



# Manual

for Accreditation of Undergraduate Engineering Programs

(Tier I Institutions)

National Board of Accreditation New Delhi

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To be an accrediting agency of international standard by ensuring the highest degree of credibility in assurance of quality and relevance to professional education and come up to the expectations of its stakeholder's viz., academicians, corporates, educational institutions, government, industry, regulators, students and their parents..



#### **Mission**

To stimulate the quality of teaching, self-evaluation and accountability in the higher education system, which help institutions realize their academic objectives and adopt teaching practices that enable them toproduce high-quality professionals and to assess and accredit the programs offered by the institutions imparting technical and professional education.

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## PART - I

#### 1. Introduction

#### 1.1. National Board of Accreditation

The National Board of Accreditation (NBA) was set-up in September 1994 by the AICTE to assess the qualitative competence of the programs offered by technical and professional educational institutions from diploma level to post-graduate level in engineering and technology, management, pharmacy, architecture and related disciplines, which are approved by appropriate statutory regulatory bodies.

NBA came into existence as an independent autonomous body with effect from 7th January 2010 with the objectives of assurance of quality and relevance to technical education, especially of the programs in technical disciplines, i.e., Engineering and Technology, Management, Architecture, Pharmacy and Hospitality, etc., through the mechanism of accreditation of programs offered by technical and professional institutions. The Memorandum of Association and Rules of NBA were amended in April 2013, to make it completely independent of AICTE, administratively as well as financially. NBA conducts evaluation of programs of technical institutions based on evaluation criteria and parameters laid down by its Committees and Council.

NBA works closely with all the stakeholders to ensure that the programs serve to equip graduates with sound knowledge of fundamentals of the discipline and to develop in them an acceptable level of professional competence that would meet the needs of profession and be adequate for the responsible fulfilment of professional assignments.

#### 1.2. Objectives

Major objectives of the NBA for engineering education are as follows:

- To assess and accredit the engineering education programs at diploma, degree and post-graduate level;
- To evolve standards and parameters for assessment and accreditation in line with the parameters laid down by the appropriate statutory regulatory authority for co-ordination, determination and regulation of standards in the concerned field of technical education;
- To promote excellence through a bench marking process, which is helpful in determining whether or not an institution is able to achieve its mission and broad based goals, and in interpreting the results of the outcomes assessment process;
- To promote quality conscious system of technical education where excellence, relevance to market needs and participation by all stakeholders are prime and major determinants.
- To build a technical education system as facilitator of human resources, that will match the national goals of growth by competence, contribution to economy through competitiveness and compatibility with societal development;

- To set the quality benchmarks targeted at global and national stockpile of human capital in all fields of technical education;
- To conduct evaluation of self-assessment of technical institutions and/or programs offered by them on the basis of guidelines, norms and standards specified by it; and
- To contribute to the domain of knowledge in quality parameters, assessment and evaluation.

#### 1.3. Governance Structure

The NBA is empowered by its Memorandum of Association (MoA). The governance of NBA is effected through the following three statutory committees enshrined in its MoA:

- i) The General Council (GC)
- ii) The Executive Committee (EC)
- iii) The Academic Advisory Committee (AAC)

Details of the constitution, functions and responsibilities of the above Committees are provided in the MoA of NBA and are available at http://www.nbaind.org/files/moa-rules-of-society.pdf.

All these committees are chaired by the Chairman, NBA.

Member Secretary is the Member Secretary of these committees. Member Secretary is the Executive Authority of NBA.

Besides, the NBA also have the following other committees and sub-committees:

- Sub-Committee of AAC of Engineering & Technology functions separately to evolve standard for assessment and accreditation, to form assessors' panels, to lay down guidelines for assessors, to evaluate and approve the recommendations of the Evaluation and Accreditation Committee (EAC).
- **Evaluation and Accreditation Committee (EAC)** of Engineering & Technology reviews the reports of the evaluation team and submits its recommendations on accreditation to the Sub Committee of AAC.
- Appellate Committee considers the appeal applications made by the institutions against the decision on accreditation of a program by NBA and gives its recommendations to the Academic Advisory Committee (AAC).

