# Format for
# Self Assessment Report (SAR)
# for NBA Accreditation of Undergraduate Engineering Programme

_____

(Name of the Programme)

(Name and Address of the College / Institute /University)

**National Board of Accreditation
New Delhi, India**

**June 2009**

# FOREWORD

National Board of Accreditation (NBA), was established in September 1994. The NBA is entrusted with the task of evolving a procedure for quality assessment in the technical education sector, and specifically to

- Articulate the criteria for assessment of quality;
- Identify parameters to quantitatively assess these criteria and assign appropriate programme-specific weights;
- Validate the procedure by well - designed test runs;
- Establish appropriate benchmarks.

The unprecedented expansion of the technical education sector in India in recent years has brought in its wake questions about the quality of education imparted, the competence of the graduates and their relevance to the current technical manpower needs of our country. The concurrent ISO standardization movement in the industrial scene has highlighted the need for accrediting programmes, especially in terms of their role as the main suppliers of technically qualified human resource.

It is heartening to note in this context that the NBA is now bringing out second edition of Manual for Accreditation of for Engineering (UG) programmes in India. It consists of four Sections, viz.,

- Accreditation Policy and Procedure
- Evaluation guidelines
- Evaluation Report
- Self Assessment Report

It is hoped that this manual will provide the students, parents, employers and the society at large, comprehensive information on all aspects of the Quality Assurance provided by the NBA to assist them in making a judicious choice among competing educational programmes.

This manual is the culmination of sustained efforts and mutually supporting interaction amongst several individuals, organizations and agencies. This manual addresses the equivalence of evaluation and accreditation processes for engineering education programs to international standards so as to ensure opportunities for global mobility of engineering graduates.

We would be failing in our duty if we do not place on record our gratitude and appreciation for the help we have received from the following people.

- The Members of the Board of the NBA and the NBA Engineering Committee for their ready and willing cooperation and the officials of NBA for their dedicated efforts.

- Committee comprising Prof. S.C. Sahasrabudhe Director, DAACT, Gandhinagar, Prof. M.U. Deshpande Former Professor, IIT – Bombay, Prof. Gopal Ranjan Former VC, IIT, Roorkee, Prof. Gautam Biswas IIT, Kanpur, Prof S Sen Gupta IIT Kharagpur, Prof. V.P. Kodali, Ex Director of E&I, DRDO, Shri Ravi Kumar, presently Principal Secretary (Technical Education), Govt of Rajasthan for their valuable contribution in drafting the initial accreditation manual.

- Prof. Ashok Saxena University of Arknas, USA and Prof K. Vedula University of Manchester, USA for their valuable guidance

- Committee comprising Prof S K Khanna Former Chairman AICTE, Prof K L Chopra, Former Director – IIT – Kharagpur, Prof S Sen Gupta, IIT – Kharagpur,  Prof J P Gupta, VC – Jaypee University, Noida, Prof Rajeev Kumar, IIT Kharagpur for their contribution in refining, revising and presenting the final version of the accreditation manual.

We welcome suggestions from all the stakeholders in Engineering Education in order to bring further improvement in the effort of NBA to provide a transparent and credible System of accreditation of engineering programs in India.

**Prof. P.N. Srivastava**
**Chairman, NBA**

# Organization of the SAR :

The Self Assessment Report should be submitted using the format which is organized in the following four parts:

Part I:  Institutional Summary for Criteria I and II.

Part II:  Department/Programme Summary for Criteria III to VIII.

Part III:  Curriculum and syllabus for the degree programme along with the identified Programme Evaluation Objectives (PEOs).

Part IV:  List of Documents to be made available during the accreditation visit.

## Abbreviations:

**CAY** -- Current Academic Year                 e.g., __2009 – 10___
CAY$m1$  ---  Current Academic Year *minus* one          e.g., __2008 – 09___
CAY$m2$  ---  Current Academic Year *minus* two          e.g., __2007 – 08___

**LYG** -- Latest Year of Graduation          e.g., __2008 – 09___
LYG$m1$  ---  Latest Year of Graduation *minus* one     e.g., __2007 – 08___

**CFY** -- Current Financial Year
CFY$m1$  ---  Current Financial Year *minus* one

## Notes:

1. It would be greatly appreciated if precise and specific details, as requested in this format, are provided in tabular form and/or using bullets as far as possible. No detailed description should be included anywhere; do not include any detail/information which is not asked for. In case, you wish to add any data/information which is not asked for, kindly add in annexure.

2. Unless otherwise specified, do not include any data beyond three years.

3. If not specified otherwise, the information requested is meant to be the "*Average*" over sufficient samples, as applicable.

4. Kindly select/use the appropriate word/phrases, e.g., college/Institute/ University and Principal/ Director/Vice-Chancellor whichever as applicable.

**CAY** _____    **LYG** _____    **CFY** _____

## <u>Declaration</u>

This Self Assessment Report (SAR) is prepared for Current Academic Year (_____) and Current Financial Year (_____) on behalf of us by the team headed by the Principal/Director/Vice Chancellor of the Institution. I certify that the information provided in this SAR is extracted from the records and to the best of our knowledge, is correct and complete

  I understand that any false statement/information of consequence may lead to the 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 subcommittee 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 of consequence was found to be wrong during the visit or subsequent to grant of accreditation, NBA has right to withdraw the accreditation granted, if any, and no accreditation will be allowed for a period of two years or more.


