provided in the preceding table.)

6.2.2. Room equipped with white/black board, computer, internet, and such other amenities/facilities (3)

(Instruction: Assessment based on the information provided in the preceding table)

6.2.3. Usage of room for counselling/discussion with students (3)

(Instruction: Assessment based on the information provided in the preceding table and the inspection thereof.)

The following table is required for the subsequent criteria.

Laboratory description in the curriculum	Exclusive use / shared	Space, number of students	Number of experiments	Quality of instruments	Laboratory manuals

**6.3. Laboratories in the Department to meet the Curriculum Requirements and the POs (60)**

Curriculum Laboratory Description	Exclusive use/Shared?	Space, Number of Students	Number of experiments	Quality of instruments	Laboratory manuals	Av. No. of hours of utilisation per week
...						
....						

6.3.1. Adequate, well-equipped laboratories to meet the curriculum requirements and the POs (20)

(Instruction: Assessment based on the information provided in the preceding table.)

6.3.2. Availability of computing facilities in the department (15)

(Instruction: Assessment based on the information provided in the preceding table.)

6.3.3. Availability of laboratories with technical support within and beyond working hours (10)

(Instruction: Assessment based on the information provided in the preceding table.)

6.3.4. Equipments to run experiments and their maintenance, number of students per experimental setup, size of the laboratories, overall ambience, etc. (15)

(Instruction: Assessment based on the information provided in the preceding table.)

#### 6.4. Technical Manpower Support in the Department (20)

Name of the technical staff	Designation	Pay-scale	Exclusive / shared work	Date of joining	Qualification		Other technical skills gained	Responsibility
					At Joining	Now		

6.4.1. Availability of adequate and qualified technical supporting staff for programme-specific laboratories (15)

(Instruction: Assessment based on the information provided in the preceding table.)

6.4.2. Incentives, skill-upgrade, and professional advancement (5)

(Instruction: Assessment based on the information provided in the preceding table.)

## 7. Academic Support Units and Teaching-Learning Process (150)

### 7.1. Academic Process (15)

7.1.1. Published schedule in academic calendar for assignments/test/examinations and distribution of corrected scripts (5)

Items in Academic Calendar	Conduct during the period or in the academic week	Performance Feedback*	
		Distribution of answer scripts	Answers scripts shown to students
Assignments ...			
Test ...			
Mid-sem. examination			
End-sem. examination			
Other activities ...			

\* Performance feedback will include evaluation-based comments on student's comprehension

7.1.2. Published time-table with sufficient hours for lectures, labs, tutorials, innovative projects, remedial classes and extra-curricular activities (5)

Specify the contents of the time-table.

7.1.3. Attendance Monitoring(5)

E-System of attendance of students, faculty and staff and how it is monitored and analysed. Produce cases of action.

## 7.2. Academic Support Units and Common facilities for First Year Courses (30)

7.2.1. Basic Science/Engineering Laboratories adequacy of space, number of students per students per batch, quality and availability of measuring instruments, laboratory manuals, list of experiments) (10)

Lab Description	Space, Number of Students	Number of Experiments	Operational status of instruments	Lab manuals	
				English	Local Language
...					
...					

7.2.2. Central computing laboratory (6)

Computing Lab	Space	Number of Computers	Software		Timings	Lab Assistance (Yes/No)
			Licensed SW with No. of Users	Open domain SW		
...						
...						

7.2.3. Manufacturing practices (mechanical/electrical) common workshop (10)

Workshop Description	Space & Number of Students	Number of Experiments		Instruments		Lab manuals & charts	
		As per Syllabus	Beyond Syllabus	Adequacy	Quality	In English	In local language
.....							
.....							

7.2.4. Communicative Skills Laboratory(4)

Language Lab	Space & Number of Students	Types of experiments	Quality of instructions	Guidance/Learning
In English				
In local language				

- Specify innovative initiatives taken towards excellence in communication skills.

### 7.3. Tutorial Classes/ Remedial Classes/ Mentoring (15)

#### 7.3.1. Tutorial classes and size of tutorial classes, hours per subject in timetable (6)

Provision of Tutorial classes in time table ?                      YES                      NO  
Tutorial Sheets ?                      YES                      NO  
Tutorial classes taken by: Faculty/Teaching Assistants/Senior Students/Other  
(specify)\_\_\_\_\_

Average number of tutorial classes per subject\_\_per week

Average number of students \_\_\_\_\_per tutorial class

Number of subjects with tutorials : 1<sup>st</sup> year\_\_\_\_2<sup>nd</sup> year \_\_\_\_\_3<sup>rd</sup> year \_\_\_\_\_

#### 7.3.2. Remedial classes and additional make-up test for weaker students: list of remedial classes, schedule of classes/tests and students' lists (4)