#### 1.4. Tier I Institutions

The categories of institutions that qualify for Tier I accreditation for undergraduate engineering/technology programs through NBA are given below:

- Institutions of National importance (Indian Institutes of Technology (IITs), Indian Institute of Science (IISc) and Indian Institutes of Information Technology (IIITs) etc.
- Mational Institutes of Technology (NITs).
- Central Universities (Universities established by or under Act enacted by Parliament of India).
- State Universities (Universities established by or under legislation enacted by the legislature of the concerned States).
- Private Universities (Universities established by or under legislation enacted by the State legislature but promoted by private trusts, societies, companies under Section 8 of Indian Companies Act).
- Deemed-to-be-Universities (Institutions declared as Deemed-to-be-Universities by MHRD).
- Institutions declared as Autonomous by a competent empowered authority.

These institutions have freedom to design, develop and update curricula and also have complete academic autonomy.

#### 1.5. Washington Accord

The Washington Accord is an international and multi-lateral agreement among bodies responsible for accrediting undergraduate engineering degree programs, originally signed among six countries in 1989. It recognizes the substantial equivalency of programs accredited by bodies that are its signatory and recommends that graduates of programs accredited by any of the signatory bodies be recognized mutually as having met the academic requirements for entry to the practice of engineering in the area of their jurisdiction. The NBA became a provisional member of the Washington Accord (WA) in 2007 and was given the status of permanent signatory on 13<sup>th</sup> June 2014. Signatory status is subject to the condition that only programs of Tier I institutions accredited by NBA are eligible for mutual recognition under the Washington Accord.

## PART - II

#### 2. Accreditation Policy

#### 2.1. General Information on Accreditation

The following general policies are the guiding principles for accreditation of programs offered by various technical institutions:

- I) NBA accredits technical programs of institutions and not the institution or its departments/centres as a whole.
- ii) Institutions are required to apply for accreditation through eNBA portal as per norms prescribed by NBA from time-to-time.
- iii) Programs to be accredited should be offered by an educational institution, which has been formally approved by the AICTE or the concerned regulatory authority.
- iv) Programs from which at least two batches of students have graduated are considered for accreditation. The program should continuously be running without break with approval of the concerned regulatory authority during the whole duration of last two batches (for example: 5 years for UG Engineering, 3 years for PG Engineering, etc.).
- v) One batch of students must pass out under the autonomous status of the institution and that batch shall be taken as the batch which would be in the first year, in the academic year in which the institution attains autonomy and subsequently passes out after 4 years.
- vi) When an institution gets autonomous status for the first time, it can apply in Tier II in the interim period, if it wishes to, before one batch of students passes out under autonomous status. After one batch of students under autonomous status passes out, the institution shall have to apply for accreditation of its UG programs in Tier I only.
- vii) For all the cases in which an institution gets academic autonomy either from the UGC or from the affiliating University, it becomes autonomous and is required to apply for accreditation of its UG Engineering programs in Tier I only.
- viii) The institution is required to pay accreditation fee as prescribed by NBA from time-to-time. The application fee is payable in two phases 10 per cent at the time of submission of Pre-Qualifiers and balance 90 per cent fee at the time of submission of SAR, once the Pre-Qualifiers are approved.
- ix) The institution must submit Self-Assessment Report (SAR) online through e-NBA portal in the prescribed format in respect of each program proposed for accreditation.
- x) The title of a program to be accredited must be the same as shown on the graduating student's degree and the approval letters of the concerned regulatory authority.