Place:           Name, Designation and Seal
Date:    of the Chairman, Governing Council of the Institute with signature

# PART I

## INSTITUTIONAL SUMMARY
### (Criteria I and II)

I.0.1. College/ Institution/University Name and Address:

I.0.2. Name, designation, telephone numbers and e-mail id of the contact person for NBA:

I.0.3. History of the College / Institution (including dates of introduction and no. of seats of various programmes of study along with NBA accreditation, if any), in tabular form:

| Year | Description |
|---|---|
| . . . . | College/Inst. started with the following programmes (Intake strength) . . . . . |
| . . . . . . | NBA-AICTE Accreditation visits and accreditation granted, if any . . . . |
| . . . . | Addition of new programmes, increase in intake strength of the existing programmes and/or accreditation status . . . . |

I.0.4. Ownership Status : Govt.(Central/State) / Trust / Society (Govt. / NGO / Private) / Private/ Other (specify)_____

I.0.5. Financial Status : Govt.(Central/State) / Grants-in-aid / Not-for-profit / Private-Self financing / Other(specify)_____

I.0.6. Nature of Trust / Society : _____
List other Institutes/colleges run by the Trust/Society

I.0.7. External Sources of Funds :

| Name of External Sources | CFY | CFYm1 | CFYm2 |
|---|---|---|---|
| . . . . . | | | |
| . . . . . | | | |

I.0.8. Internally Acquired Funds :

| Name of Internal Sources | CFY | CFYm1 | CFYm2 |
|---|---|---|---|
| Students' fee | | | |
| . . . . . | | | |

I.0.9. Scholarships or any financial assistance provided to students ?    YES    NO
if provided, basis of scholarship/assistance : Merit/Parent's limited income/other _____
# of Assistance _____ Amount _____ in CFY
# of Assistance _____ Amount _____ in CFY *minus* 1
# of Assistance _____ Amount _____ in CFY *minus* 2

I.0.10. Basis/examination for admission to the engineering college:
All India entrance / State level entrance / University entrance / 12<sup>th</sup> level / other *(specify)* _____

I.0.11. Total No. of Engineering Students  _____        Boys _____  Girls _____
Total No. of Other Students, if any  _____        Boys _____  Girls _____

I.0.12. Total No. of Employee  _____        Male _____  Female _____

I.0.13. Minimum and maximum number of faculty and staff on roll, in the Engineering College/Institute/Faculty, during the CAY and the previous CAYs (1<sup>st</sup> July to 30<sup>th</sup> June):

| Items | CAY | | CAYm 1 | | CAYm2 | |
|---|---|---|---|---|---|---|
| | Min | Max | Min | Max | Min | Max |
| Teaching faculty in Engineering | | | | | | |
| Teaching faculty in Science and Humanities | | | | | | |
| Non-teaching staff | | | | | | |

**Criterion I: Organization & Governance, Resources, Institutional Support, Development & Planning**

**I-I.1 Campus infrastructure and facility (30)**
I-I.1.1 Land, built up area and academic infrastructure (**5**)
  - Physical resources available
      A. Exclusive for this college        Land ____ acres        Built up floor space _____ sqm
      B. Shared with other colleges
        in this campus, if any        Land ____ acres        Built up floor space _____ sqm

I-I.1.2 Maintenance of academic infrastructure and facilities (**5**)

    Specify distinct features . . .

I-I.1.3 Ambience, green cover, water harvesting, environment preservation etc. (**5**)

    Specify distinct features . . .

I-I.1.4 Hostel (Boys and girls) (**5**)
      Hostel for Boys? Yes/No        Exclusive/Shared/Rented
        # of Rooms _____ # of accommodated students _____ # in waiting _____

      Hostel for Girls? Yes/No        Exclusive/Shared/Rented
        # of Rooms _____ # of accommodated students _____ # in waiting _____

I-I.1.5 Transportation facility and canteen (**5**)
      Transport?        Yes/No        Exclusive/State-transport
        # of Buses _____ Facility availed by _____

      Canteen?        Yes/No
        # of Canteen _____ Sitting space _____ Daily Usage _____

I-I.1.6 Electricity, power backup, telecom, water etc (**5**)
      -- specific details in respect of installed capacity, service points for distribution, water purification etc.

**I-I.2 Organization, governance and transparency (20)**
I-I.2.1 Governing body, administrative setup and functions of various bodies (**5**)

List Governing, Senate and all other Academic and Administrative bodies, their memberships, functions and responsibilities, relation of the members of the members of such bodies with the principal owner of the college/institute, frequency of the meetings and attendance therein, in tabular form. A few sampler minutes of the meetings and action taken reports should be annexed.

I-I.2.2 Defined rules, procedures, recruitment and promotional policies etc (**5**)

List of the published rules, policies and procedures, year of publications, awareness among the employees/students, availability on web etc.

I-I.2.3 Decentralization in working and grievance addressal system (**5**)

- List of faculty members who are administrators/decision makers for various assigned jobs
- Specify the mechanism and composition of grievance addressal system, including faculty association, and staff-union, if any.

I-I.2.4 Transparency and availability of correct/unambiguous information (**5**)

- Dissemination and Availability of institute/program specific information through the web
- Formation of a Cell in accordance with the provisions of Right To Information Act, 2005

**I-I.3 Budget allocation and its utilization (10)**

Summary of current financial year's budget and the actual expenditures incurred (exclusively for the College/Institute) for three preceding financial years

| Item | Budgeted in CFY | Expenses in CFY (till . . . ...) | Expenses in CFYm1 | Expenses in CFYm2 |
|---|---|---|---|---|
| Acquisition of land; & new buildings and infrastructural built-up | | | | |
| Library | | | | |
| Laboratory Equipment | | | | |
| Laboratory consumables | | | | |
| Teaching & Non-Teaching staff salary | | | | |
| Travel | | | | |
| Other, specify . . . | | | | |

**I-I.4 Library (25)**
I-I.4.1 Library space and ambience, timings and usage (**5**)

Carpet area of Lib. _____ sqm   Reading Space _____ sqm   # of Seats in reading space _____
# of Users (issue book) _____ per day     # of Users (Reading space) _____ per day

Timings :  Academic Working day _____ Academic Weekend _____
           Vacation _____

I-I.4.2 Availability of a qualified librarian and other staff, Library automation, online access, networking (**5**)

# of Lib. Staff _____     # of Lib. Staff with Degree in Lib. _____

Computerization for search, indexing, issue/return records ?     Yes    No

|  | | |
|---|---|---|
| Bar-coding used ? | Yes | No |
| Lib services on internet/intranet ? | Yes | No |
| INDEST or other similar membership ? specify _____ | Yes | No |

I-I.4.3 Variety of titles and the volumes per title (**5**)

# of Titles _____    # of Volumes _____

| Year | # of New Titles added | # of New Editions added | # of New Volumes added |
|---|---|---|---|
| CFYm2 | | | |
| CFYm1 | | | |
| CFY | | | |

I-I.4.4 Journal subscription and internationally acclaimed titles (**5**)

| Year | # of Technical Magazines/ Periodicals | # of Total Technical Journals subscribed | | Internationally acclaimed titles in (originals, reprints) |
|---|---|---|---|---|
| | | in Hardcopy | In Softcopy | |
| CFYm2 | | | | |
| CFYm1 | | | | |
| CFY | | | | |

I-I.4.5 Digital library (**5**)

Availability of Digital Lib. contents ?          Yes      No

If available,
 # of Courses _____  # of Books _____  Any other ?
 Availability of an exclusive server ?      Yes      No
 Availability over intranet/internet ?      Yes      No
 Availability of exclusive space/room ?     Yes      No
 # of Users _____ per day.