Provision of Remedial Classes in Time Table ?                      YES                      NO  
Number of subjects having Remedial Classes \_\_Subjects out of total subjects per semester  
Number of students having Remedial Classes \_\_Percentage of students out of total \_\_\_\_\_students in a semester

Number of hours of Makeup Test \_\_\_\_\_per-subject per semester

#### 7.3.3. Mentoring system (5)

Type of Mentoring: Professional guidance/Career advancement/Course work specific/Lab specific/Total development/

Number of faculty mentors\_\_\_\_\_,Number of students \_\_\_\_\_per mentor,

Frequency of meeting: Weekly /Monthly /.....per semester /Need based/other

### 7.4. Teaching in Programme – Specific laboratories and workshop (25)

#### 7.4.1. Laboratory activities and workshop manuals (10)

#### 7.4.2. Quality of laboratory manuals (5)

#### 7.4.3. Working equipment of laboratory and workshop (5)

Working equipment (3)

Removal of obsolescence (2)



7.4.4. Effectiveness of laboratory/workshop instruction (5)

7.5. Teaching Evaluation Process: Feedback System (20)

7.5.1. Design of Performa and process for feedback mechanism (7)

Number of Feedback parameters & its weight \_\_\_\_\_

Number of Feedback levels \_\_\_\_\_

Space for descriptive feedback/suggestion etc. ?            YES            NO

Any consistency check?    YES            NO

Any performance/attendance profile?                        YES            NO

Frequency of feedback collection: Once/Twice in a semester

Feedback collection : Hard-copy/Web-based

Mode of feedback: Selective/ From all students

Feedback collected for all courses?                            YES            NO

Specify the feedback collection process                        Electronic    Manual

When is feedback collected? \_\_\_\_\_

Percentage of students' participating \_\_\_\_\_

7.5.2. Feedback analysis and reward/corrective measures taken (8)

Specify the feedback analysis process \_\_\_\_\_

Is this done manually or computerised?

Specify weightage to parameters, such as expertise, communication, teaching methods, use of media, covering of syllabus / achievements of objectives in the feedback proforma and the utilisation of feedback analysis.

Basis of reward/corrective measures, if any \_\_\_\_\_

Is there any correlation of feedback with the examination result of the class? If yes, specify.

Number of corrective action in CAY \_\_\_\_\_ in CAYm1 \_\_\_\_\_ in CAYm2 \_\_\_\_\_

7.5.3. Feedback mechanism from alumni, parents and employers (5)

Specify the mechanism of feedback collection and analysis

Number of feedback received in CAY \_\_\_\_\_ in CAYm1 \_\_\_\_\_ in CAYm2 \_\_\_\_\_

Specify typical corrective actions taken, if any

---

**7.6. Innovative projects and learning beyond syllabus (15)**

7.6.1. Flexibility in curriculum with scope of innovation (5)

Specify flexibility \_\_\_\_\_

7.6.2. Availability of resources for innovation and learning beyond syllabus (5)

Specify provisions made

---

7.6.3. Specify innovation- conducive practices and projects undertaken in last three years (5)

CAYm1 .....  
CAYm2 .....  
CAYm3 .....

**7.7. Training, Placement and Entrepreneurship cell (15)**

7.7.1. Career guidance services including counselling for higher studies (5)

Specify – facility, management and impact

7.7.2. Training and placement facility with training and placement officer (TPO), industry interaction for training/internship/placement and impact (5)

Specify – facility, management and impact

7.7.3. Entrepreneurship cell and incubation facility (5)

Specify – facility, management and impact (no. of entrepreneurs produced in last three years)

**7.8. Co-curricular and Extra-curricular activities (15)**

7.8.1. Co-curricular and extra-curricular activities, e.g., NCC/ NSS, cultural activities etc. (6)

Specify – facilities and usage in brief

7.8.2. Sports facilities and activities with qualified sports instructors (6)

Specify – facility, management and usage

7.8.3. Life management and ethical practices (3)

Specify details.

## 8. Governance, Institutional Support and Financial Resources (75)

### 8.1. Campus Infrastructure and Facility (10)

#### 8.1.1. Maintenance of academic infrastructure and facilities (4)

(Instruction: Specify distinct features)

#### 8.1.2. Hostel (boys and girls), transportation facility, and canteen (2)

Hostels	No. of rooms	No. of students accommodated
Hostel for Boys:		
Hostel for Girls:		

#### 8.1.3. Electricity, power backup, telecom facility, drinking water, and security (4)

(Instruction: Specify the details of installed capacity, quality, availability, etc.)

### 8.2. Organisation, Governance, and Transparency (10)

#### 8.2.1. Governing body, administrative setup, and functions of various bodies (2)

(Instruction: List the governing, senate, and all other academic and administrative bodies; their memberships, functions, and responsibilities; frequency of the meetings; and attendance therein, in a tabular form. A few sample minutes of the meetings and action taken reports should be annexed.)