- xi) Visiting Team, while evaluating the programs, should ascertain overlapping of resources and faculty for programs in an institution where AICTE has granted approval for 1st shift and 2nd shift.
- xii) Part-time programs are not considered for accreditation.
- xiii) Programs are evaluated in accordance with the accreditation criteria as specified by NBA.
- xiv) Institutions are required to represent the accreditation status of each program accurately and without ambiguity. If accreditation is withdrawn or discontinued or expires, the institution should no longer refer to the program as accredited.
- xv) A two/three day's onsite visit is a part of the accreditation process. A Visiting Team appointed by the NBA carries out the evaluation of the program. The institution is required to propose such sets of dates for the visit when the regular classes and all academic activities of the program applied for, are going on.
- xvi) Institutions have the option of withdrawing a program during the Exit Meeting of the visit. The institution shall handover a written request to the Team Chair during the Exit Meeting. No communication regarding withdrawal will be accepted after the Visiting Team has left the institution. No fee would be refunded in such cases.
- xvii) The final decision made by the NBA is communicated to the educational institution, together with comments detailing strengths, weaknesses and scope for improvement.
- xviii) A copy of the report of the Visiting Team is sent to the institution along with the accreditation status in order to maintain the transparency. In the event of change of the decision from the Visiting Team to the decision making team, the reasons for changes are also conveyed along with the Visiting Team report.
- xix) If an institution is not satisfied with the decision of NBA regarding accreditation status, it may appeal against the decision to the Appellate Committee (AC) of NBA within 30 days of receipt of the communication.
- xx) Commencement of Accreditation Period:
  - In case visit of the Expert (Visiting) Team to an Institution is conducted between 1st July 31st December, the period of accreditation would commence from the on-going academic year (i.e. with effect from 1st July of the on-going academic year).
  - In case visit is conducted between 1st January to 30th June, the accreditation period would be from the next academic year (i.e. with effect from 1st July of the next academic year).
  - Same rules apply for deciding the validity period of accreditation periods of programs in appeal cases also.

- xxi) If a program is 'not accredited' or withdrawn during the visit, a fresh application for accreditation of the same program can be considered one year after the date of previous visit of the Visiting Team.
- xxii) If an institution requests postponement of the visit of the Expert Team after the team has already been constituted for the purpose, an additional fee of 25% shall be required to be paid before the visit is rescheduled. If the institution causes cancellation of the visit after the team has already been constituted for the purpose, there would be a cancellation fee of 25% deducted from the fees paid by the institution. In case, an institution requests for withdrawal of the program(s) applied by it after application has been approved by the NBA for further processing and the fee has been paid by the institution, 10% of the accreditation fee per program shall be deducted while refunding the fee as per the request of the institution.

#### 2.2. Outcome-based Education and Accreditation

Outcome based education is targeted at achieving desirable outcomes (in terms of knowledge, skills, attitudes and behaviour) at the end of a program. Teaching with this awareness and making the associated effort constitutes outcome based education. This entails a regular methodology for ascertaining the attainment of outcomes, and benchmarking these against the program outcomes consistent with the objectives of the program.

Initially, NBA accreditation used to be based on 'Input - Process - Output' model with major emphasis on availability of resources / facilities and the outputs thereof. In the year 2009, NBA aligned its methodology with international benchmarks and started accreditation on the basis of outcomes. It believes that educational quality must be measured by outcomes rather than inputs, because inputs do not necessarily correlate with quality outcomes. Outcomes are dependent not only on inputs but also on the processes followed by an institution to convert inputs into defined outcomes.

### PART - III

#### 3. Accreditation Criteria

#### 3.1. Accreditation Criteria

The assessment and evaluation process of accreditation of an engineering program is based on 10 broad criteria developed through a participatory process involving experts from reputed national-level technical institutions, industries, R&D organizations and professional bodies. Each criterion relates to a major feature of institutional activity and its effectiveness. The criteria have been formulated in terms of parameters, including quantitative measurements that have been designed for maximal objective assessment of each feature.