**I-I.5 Academic support units and common facilities for FIRST YEAR Courses (20)**
I-I.5.1 Core laboratories (Adequacy of space, number of students per batch, quality and availability of measuring instruments, laboratory manuals, list of experiments) (**10**)

| Core Lab Description | Space/# Students | # of experiments | Quality of instruments | Lab manuals |
|---|---|---|---|---|
| . . . | | | | |
| . . . . | | | | |

I-I.5.2 Central computing laboratory (**4**)

| Computing Lab | Space | # of Computers | Variety of SWs | Usage/Timings | Lab Assistance? |
|---|---|---|---|---|---|
| . . . | | | | | |
| . . . . | | | | | |

I-I.5.3 Manufacturing practices laboratory (**4**)

| Lab Description | Space/# Students | # of experiments | Quality of instruments | Lab manuals |
|---|---|---|---|---|
| . . . | | | | |
| . . . . | | | | |

I-I.5.4 Language laboratory (**2**)

| Language Lab | Space/# Students | Type of experiments | Quality of instructions | Guidance/Learning |
|---|---|---|---|---|
| . . . | | | | |
| . . . . | | | | |

**I-I.6 Internet (5)**

Internet Provider _____          BW _____
Access Speed ?      Poor      Good      Excellent

Availability
      Availability in an exclusive lab for Internet use ?      Yes      No
      Availability in most computing labs ?      Yes      No
      Availability in departments and other units ?      Yes      No
      Availability in faculty rooms ?      Yes      No

**I-I.7 Co-curricular and extra curricular activities (10)**
I-I.7.1 Co-curricular and extra-curricular activities, e.g., NCC/ NSS, cultural activities etc. (**5**)

    Specify – facilities and usages in brief ?

I-I.7.2 Sports grounds and facilities (**5**)

    Specify – facility, management and usages ?

**I-I.8 Career guidance, Training, placement and Entrepreneurship cell (15)**
I-I.8.1 Effective career guidance services including counseling for higher studies (**5**)

    Specify – facility, management & impact ?

I-I.8.2 Training and placement facility with training-n-placement officer (TPO), industry interaction for training/internship/placement (**5**)

    Specify – facility, management & impact ?

I-I.8.3 Entrepreneurship cell and incubation facility (**5**)

    Specify – facility, management & impact ?

**I-I.9 Safety norms and checks (5)**

    Specify how safety norms and checks carried out in buildings, laboratories (e.g. those using hazardous chemicals, high voltages etc.) and other critical installations. Comment on how checks are conducted and how frequently are these carried out

**I-I.10 Emergency medical care and first-aid (10)**
I-I.10.1 Medical staff to provide first-aid and medical help in emergency;

    #_Medical practitioners _____     #_of_nursing staff _____
    Specify Medical facility within the Inst./College ?
    Medical facility nearby ?


I-I.10.2 Availability of ambulance services (response times and medical facility);

    #_of ambulances within the Inst./college _____ Facility in ambulances _____
    Response-time in calling ambulance services from outside _____

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**Criterion II: Evaluation and Teaching-Learning Process**

**II-I.1 Evaluation system (40)**
II-I.1.1 Published schedule in academic calendar for assignments/mid-semester tests, distribution of corrected
    scripts (**10**)

| Items in Academic Calendar | Conduct during the period or in the academic week | Performance Feedback / Distribution of Scripts during the period or in the academic week |
|---|---|---|
| Assignments . . . | | |
| Tests . . . | | |
| Mid-sem. examination | | |
| End-sem. examination | | |
| Other activities . . . | | |


II-I.1.2 Maintenance of Course files – class deliveries and their closeness and mapping with Program
    Educational Objectives (PEOs) (**15**)

    Produce sample (best and average quality) course files, handouts showing course deliveries mapped with
    the identified PEOs. In case of an affiliated college, there may be a provision of teaching additional topics
    and supplementary tests/examinations in order to achieve the identified PEOs.

    This exercise is aimed at to assess the provision and ability of the college to do the above in order to
    achieve the stated PEOs.


II-I.1.3 Quality of problems in assignments/tests/semester examinations and their closeness and mapping with
    Program Educational Objectives (PEOs) (**15**)

    Produce sample (best and average quality) assignment sheets, lab sheets, test/examination question papers
    along with model solutions to assess how the PEOs are achieved by examining students' knowledge
    through assignments and examinations. In case of an affiliated college, there may be a provision of
    additional/supplementary tests/examinations to examine the additional subject topics covered to achieve
    the identified PEOs.

    This exercise is aimed at to assess the provision and ability of the college to do the above in order to
    achieve the stated PEOs.

**II-I.2 Tutorial classes/ remedial classes/ mentoring (20)**

II-I.2.1 Tutorial classes to address personal level doubts and queries : size of tutorial classes, hours per subject in timetable (**10**)

Provision of Tutorial classes in time-table ?　　　　　YES　　NO
Tutorial Sheets ?　　YES　　NO
Tutorial classes taken by : Faculty/Teaching Assistants/Senior Students/Other (specify)_____
#_of_tutorial classes  per subject _____ per week　　　#_of_students _____ per tutorial class

#_of_subjects_with_tutorials : 1$^{st}$ year _____　2$^{nd}$ year _____　3$^{rd}$ year _____　4$^{th}$ year _____

II-I.2.2 Remedial classes and additional make-up tests to help academically weaker students : list of remedial classes, schedule of classes/tests and students' lists (**5**)

Provision of Remedial Classes in Time Table ?　　　　YES　　NO
#_of_subjects_having_Remedial Calsses _____ subjects out of total _____ subjects per semester
#_of_students_having_Remedial Calsses _____ students out of total _____ students in a semester
#_of_hours_of_Remedial_classes _____ per-subject per week