#### 8.2.2. Define rules, procedures, recruitment, and promotional policies, etc. (2)

(Instruction: List the published rules, policies, and procedures; year of publications; and state the extent of awareness among the employees/students. Also comment on its availability on the internet, etc.)

8.2.3. Decentralisation in working including delegation of financial power and grievance redressal system (3)

(Instruction: List the names of the faculty members who are administrators/decision makers for various responsibilities. Specify the mechanism and composition of grievance redressal system, including faculty association, staff-union, if any.)

8.2.4. Transparency and availability of correct/unambiguous information (3)

(Instruction: Availability and dissemination of information through the internet. Information provisioning in accordance with the Right to Information Act, 2005).

**8.3. Budget Allocation, Utilisation, and Public Accounting (10)**

Summary of current financial year's budget and the actual expenditure incurred (exclusively for the institution) for three previous financial years.

Item	Budgeted in CFY	Expenses in CFY (till ...)	Expenses in CFY <sub>m1</sub>	Expenses in CFY <sub>m2</sub>
Infrastructural built-up				
Library				
Laboratory equipment				
Laboratory consumables				
Teaching and non-teaching staff salary				
R&D				
Training and Travel				
Other, specify				
Total				

(Instruction: The preceding list of items is not exhaustive. One may add other relevant items if applicable.)

8.3.1. Adequacy of budget allocation (4)

(Instruction: Here the institution needs to justify that the budget allocated over the years was adequate.)

### 8.3.2. Utilisation of allocated funds (5)

(Instruction: Here the institution needs to state how the budget was utilised during the last three years.)

### 8.3.3. Availability of the audited statements on institute's website (1)

(Instruction: Here the institution needs to state whether the audited statements are available on its website.)

## 8.4. Program Specific Budget Allocation, Utilisation (10)

Summary of budget for the CFY and the actual expenditure incurred in the CFY<sub>m1</sub> and CFY<sub>m2</sub> (exclusively for this programme in the department):

Items	Budgeted in CFY	Actual expenses in CFY (till ...)	Budgeted in CFY <sub>m1</sub>	Actual Expenses in CFY <sub>m1</sub>	Budgeted in CFY <sub>m2</sub>	Actual Expenses in CFY <sub>m2</sub>
Laboratory equipments						
Software						
R&D						
Laboratory consumables						
Maintenance and spares						
Training and Travel						
Miscellaneous expenses for academic activities						
Total						

### 8.4.1. Adequacy of budget allocation (5)

(Instruction: Here the institution needs to justify that the budget allocated over the years was adequate.)

### 8.4.2. Utilisation of allocated funds (5)

(Instruction: Here the institution needs to state how the budget was utilised during the last three years.)

## 8.5. Library (20)

8.5.1. Library space and ambience, timings and usage, availability of a qualified librarian and other staff, library automation, online access, networking, etc. (5)

(Instruction: Provide information on the following items.).

Carpet area of library (in m<sup>2</sup>) Reading space (in m<sup>2</sup>)

Number of seats in reading space

Number of users (issue book) per day

Number of users (reading space) per day

Timings: During working day, weekend, and vacation

Number of library staff

Number of library staff with degree in Library

Management Computerisation for search, indexing, issue/return records

Bar coding used

Library services on Internet/Intranet INDEST or other similar membership archives

8.5.2. Titles and volumes per title (4)

Number of titles ..... Number of volumes .....

	Number of new titles added	Number of new editions added	Number of new volumes added
CFY <sub>m2</sub>			
CFY <sub>m1</sub>			
CFY			

8.5.3. Scholarly journal subscription (3)

Details		CFY	CFY <sub>m1</sub>	CFY <sub>m2</sub>	CFY <sub>m3</sub>
Science	As soft copy				
	As hard copy				

Engg and Tech	As soft copy				
	As hard copy				
.....	As soft copy				
	As hard copy				
	As soft copy				
	As hard copy				
	As soft copy				
	As hard copy				

#### 8.5.4. Digital Library (3)

Availability of digital library contents:

If available, then mention number of courses, number of e-books, etc.

Availability of an exclusive server:

Availability over Intranet/Internet:

Availability of exclusive space/room:

Number of users per day:

#### 8.5.5. Library expenditure on books, magazines/journals, and miscellaneous contents (5)

Year	Expenditure				Comments, if any
	Book	Magazines/journals (for hard copy subscription)	Magazines/journals (for soft copy subscription)	Misc. Contents	
CFY $m_2$					
CFY $m_1$					
CFY					



## **8.6. Internet (5)**

Name of the Internet provider:

Available bandwidth:

Access speed:

Availability of Internet in an exclusive lab:

Availability in most computing labs:

Availability in departments and other units:

Availability in faculty rooms:

Institute's own e-mail facility to faculty/students:

Security/privacy to e-mail/Internet users:

(Instruction: The institute may report the availability of Internet in the campus and its quality of service.)