The definitions of the terms used in this manual are as follows:

- (a) Mission and Vision Statement Mission statements are essentially the means to achieve the vision of the institution. For example, if the vision is to create high-quality engineering professionals, then the mission could be to offer a well-balanced program of instruction, practical experience, and opportunities for overall personality development. Vision is a futuristic statement that the institution would like to achieve over a long period of time, and Mission is the means by which it proposes to move toward the stated Vision.
- (b) **Program Educational Objectives (PEOs)** Program Educational Objectives are broad statements that describe the career and professional accomplishments that the program is preparing graduates to achieve.
- (c) Program Outcomes (POs) Program Outcomes are statements that describe what students are expected to know and be able to do upon graduating from the program. These relate to the skills, knowledge, attitude and behaviour that students acquire through the program. NBA has defined the Program Outcomes for each discipline.
- (d) Course Outcomes (COs) Course Outcomes are narrower statements that describe what students are expected to know, and are able to do at the end of each course. These relate to the skills, knowledge and behaviour that students acquire in their progress through the course.
- (e) Assessment Assessment is one or more processes, carried out by the institution, that identify, collect, and prepare data to evaluate the achievement of Program Educational Objectives and Program Outcomes.
- (f) Evaluation Evaluation is one or more processes, done by the evaluation team, for interpreting the data and evidence accumulated through assessment practices. Evaluation determines the extent to which Program Educational Objectives or Program Outcomes are being achieved, and results in decisions and actions to improve the program.
- (g) Mapping Mapping is the process of representing, preferably in matrix form, the correlation among the parameters. It may be done for one to many, many to one, and many to many parameters.

(h) **Rubrics:** Rubrics provide a powerful tool for assessment and grading of student work. They can also serve as a transparent and inspiring guide to learning. Rubrics are scoring, or grading tool used to measure a students' performance and learning across a set of criteria and objectives. Rubrics communicate to students (and to other markers) your expectations in the assessment, and what you consider important.

#### 3.2. Program Outcomes (POs) and Program-Specific Outcomes (PSOs)

#### 3.2.1. Program Outcomes (POs)

POs are statements that describe what students are expected to know and be able to do upon graduating from the program. These relate to the skills, knowledge, analytical ability attitude and behaviour that students acquire through the program.

The POs essentially indicate what the students can do from subject-wise knowledge acquired by them during the program. As such, POs define the professional profile of an engineering graduate.

NBA has defined the following twelve POs for an engineering graduate. These are inline with the Graduate Attributes as defined by the Washington Accord:

- i) **Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- ii) **Problem Analysis:** Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.
- iii) **Design/Development of Solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- iv) Conduct Investigations of Complex Problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions for complex problems:
  - that cannot be solved by straightforward application of knowledge, theories and techniques applicable to the engineering discipline as against problems given at the end of chapters in a typical text book that can be solved using simple engineering theories and techniques;
  - \* that may not have a unique solution. For example, a design problem can be solved in many ways and lead to multiple possible solutions;
  - that require consideration of appropriate constraints / requirements not explicitly given in the problem statement such as cost, power requirement, durability, product life, etc.;
  - which need to be defined (modelled) within appropriate mathematical framework; and

- that often require use of modern computational concepts and tools, for example, in the design of an antenna or a DSP filter.
- v) Modern Tool Usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
- vi) The Engineer and Society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- vii) Environment and Sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- viii) Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- ix) Individual and Team Work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- x) Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
- xi) Project Management and Finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- xii) Life-long Learning: Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change.

#### **3.2.2. Program Specific Outcomes (PSOs)**

PSOs are a statement that describes what students are expected to know and be able to do in a specialized area of discipline upon graduation from a program. Program may specify 2-4 program specific outcomes, if required. These are the statements, which are specific to the particular program. They are beyond POs. Program Curriculum and other activities during the program must help in the achievement of PSOs along with Pos.

#### 3.2.3 Program-Specific Criteria

The Program-Specific Criteria deals with the requirements for engineering practice particular to the related sub-discipline. The stipulations in the Program-Specific Criteria chiefly concern curricular issues and

competencies / qualifications of faculty. UG engineering program can adopt the Program-Specific Criteria specified by appropriate International Professional Associations such as ASME, ASCE, ACM, IEEE, etc.