Provision of Makeup Tests in Academic Calendar ?　　YES　　NO
#_of_subjects_having_Makeup_Tests _____ subjects out of total _____ subjects per semester
#_of_students_having_Makeup_Tests _____ students out of total _____ students in a semester
#_of_hours_of_Makeup_Tests _____ per-subject per week

II-I.2.3 Mentoring system to help at individual levels (**5**)

Type of Mentoring : Professional guidance/Career advancement/Course work specific/
　　　　　　　　Lab specific/Total development/
#_of_faculty_mentors _____　　　#_of students _____ per mentor
Frequency of Meeting: Weekly/ Monthly/ . . . . .per semester/ Need based/ other

**II-I.3 Teaching evaluation process : Feedback system (30)**

II-I.3.1 Design of proforma and process of feedback evaluation (**5**)

#_of_Feedback_Items _____　　　#_of_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

II-I.3.2 Feedback analysis and percentage of students' participation (**5**)

Feedback collected for all courses ?　　　　　YES　　NO
Specify the feedback collection process _____
　　　Who collects the feedback? _____
　　　When feedback is collected ? _____
　　　Percentage of students participating _____

Specify the feedback analysis process _____
　　　Is this done manually ?　　　　　YES　　NO
　　　What metrics are calculated ? _____
　　　What is inferred from the metrics ? _____
　　　How are the comments used ?_____

II-I.3.3 System of reward/corrective measures etc. (**10**)

Basis of reward/corrective measures, if any, _____
Were extraneous factors, like hard-/soft-attitude of the instructor considered ?   YES   NO
Was result considered?                                                                                           YES   NO
# of awards                    in CAY _____   in CAYm1 _____   in CAYm2 _____
# of corrective action      in CAY _____   in CAYm1 _____   in CAYm2 _____

II-I.3.3 Any feedback mechanism from alumni, parents and industry (**10**)

Specify the mechanism of feedback collection and analysis _____
_____

# of feedback received      in CAY _____   in CAYm1 _____   in CAYm2 _____

Specify typical corrective actions taken, if any _____

**II-I.4 Self Learning and Learning beyond syllabus (20)**
II-I.4.1 Generation of self-learning facilities and motivation (**10**)

Specify self-learning mode and modules _____

II-I.4.2 Availability of learning beyond syllabus contents and promotion (**10**)

Specify learning beyond syllabus contents and modules _____

**II-I.5 Faculty Ratio and qualification for FIRST YEAR Common Courses (25)**

List of faculty members teaching first year courses:

| Name of Faculty | Qualification | Designation | Date of joining college | Department with which associated | Name of the course taught |
|---|---|---|---|---|---|
| . . . | | | | | |
| . . . . | | | | | |

II-I.5.1 Assessment of Faculty Availability for FIRST YEAR courses in teacher-student ratio of 1: 15 (**15**)

Three years of data for first year courses to calculate the teacher-student ratio:

| Items | CAY | CAYm1 | CAYm2 |
|---|---|---|---|
| Number of students in First Year | | | |
| Number of faculty teaching first year courses | | | |
| Teacher-student ratio | | | |

Av. Teacher-student ratio (in first year courses): _____

II-I.5.2 Assessment of Qualification (**10**)

Assessment of Qualification = $(10 * x + 6 * y + 4 * z) / N$
Where   $x$   = No. of Faculty Members with Ph. D
            $y$   = No. of Faculty Members with M. E / M. Tech.
            $z$   =  No. of Faculty Members with B. E / B. Tech./M.Sc./M.A
            $N$   = Total No. Faculty Members

| Year | x | y | z | N | Assessment of Qualification |
|------|---|---|---|---|------------------------------|
| CAYm2 | | | | | |
| CAYm1 | | | | | |
| CAY | | | | | |
| | | | | Average Assessment of Qualification | |

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**II-I.6 Academic performance in First Year Common Courses (40)**

Academic Performance = 40 * FYSI
     where FYSI = First Year Success Index
         = (No. of students who have cleared all the subjects in a single attempt of their semester or year end examination) / (Total no. of students admitted in the first year)

| Items | CAYm1 | CAYm2 | CAYm3 |
|-------|-------|-------|-------|
| No. of students admitted in First Year | | | |
| No. of students who have cleared all subjects in single attempt | | | |
| First Year Success Index (FYSI) | | | |

Av. FYSI = _____

Academic Performance = 40 * Av. FYSI = _____

# PART II
## Department / Programme Summary
## (Criteria III to VIII)

D.0.1. Name and Address of the Department:

D.0.2. Name, designation, telephone numbers and e-mail id of the contact person for NBA:

D.0.3. History of the Department (including dates of introduction and no. of seats of various programmes of study, which are run by the department along with NBA accreditation, if any), in tabular form:

| Programme of Study | Description |
|---|---|
| UG in . . . . . . . | Started with _____ seats in _____<br>Intake increased to _____ in _____<br>Intake increased to _____ in _____<br><br>Accredited by NBA-AICTE in _____ for __ years<br>Accredited by NBA-AICTE in _____ for __ years |
| UG . . . . . | . . . .<br>. . . . . . |
| MCA | . . . . . . . |
| PG . . . . | . . . . . . . . |

D.0.4. List the names of the Programmes/Departments which share human resources and/or the facilities of this Department/Programmes

D.0.5. Total No. of Students _____ Boys _____ Girls _____

D.0.6. Total No. of Employee _____ Male _____ Female _____

D.0.7. Minimum and maximum number of faculty and staff on roll during the current and previous two academic years (1$^{st}$ July to 30$^{th}$ June) in the Department :

| | CAY | | CAY minus 1 | | CAY minus 2 | |
|---|---|---|---|---|---|---|
| | Min | Max | Min | Max | Min | Max |
| Teaching faculty in the Department | | | | | | |
| Teaching faculty with the Programme | | | | | | |
| Non-teaching staff | | | | | | |

D.0.8. Summary of budget for the CFY and the actual expenditures incurred in the CFYm1 and CFYm2 (exclusively for this Programme in the Department)

| Items | Budgeted in CFY | Actual expenses in CFY (till . . . . ...) | Actual Expenses in CFYm1 | Actual Expenses in CFYm2 |
|---|---|---|---|---|
| Laboratory equipments | | | | |
| SW purchase | | | | |
| Laboratory consumables | | | | |
| Maintenance and spares | | | | |
| Travel | | | | |
| Miscellaneous expenses for academic activities | | | | |