## **8.7. Safety Norms and Checks (5)**

8.7.1. Checks for wiring and electrical installations for leakage and earthing (1)

8.7.2. Fire-fighting measurements: Effective safety arrangements with emergency / multiple exits and ventilation/exhausts in auditoriums and large classrooms/labs, fire-fighting equipment and training, availability of water, and such other facilities (1)

8.7.3. Safety of civil structure (1)

8.7.4. Handling of hazardous chemicals and such other activities (2)

(Instruction: The institution may provide evidence that it is taking enough measures for the safety of the civil structures, fire, electrical installations, wiring, and safety of handling and disposal of hazardous substances. Moreover, the institution needs to show the effectiveness of the measures that it has developed to accomplish these tasks.)

## **8.8. Counselling and Emergency Medical Care and First-aid (5)**

Availability of counselling facility

Arrangement for emergency medical care

Availability of first-aid unit

(Instruction: The institution needs to report the availability of the facilities discussed

here.)

## 9. Continuous Improvement (75)

This criterion essentially evaluates the improvement of the different indices that have already been discussed in earlier sections.

From 9.1 to 9.5 the assessment calculation can be done as follows.

If a, b, c are improvements in percentage during three successive years, assessment can be calculated as

$$\text{Assessment} = (b-a) / (100-\min(b,a)) + (c-b) / (100-\min(c,b))$$

### 9.1 Improvement in Success Index of Students (5)

From 4.2

Items	LYG	LYG <sub>m1</sub>	LYG <sub>m2</sub>	Assessment
Success index				

### 9.2 Improvement in Academic Performance Index of Students (5)

From 4.3

Items	LYG	LYG <sub>m1</sub>	LYG <sub>m2</sub>	Assessment
API				

### 9.3 Improvement in Student-Teacher Ratio (5)

From 5.1

Items	CAY	CAY <sub>m1</sub>	CAY <sub>m2</sub>	Assessment
STR				

### 9.4 Enhancement of Faculty Qualification Index (5)

From 5.2

Items	CAY	CAY <sub>m1</sub>	CAY <sub>m2</sub>	Assessment
FQI				

**9.5 Improvement in Faculty Research Publications, R&D Work, Consultancy and Testing Work (10)**

From 5.5 and 5.7

Items	LYG	LYG <sub>m1</sub>	LYG <sub>m2</sub>	Assessment
FRP				
FRDC				

**9.6 Continuing Education (10)**

In this criterion, the institution needs to specify the contributory efforts made by the faculty members by developing the course/laboratory modules, conducting short-term courses/workshops, etc., for continuing education during the last three years.

Module description	Any other contributory institute/ industry	Developed/ organised by	Duration	Resource persons	Target audience	Usage and citation, etc.
.....						
.....						

Assessment =

**9.7 New Facility Created (15)**

Specify new facilities created during the last three years for strengthening the curriculum and/or meeting the POs:

**9.8 Overall Improvement since last accreditation, if any, otherwise, since the commencement of the programme (20)**

Specify the overall improvement:

Specify the strengths/ weakness	Improvement brought in	Contributed by	List the PO(s), which are strengthened	Comments, if any
CAY				
CAY <sub>m1</sub>				
CAY <sub>m2</sub>				
.....				
.....				

## Declaration

The head of the institution needs to make a declaration as per the format given below:

This Self-Assessment Report (SAR) is prepared for the current academic year (\_\_\_\_\_) and the current financial year (\_\_\_\_\_) on behalf of the institution.

I certify that the information provided in this SAR is extracted from the records and to the best of my knowledge, is correct and complete.

I understand that any false statement/information of consequence may lead to rejection of the application for accreditation for a period of two or more years. I also understand that the National Board of Accreditation (NBA) or its sub-committees will have the right to decide on the basis of the submitted SAR whether the institution should be considered for an accreditation visit.

If the information provided in the SAR is found to be wrong during the visit or subsequent to grant of accreditation, the NBA has right to withdraw the grant of accreditation and no accreditation will be allowed for a period of next two years or more and the fee will be forfeited.

I undertake that the institution shall co-operate the visiting accreditation team, shall provide all desired information during the visit and arrange for the meeting as required for accreditation as per the NBA's provision.

I undertake that, the institution is well aware about the provisions in the NBA's accreditation manual concerned for this application, rules, regulations and notifications in force as on date and the institute shall fully abide to them.

Place:  
Date:

Signature, Name, and Designation of the  
Head of the Institution with seal