#### 3.3 Accreditation Criteria

#### 3.3.1 Criterion 1- Vision, Mission and Program Educational Objectives (PEOs)

Each engineering program to be accredited or re-accredited should have its published Vision, Mission and Educational Objectives. Vision and Mission statements help the program in defining aspirations and to remain focused. These statements should be written in a simple language, easy to communicate and should define objectives which focus on aspirations of near future of the institution. Vision is a futuristic statement that the institution would like to achieve over a long period of time, and Mission is the means by which it proposes to move toward the stated Vision.

The Program Educational Objectives of an engineering degree program are the statements that describe what the graduates are expected to perform and achieve during the first few years after graduation. The PEOs, may be guided by global and local needs, vision of the institution, long term goal, etc. The list of various stakeholders of the program, who have been involved in the process of defining the PEOs, are to be provided. While framing the PEOs, the following factors are to be considered:

- PEOs should generally reflect on the professional accomplishments, continuing education and attitudes in the first few years after their graduation.
- The PEOs should be consistent with the mission of the institution.
- All the stakeholders should participate in the process of framing PEOs.
- The number of PEOs should be manageable.
- It should be based on the needs of the stakeholders.

For example, the PEOs of an academic program might read like this:

- **PEO1:** Practice civil engineering in construction industry, public sector undertaking or as an entrepreneur for successful professional career.
- PEO2: Pursue higher education for professional development.
- **PEO3:** Exhibit leadership qualities with demonstrable attributes in lifelong learning to contribute to the societal needs.

The program shall provide how and where the department's Vision and Mission and the PEOs have been published and disseminated. It should also describe the process of establishing the Vision, Mission and PEOs of the program as per the details provided in the SAR. The program shall also demonstrate how the PEOs are aligned with the Mission of the department /institution.

#### 3.3.2 Criterion 2- Program Curriculum and Teaching-Learning Processes

Program should describe the process that periodically documents and demonstrates how the program curriculum is evolved considering the Program Outcomes and Program-Specific Outcomes. The structure of the curriculum shall comprise of course code, course title, total number of contact hours (lecture, tutorial and practical) and credits. Program curriculum grouping based on course components such as core, elective, basic science, engineering science, humanities and projects / internship shall also be indicated. The process to identify the extent of compliance of the curriculum for attaining the Program Outcomes (POs) and Program-Specific Outcomes (PSOs) shall be articulated.

Program should include methods followed to improve quality of teaching and learning processes which may include adherence to academic calendar and improving instruction methods using pedagogical initiatives such as real world examples, collaborative learning, quality of laboratory experience with regard to conducting experiments, recording observations, analysis of data, etc. encouraging bright students, assisting weak students, etc. It is also required to mention the initiatives, implementation details and analysis of learning levels related to quality of semester tests, assignments and evaluation, steps taken to ascertain the quality of the projects in terms of processes related to project identification, allotment, continuous monitoring, evaluation including demonstration of working prototypes and enhancing the relevance of projects. Implementation details including details of POs and PSOs addressed through the projects with justification are also required to be provided.

Program should describe about the initiatives related to industry interaction in terms of industry-attached laboratories, partial delivery of appropriate courses by industry experts, initiatives related to industry internship/summer training, etc.

The initiatives, implementation details and impact analysis for various parameters as per the format are to be provided in SAR.

#### **3.3.3 Criterion 3- Course Outcomes and Program Outcomes**

Precise illustrations of program articulation matrix and course articulation matrix, modes of delivery of the courses, how assessment tools are used to assess the impact of course delivery / course content, and how laboratory and project work are contributing towards the attainment of the COs and POs, shall be clearly outlined in the program.