## Criterion III : Students' Entry and Outputs (150)

### III-P.1 Students admission (10)

#### Admission Intake

| Items | CAY | CAYm1 | CAYm2 | CAYm3 |
|---|---|---|---|---|
| Sanctioned Intake Strength in the program | | | | |
| No. of total admitted students in First year | | | | |
| No. of total admitted students (including lateral entries in 2nd year, if any), belonging to the same batch | | | | |

**Admission Quality :** Divide the total admitted ranks (or percentage-marks) into 5 or a few more meaningful ranges

| Rank Range | CAY | CAYm1 | CAYm2 | CAYm3 |
|---|---|---|---|---|
| 1 to 10,000 | | | | |
| 10,001 to 20,000 | | | | |
| 20,001 to 50,000 | | | | |
| 50,001 to 1,00,000 | | | | |
| 1,00,001 to 2,00,000 | | | | |
| . . . . | | | | |
| Admitted without rank | | | | |

### III-P.2 Success Rate (30)

Provide data for the past 7 batches of students (Successfully completed implies Zero Backlogs)

| Year of Entry (in reverse chronological order) | # of Students Admitted in 1st year + Admitted in 2nd year (x + y) | # of Students successfully completed 1st year | # of Students successfully completed 2nd year | # of Students successfully completed 3rd year | # of Students successfully earned their degree in just 4 years |
|---|---|---|---|---|---|
| CAY | | | | | |
| CAYm1 | | | | | |
| CAYm2 | | | | | |
| CAYm3 | | | | | |
| CAYm4 / LYG | | | | | |
| CAYm5 / LYGm1 | | | | | |
| CAYm6 / LYG m2 | | | | | |

Success Rate  = 30 * Mean of Success Index (SI) for past 3 batches
  SI    = (No. of students who cleared the program in the minimum period of course duration) /
        (No. of students admitted in the first year of that batch)

| Items | LYG or CAYm4 | LYGm1 or CAYm5 | LYGm2 or CAYm6 |
|---|---|---|---|
| No. of students admitted in the corresponding First Year | | | |
| No. of students who have graduated in 4 years | | | |
| Success Index (**SI**) | | | |

Av. SI = _____

Success Rate  = 30 * Av. SI = _____

## III-P.3 Academic performance (30)

Academic Performance  = 3 * API
  Where API   = Academic Performance Index
         = Mean of Cumulative Grade Point Average of all the
          Students on a 10 point CGPA System
             OR
         = Mean of the percentage of marks of all students / 10

| Items | LYG or CAYm4 | LYGm1 or CAYm5 | LYGm2 or CAYm6 |
|---|---|---|---|
| Approximating the API by the following mid-point analysis | | | |
| # of students in $10.0 <= CGPA < 9.0$ | | | |
| # of students in $9.0 <= CGPA < 8.0$ | | | |
| . . . | | | |
| | | | |
| | | | |
| Total | | | |
| Approximating API by Mid-CGPA | | | |
| | | | |
| Exact Mean of CGPA/Percentage of all the students (**API**) | | | |

Av. API = _____

Academic Performance = 3 x Av. API  = _____

## III-P.4 Placement and higher studies (40)

Assessment Points  = 40 * (X + 1.25 * Y) / N
    Where X  = Number of students placed,
       Y  = Number of students admitted for higher studies with valid qualifying scores/ranks,
       N  = Total number of students who were admitted in the batch
    subject to Max. Assessment Points = 40.

 .

| Items | LYG | LYGm1 | LYGm2 |
|---|---|---|---|
| # of Admitted students corresponding to LYG   (N) | | | |
| # of students who obtained jobs as per the record of | | | |

| | | | |
|---|---|---|---|
| placement office (X1) | | | |
| # of students who found employment otherwise at the end of the final year (X2) | | | |
| X = X1 + X2 | | | |
| Number of students who went for higher studies with valid qualifying scores/ranks (Y) | | | |
| | | | |
| Assessment Points | | | |

Av. Assessment Points = _____

## III-P.5 Professional Activities (20)

### Provide data for the past 3 years – CAY, CAYm1 and CAYm2

III-P.5.1 Professional societies/ chapters and organizing engineering events (**4**)

List the above in Tabular form

III-P.5.2 Organization of paper contests, design contests etc. and their achievements (**4**)

List the above in Tabular form

III-P.5.3 Publication of technical magazines, newsletters etc. (**4**)

List the above publications along with the names of the editors, publishers etc.

III-P.5.4 Entrepreneurship initiatives, product designs, innovations (**4**)

Specify the efforts and achievements

III-P.5.5 Publications and awards in inter institute events by students of the programme of study (**4**)

Include a Table having those publications, which fetch awards by students in the events/conferences organized by other institutes. Include a tabulated list of all other student publications in a separate annexure.

## III-P.6 Students' Projects Quality (20)

Include list of five best and average projects each, taken each from three years– CAY, CAYm1 and CAYm2 – along with their contributions

| Name of the Student(s) | Project Title | Areas of Specialization | Project Supervisor(s) | Contribution/ Achievements / Research Output | Matching with the stated PEOs | Publication |
|---|---|---|---|---|---|---|
| In CAYm2 | | | | | | |
| . . . . | | | | | | |
| In CAYm1 | | | | | | |
| | | | | | | |
| In CAY | | | | | | |
| . . . | | | | | | |

## Criterion IV: Faculty Contributions

### List of Department Faculty : Exclusively for the Program / Shared with other Programs

| Name of the Faculty | Designation (administrative positions, if any,) | Qualification, University and year of graduation | Areas of Specialization | Date of joining the department/ program; Load sharing with more than one programms | No. of research publications in journals and conferences since joining the department and Total no. of such publications | # of current R & D and consultancy projects and the amount |
|---|---|---|---|---|---|---|
| . . . . | | | | | nJ, nC (NJ, NC) | |
| . . . | | | | | | |

### IV-P.1 Teacher - student ratio (20)

Assessment $= 20 * TSR / 15$
Where TSR $=$ Teacher Student Ratio
$= (x + y + z) / N$
subject to Max. TSR = 15;
Where x $=$ No. of students in $2^{nd}$ year of the program
y $=$ No. of students in $3^{rd}$ year of the program
z $=$ No. of students in $4^{th}$ year of the program
N $=$ Total No. Faculty Members in the program

| Year | x | y | z | x+y+z | N | TSR | Assessment |
|---|---|---|---|---|---|---|---|
| CAYm2 | | | | | | | |
| CAYm1 | | | | | | | |
| CAY | | | | | | | |
| | | | | | | Av. Assessment | |

### IV-P.2 Cadre ratio (20)

Assessment $= 20 * CRI$
Where CRI $=$ Cadre Ratio Index
$= 2.25 ( 2x + y ) / N$
subject to Max. CRI = 1.0;
where x $=$ No. of professors in the program
y $=$ No. of associate professors / readers in the program
N $=$ Total No. Faculty Members in the program

| Year | x | y | N | CRI | Assessment |
|---|---|---|---|---|---|
| CAYm2 | | | | | |
| CAYm1 | | | | | |
| CAY | | | | | |
| | | | | Av. Assessment | |

### IV-P.3 Faculty qualifications (40)

Assessment $= 4 * FQI$
Where FQI $=$ Faculty Qualification Index
$= (10 * x + 6 * y + 4 * z) / N$
Where x $=$ No. of Faculty Members with Ph. D in Engineering
y $=$ No. of Faculty Members with M. E / M. Tech
z $=$ No. of Faculty Members with B. E / B. Tech
N $=$ Total No. Faculty Members

| Year | x | y | z | N | FQI | Assessment |
|------|---|---|---|---|-----|------------|
| CAYm2 | | | | | | |
| CAYm1 | | | | | | |
| CAY | | | | | | |
| | | | | | Av. Assessment | |

## IV-P.4 Faculty retention (20)

Assessment  = 4 * RPI / N

Where RPI = Retention Point Index

= Points assigned to all Faculty

Where Points assigned to a faculty = 1 point for each year of experience at the Institute but not exceeding 5.

N = Total No. of Faculty Members

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

## IV-P.5 Research publications and IPR (20)

Faculty Points in Publications and IPR (FPPR) = Assessment of Publications  + Assessment of IPR

Assessment of Publications  = 3 * Sum of the Research points scored by each Faculty member /
No. of  sanctioned positions of Professors and Readers

Assessment of IPR = Sum of the IPR points scored by each Faculty member /
No. of  sanctioned positions of Professors and Readers

Note: A faculty member scores at the most 5 Research points depending upon the quality of the research papers published in the past 3 years. For this research papers considered are those (i) which can be located on Internet and/or are included in hard-copy volumes/proceedings, published by a well known publishing house, and (ii) the faculty member's affiliation, in the published paper, is the one of the same college/institute. For multiple authors, every author of the same college will earn the points.

Similarly, a faculty member scores 1 point for each IPR subject to a maximum of 5 points.

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

| Name of faculty (contributing to FPPR) | CAYm2 | | | CAYm1 | | | CAY | | |
|----------------------------------------|-------|---|---|-------|---|---|-----|---|---|
| | Pub Points (x) | IPR Points (y) | Pub + IPR Points (3x +y) | Pub Points (x) | IPR Points (y) | Pub + IPR Points (3x +y) | Pub Points (x) | IPR Points (y) | Pub + IPR Points (3x +y) |
| . . . | | | | | | | | | |
| . . . . . | | | | | | | | | |
| . . . . . . . | | | | | | | | | |
| Sum | | | | | | | | | |
| N (Min. N is 3) (excluding Asstt Prof.) | | | | | | | | | |
| Assessment FPPR = (Sum/N) | | | | | | | | | |
| Av. Assessment | | | | | | | | | |

## IV-P.6 Externally funded R & D projects and consultancy work (20)

Assessment of R&D & Consultancy Projects = 4 * Sum of FPPC by each faculty
/ No. of sanctioned positions of Professors and Readers
Where FPPC = Faculty Points in Projects and Consultancy

Note: A faculty member gets at the most 5 points depending upon the amount of externally funded R & D project and/or consultancy work. For multiple faculty members involved in a single project, every faculty member will earn the points, depending on the funding agency as given below:

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.

Points to be awarded, if the total fund available for a project is of minimal one lakh rupees in the CFY.

| Name of faculty (contributing to FPPC) | FPPC Points | | |
|---|---|---|---|
| | CAYm2 | CAYm1 | CAY |
| . . . | | | |
| . . . . . | | | |
| . . . . . . . | | | |
| Sum | | | |
| N (Min. N is 3) (excluding Asstt. Prof.) | | | |
| Assessment FPPC = 4 x Sum/N | | | |
| | | Av. Assessment | |

## IV-P.7 Interactions of faculty members with outside world (10)

Assessment of Interaction = 2 * Sum of IP by each faculty
/ No. of sanctioned positions of Professors and Readers
Where IP = Interaction points scored by each faculty member

Note: A faculty member gets at the most 5 Interaction Points depending upon the type of Institution or R&D Lab or Industry. Only those interactions will be considered who have resulted in joint quality publication, R& D projects and/or consultancy. The points earned by each faculty shall be decided as given below:

5 points for interaction with a well known Institute/University abroad,
4 points for interaction with Institute of Eminence in India or National Research Labs,
3 points for interaction with University / Industry in India and Institute/University (not covered) above
2 points for interaction with State Level Institutions, and
1 point for interaction with private affiliated Institutions.