The attainment of POs may be assessed by direct and indirect methods. Direct methods of assessment are essentially accomplished by the direct examination or observation of students' knowledge or skills against measurable performance indicators. On the other hand, indirect methods of assessment are based on ascertaining opinion or self-report. Rubric is a useful tool for indirect assessment. A rubric basically articulates the expectations for students' performance. It is a set of criteria for assessing students' work or performance. Rubric is particularly suited to Program Outcomes that are complex or not easily quantifiable for which there are no clear "right" or "wrong" answers or which are not evaluated with the standardized tests or surveys. For

example, assessment of writing, oral communication, or critical thinking often require rubrics. The development of different rubrics and the achievement of the outcomes need to be clearly stated in the SAR. The results of assessment of each PO for two to three assessment years shall be indicated as they play a vital role in implementing the continuous improvement process of the program.

#### 3.3.4 Criterion 4 - Students' Performance

The educational institution should monitor the academic performance of its students carefully. The institution shall provide the required information for three complete academic years about sanctioned intake and corresponding admission in the program, success rate with and without backlogs in the stipulated period, academic performance of second and third year, placement and higher studies and professional activities as per the format given in the SAR.

#### 3.3.5 Criterion 5 - Faculty Information and Contributions

The faculty members should possess adequate knowledge / expertise to deliver all the curricular contents of the program.

The number of faculty members must be adequate so as to enable them to engage in activities outside their teaching duties, especially for the purposes of professional development, curriculum development, student mentoring/counselling, administrative work, training, and placement of students, interaction with industrial and professional practitioners.

The number of faculty members must be sufficiently large in proportion to the number of students, so as to provide adequate levels of faculty-student interaction. In any educational program, it is essential to have adequate levels of faculty-student interaction, which is possible only if there are enough faculty members.

The faculty must be actively involved in research and development. The program must support, encourage and maintain such R&D activities, which, in turn, provide new knowledge to the curriculum. The student's education is enriched by being part of such a culture as it cultivates skills and habits for lifelong learning and knowledge on contemporary issues.

The program shall provide the required information for three complete academic years for Student-Faculty Ratio (SFR), Faculty Cadre Ratio, Faculty Qualifications, Faculty Retention, Faculty competencies in correlation to program-specific criteria, Innovations by the faculty in teaching and learning, Faculty development activities, academic research, sponsored research, development activities and consultancy along with Faculty Performance Appraisal and Development System (FPADS) and contributions of visiting / adjunct / emeritus faculty as per the format given in the SAR.

#### 3.3.6 Criterion 6 - Facilities and Technical Support

The institution must provide adequate infrastructural facilities to support the achievement of the Program Outcomes. Classrooms, tutorial rooms, meeting rooms, seminar halls, conference hall, faculty rooms, and laboratories must be adequately furnished to provide an environment conducive to learning.

The laboratories must be equipped with computing resources, equipment, and tools relevant to the program. The equipment of the laboratories should be properly maintained, upgraded and utilized so that the students can attain the Program Outcomes. There should be an adequate number of qualified technical supporting staff to provide appropriate guidance to the students for using the equipment, tools, computers, and laboratories. The institution must provide scope for the technical staff for upgrading their skills and professional advancement.

The institution shall provide the required information about adequacy and equipment in the laboratories, their maintenance, overall ambience and safety measures in laboratories in the department to meet the curriculum requirements as well as the POs and PSOs, and technical manpower in the department, as per the format given in the SAR.

#### **3.3.7 Criterion 7- Continuous Improvement**

Closing the loop at course level, program level and institution level ensures quality assurance of the program. All COs attainment and POs attainment analysis is made to provide continuous improvement through course delivery, assessment and curriculum.

The institution shall provide required information regarding action taken based on the results of evaluation of each PO for two to three assessment years along with academic audit system / process, placement, higher studies, entrepreneurship and quality of students admitted to the program in relation to continuous improvement.

#### 3.3.8 Criterion 8 – First Year Academics

First year of graduation study consists of science, mathematics, humanities and general engineering courses from different departments of the institution. Institution has to provide information about First Year Faculty Ratio (FYSFR), Qualification of Faculty Teaching First Year Common Courses, First Year Academic Performance, Attainment of Course Outcomes and Program Outcomes of all first year courses and the action taken based on the results of evaluation of relevant POs and PSOs for continuous improvement.