Point to be warded, are for those activities, which result in joint efforts in publication of books/research paper, pursuing externally funded R & D projects and/or development of semester-long course/teaching modules.

| Name of faculty (contributing to IP) | IP Points | | |
|---|---|---|---|
| | CAYm2 | CAYm1 | CAY |
| . . . | | | |
| . . . . . | | | |
| . . . . . . . | | | |
| Sum | | | |
| N (Min. N is 3) (excluding Asstt. Prof.) | | | |
| Assessment IP = 2 x Sum/N | | | |
| | | Av. Assessment | |

## Criterion V: Facilities and Technical Support

Description of Class rooms, faculty rooms, seminar and conference halls:
(Entries in the following table are sampler entries)

| Room Description | Usage | Shared / Exclusive ? | Capacity | Rooms Equipped with |
|---|---|---|---|---|
| Class Room No. | Class room for 2nd year | Exclusive | | |
| . . . . | | | | |
| Tutorial rooms | | | | |
| | | | | |
| Seminar Room no. | . . . . . | Shared | 100 | |
| Meeting room no. | . . . . | Exclusive | | |
| Faculty rooms (n) | . . . | . . . . | . . . . | PC, Internet, Book rack, . . . . |
| | | | | |

### V-P.1 Class rooms in the department (15)

V-P.1.1 Enough rooms for lectures (core/electives), seminars, tutorials, etc for the program (**5**)

    Assessment based on the information provided in the above table

V-P.1.2 Teaching aids – black/white-board, multimedia projectors, etc. (**5**)

    Assessment based on the information provided in the above table

V-P.1.3 Acoustics, class room size, conditions of chairs/benches, air circulation, lighting, exits, ambiance, etc. (**5**)

    Assessment based on the information provided in the above table and the inspection thereof

### V-P.2 Faculty rooms in the department (15)
V-P.2.1 Availability of individual faculty rooms (**5**)

    Assessment based on the information provided in the above table

V-P.2.2 Room equipped with white/black board, computer, internet, etc. (**5**)

    Assessment based on the information provided in the above table

V-P.2.3 Usage of room for discussion/counseling with students (**5**)

    Assessment based on the information provided in the above table and the inspection thereof

### V-P.3 Laboratories in the department to meet the curriculum requirements as well as the PEOs (25)

| Curriculum Lab Description | Exclusive use/Shared? | Space/# Students | # of experiments | Quality of instruments | Lab manuals |
|---|---|---|---|---|---|
| . . . | | | | | |
| . . . . | | | | | |

V-P.3.1 Enough labs to run all the program specific curriculum (**10**)

     Assessment based on the information provided in the above table

V-P.3.2 Availability of computing facilities available exclusively in the department (**5**)

     Assessment based on the information provided in the above table

V-P.3.3 Availability of labs with tech. support within and beyond working hours (**5**)

     Assessment based on the information provided in the above table

V-P.3.4 Equipments to run experiments and their maintenance, Number of students per experimental set up, Size of the laboratories, overall ambience etc. (**5**)

     Assessment based on the information provided in the above table

**V-P.4 Technical manpower support in the department (20)**

| Name of the Tech Staff | Designation (Pay-scale) | Exclusive /Shared Work? | Date of Joining | Qualification | | Other Technical Skills gained? | Responsi bility |
|---|---|---|---|---|---|---|---|
| | | | | At Joining | Now ? | | |
| . . . | | | | | | | |
| . . . . | | | | | | | |

V-P.4.1 Availability of adequate and qualified technical supporting staff for program specific labs (**10**)

     Assessment based on the information provided in the above table

V-P.4.2 Incentives, skill-up gradation and professional advancement (**10**)

     Assessment based on the information provided in the above table

**Criterion VI: Continuous Improvements**

**VI-P.1 Improvement in Success Index of students (10)**

    **From III-P.2**

| Items | LYG | LYGm1 | LYGm2 |
|---|---|---|---|
| Success Index | | | |

**VI-P.2 Improvement in academic performance of students (10)**

    **From III-P.3**

| Items | LYG | LYGm1 | LYGm2 |
|---|---|---|---|
| API | | | |

**VI-P.3 Enhancement of faculty qualifications and retention (15)**

**From IV-P.3 and IV-P.4**

| Items | CAY | CAYm1 | CAYm2 |
|-------|-----|-------|-------|
| FQI | | | |
| RPI | | | |

**VI-P.4 Improvement in Faculty activities in research publication, R & D work and consultancy, and interaction (15)**

**From IV-P.5 and IV-P.6**

| Items | CAY | CAYm1 | CAYm2 |
|-------|-----|-------|-------|
| FPPR | | | |
| FPPC | | | |
| IP | | | |
| Sum | | | |

**VI-P.5 Continuing education (10)**

Specify the contributory efforts made by the faculty by developing the course/lab modules and conducting short-term courses/workshops etc. for continuing education :

| Module Description | Any other contributory Inst./Industry | Developed/ organized by | Duration | Resource Persons | Target Audience | Usages and citation etc. |
|--------------------|---------------------------------------|-------------------------|----------|------------------|-----------------|--------------------------|
| . . . | | | | | | |
| . . . . | | | | | | |

**VI-P.6 New facility created (10)**

Specify the new facility created to strengthening the curriculum and/or to meet the PEOs:

| Module Description | Any other contributory Inst./Industry | Developed by | Duration of Development | Resources consumed | Target Audience | Usages and citation etc. |
|--------------------|---------------------------------------|--------------|-------------------------|--------------------|-----------------|--------------------------|
| In CAYm2 | | | | | | |
| . . . | | | | | | |
| In CAYm1 | | | | | | |
| . . . . . . | | | | | | |
| In CAY | | | | | | |
| . . . . | | | | | | |

**VI-P.7 Overall improvements (5)**

Specify the overall successive improvements in curriculum and others:

| Specify the improvement | Improvement brought in | Contributed by | List the PEO(s), which are strengthened | Comments, if any |
|-------------------------|------------------------|----------------|------------------------------------------|------------------|
| In CAYm2 | | | | |
| . . . | | | | |
| In CAYm1 | | | | |

| . . . . . . | | | | |
|---|---|---|---|---|
| In CAY | | | | |
| . . . . | | | | |
| . . . . . . . . | | | | |

## Criterion VII: Curriculum

List all the course modules along with their objectives and outcomes (in Part III):

| Course | Units | | Science/HSS/ Professional Core, Elective or Breadth? | PEOs specified by Affiliating Univ. or the College ? | Additional theory/lab/ assignments/ tests needed to meet objectives? | Comments |
|---|---|---|---|---|---|---|
| | Theory | Lab | | | | |
| . . . | | | | | | |
| . . . . . . | | | | | | |
| . . . . | | | | | | |

**VII-P.1 Contents of basic sciences, HSS, professional core and electives, and breadth (40)**

Assessment is based on the balanced composition of basic sciences, HSS, professional core and electives, and breadth to meet the PEOs. If such components are not included in the curriculum provided by the affiliated university, then the college/Inst. should make additional efforts to impart such knowledge through covering such aspects through "contents beyond syllabi".