#### 3.3.9 Criterion 9 – Student Support Systems

Academic student support systems play an important role in the teaching-learning process. Institutions are expected to provide information on the various such systems namely, mentoring/proctor system at individual level, feedback analysis and reward and corrective measures, self-learning facilities/materials and scope for learning beyond syllabus, career guidance, training and placement, details of activities of entrepreneurship cell, and provision for co-curricular and extra-curricular activities as per the format given in SAR.

#### 3.3.10 Criterion 10 - Governance, Institutional Support and Financial Resources

The governance structure of the program must clearly assign authority and responsibility for the formulation and implementation of policies that enable the institution to fulfil its Mission and in turn Vision of the institution. The institution must possess the financial resources necessary to fulfil its Mission and PEOs. In particular, there must be sufficient resources to attract and retain well-qualified staff, and to provide them with opportunities for continuous development and career growth. The program's budgetary planning process must also be provided for the acquisition, repair, maintenance and replacement of physical facilities and equipment.

The educational institution must have a comprehensive and up-to-date library and extensive educational, technological facilities.

The institution shall provide the required information about strategic plan and its effective implementation and monitoring, governance body, administrative setup, function of various bodies, service rules and recruitment policies, decentralization in working and grievance redressal mechanism, delegation of financial powers, transparency and availability of correct information in public domain, budget allocation and utilization (for both institution and program), library, quality of learning resources and availability of adequate Internet bandwidth as per the format given in the SAR.

#### 3.4 Accreditation Criteria Marks Distribution

Criterion No.	Criteria	Mark / Weightage
	Program Level Criteria	
1.	Vision, Mission and Program Educational Objectives	50
2.	Program Curriculum and Teaching - Learning Processes	100
3.	Course Outcomes and Program Outcomes	175
4.	Students' Performance	100
5.	Faculty Information and Contributions	200
6.	Facilities and Technical Support	80
7.	Continuous Improvement	75
	Institution Level Criteria	
8.	First Year Academics	50
9.	Student Support Systems	50
10.	Governance, Institutional Support and Financial Resources	120
	Total	1000

### PART - IV

#### 4. Accreditation Process

Accreditation workflow for Tier I Engineering institution is summarized in Workflow Diagram (Fig. 1) and described below briefly:

#### 4.1 Accreditation Stages

Eligible institutions may apply for accreditation of their programs online through the "Accreditation Workflow Management System" (https://enba.nbaind.org/) called e-NBA. The process of accreditation can be grouped into the following four sequential stages essentially in the same order. These stages are: i) Initial Stage; ii) Pre-Assessment Stage; iii) Assessment Stage; and iv) Post Assessment Stage (Decision-Making). Applicant institution must complete the previous stage, before proceeding to the next stage.