**VII-P.2 Emphasis on laboratory and project work (30)**

Assessment is based on the balanced laboratory and project work along with theory, to meet the PEOs. If enough lab/design/experimentation components are not included in the curriculum provided by the affiliated university, then the college/Inst. should make additional efforts to impart such knowledge through covering such aspects through "contents beyond syllabi".

**VII-P.3 Curriculum updates and PEO reviews (30)**

List of course modules (along with coverage beyond syllabus) and PEOs which were updated and revised in past 3 years by the college, irrespective of curriculum updates by the affiliating university, in order to meet the corresponding PEOs

**VII-P.4 Additional contents to bridge curriculum gaps (25)**

Assessment is based on program specific contents which are added to bridge curriculum gaps across the courses in order to achieve PEOs and the specific course objectives

## Criterion VIII: Program Educational Objectives – Their Compliance and Outcomes

List all the course modules along with their PEOs (in Part III):

| Course | Units | | Quality of PEOs specified ? | Additional contents to meet PEOs through ? | | | Assessment through Course files/Lab and assignment sheets/Test papers |
|---|---|---|---|---|---|---|---|
| | Theory | Lab | | Theory | Lab | Assignme nts/Tests | |
| . . . | | | Poor/Av/Good/Excell | | | | |
| . . . . . . | | | | | | | |
| . . . . | | | | | | | |

**VIII-P.1 Course objective and mapping (20)**

Assessment is based on the PEOs defined for a course or a set of courses and their mapping with the content delivery and knowledge gain through theory classes, lab experiments, assignments and tests.

**VIII-P.2 Assessment outcomes (20)**

Assessment is based on the feasibility, applicability and quality of the PEOs' with the course delivery. Assessment is also based on the methodologies for outcome measurements from the stake-holders including industry, alumni, and professional bodies.

**VIII-P.3 Mapping with faculty expertise (20)**

| Course | Units | | Area of specialization needed to achieve PEOs | Name of the Faculty whose expertise matched with the specialization | Comments |
|---|---|---|---|---|---|
| | Theory | Lab | | | |
| . . . | | | | | |
| . . . . . . | | | | | |
| . . . . | | | | | |
| | | | | | |

Assessment is based on the factor that the expertise needed to deliver the contents is met with the faculty expertise and on a balanced load factor of the concerned faculty. Faculty expertise should be adequate to cater for all the major fields specified in the program criteria.

**VIII-P.4 Mapping with outcomes (20)**

Assessment is based on what extent the PEOs/curriculum map with the outcomes

**VIII-P.5 Significant achievements (20)**
List significant achievements, in respect of curriculum, stated PEOs and their outcomes, in CAY, CAYm1 and CAYm2.

# PART III
# Curriculum, Syllabi, PEOs and Outcomes

In this part of SAR, the course modules and/or a group of course modules, in the program, should be arranged in order to provide the following information:

1.  Program Educational Objectives (PEOs) and Course Objectives,
2.  Program and Course Outcomes,
3.  Mapping of PEOs with the expected outcomes,
4.  Additional contents beyond the syllabi, if needed, to be provided to meet the outcomes with the course objectives, and
5.  How to make provisions for the additional contents, if needed to bridge the gaps, in the academic calendar.

Three sample cases of the programmes in Electrical & Electronics Engineering, Mechanical Engineering and Chemical Engineering are included in "Evaluation Guidelines" as sampler guidelines.

\* \* \*

# PART IV
## List of documents/records to be made available during the visit
(Three years of records to be made available, wherever applicable)

## Institute Specific
I.1. Land papers, built-plan and approval etc.
I.2. Composition of GC/GB, Senate and other Academic and Administrative bodies, their functions and responsibilities. List of all the meetings held in the past 3 years along with the attendance records. Representative minutes and action-taken reports of a few meetings of such bodies along with the list of current faculty members who are members of such bodies.
I.3. Rules, policies and procedures published by the college/Institute including service book and academic regulations and other along with the proof that the employee/students are aware of the rules and procedures.
I.4. Budgeted allocation and utilization : Audited statement of accounts
I.5. Informative web site
I.6. Library resources – books and journal holdings,
I.7. Listing of core, computing and manufacturing etc. labs
I.8. Records of T & P and career & guidance cells
I.9. Records of safety checks and critical installations
I.10. Medical care records and usages of ambulance etc.
I.11. Academic calendar, schedule of tutorial and makeup classes
I.12. Course handouts/files along with PEOs; list of additional topics to meet PEOs and outcomes.
I.13. Set of question papers, assignments, evaluation schemes etc.
I.14. Feedback proforma, analysis and corrective actions
I.15. Documented feedback received from the stake-holders (e.g., Industries, Parents, Alumni, Financiers etc.) of the college/institute
I.16. List of faculty who teach first year courses along with their qualifications
I.17. First year results.

## Program Specific
P.1 NBA accreditation reports of the past visits, if any
P.2 Department budget and allocations of the past 3 years
P.3 Admission – seats filled and ranks (3y data)
P.4 List/Number of students who clear the program in 4y (3y data)
P.5 Av. Grade point (CGPA) (3y data of students CGPA/percentage)
P.6 Placement and higher studies data (3y data)
P.7 Professional society activities, events, conferences organized etc.
P.8 List of students' papers along with hard-copies of the publications; professional society publications/magazines etc.
P.9 Sample best and average project reports/theses
P.10 Details of faculty student ratio
P.11 Faculty details with their service books, salary details, sample appointment letters, promotion and award letters/certificates
P.12 Faculty list with designation, qualification, joining date, publication, R & D, interaction details
P.13 List of faculty publications along with DOIs and publication/citation details
P.14 List of R & D and consultancy projects along with approvals and project completion reports
P.15 List and proofs of faculty interaction with outside world
P.16 List of class rooms, faculty rooms,
P.17 List of program specific labs & computing facility within dept.
P.18 List of non-teaching staff with their appointment letters etc
P.19 List of short-term courses, workshop arranged and course-modules developed
P.20 Records of new program specific facility created, if any
P.21 Records of overall program specific improvements, if any
P.22 Curriculum, PEO/Course objectives and Outcomes,
P.23 Known gaps in the curriculum vis-à-vis PEOs and Outcomes
P.24 List of contents beyond syllabi and schedule in academic calendar, if any
P.25 Course files, plan of course delivery, question papers, assignments, list of experiments etc.

**\* \* \***