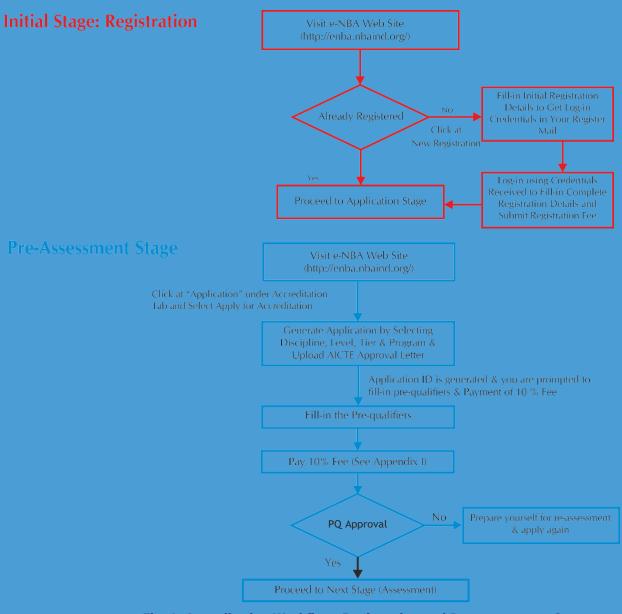


Fig. 1: Accreditation Workflow: Registration and Pre-assessment Stage

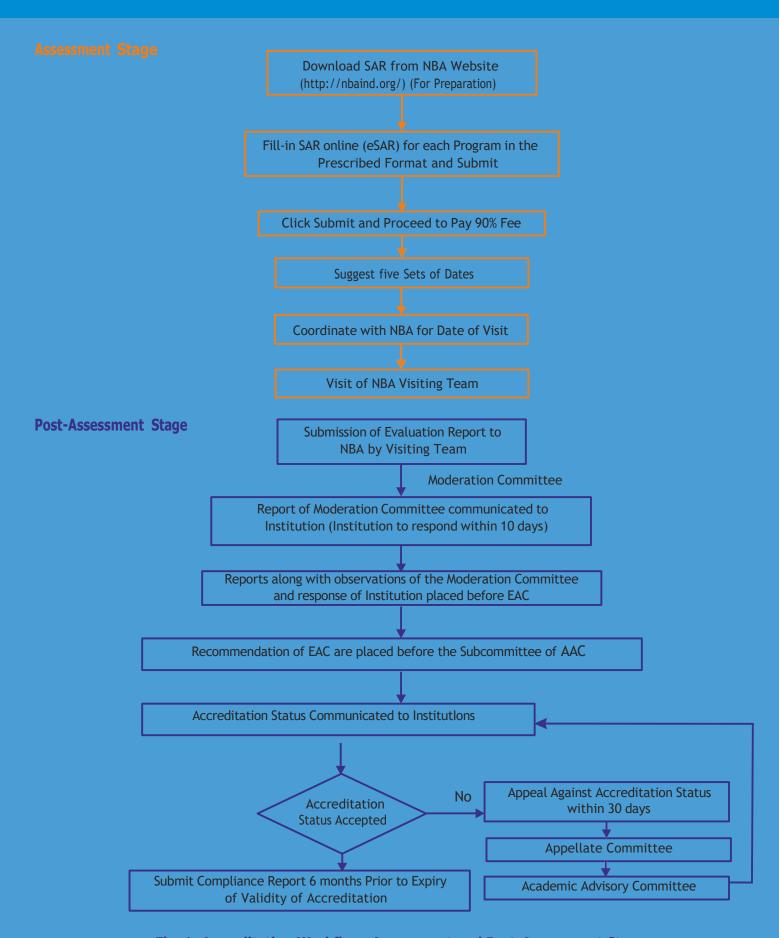


Fig. 1: Accreditation Workflow: Assessment and Post-Assessment Stage

#### 4.1.1. Initial Stage: Registration

Institutions willing to seek accreditation of their programs by NBA are required to register with eNBA. Registration with eNBA is a one-time process. After filing the initial registration form, user gets user-id and password to fill-in the complete Registration Form. Fig.2 is screen shot of initial registration and login interface for registered institutions.



Fig. 2: Registration of Institutions on e-NBA

Steps involved in the process of registration are as follows:

- The process of registration involves filling-in and submission of basic information of the registering institution in the data input boxes on e-NBA Registration Interface. On submission of basic information, the institution receives temporary login credentials through their registered e-mail, which become permanent user ID after submission of one-time Registration Fee (See Annexure I: Fee Structure).
- The institution is required to login using credentials received through their registered e-mail to complete the process of registration which includes keying-in of information in the data input boxes on e-NBA portal, such as the head of the institution, details of key promoters, bank details, details of the programs proposed for accreditation by the institution and uploading copies of all AICTE Approval Letters (academic year wise) or any other appropriate regulatory authority. The copies should be duly authenticated by the Head of the institution on each page.
- The institution is required to pay one-time registration fee to complete the process of registration.
- The above-mentioned process should be completed within **15 working days** of the initiation of the registration, failing which institutions will have to register again.
- Institutions already registered with e-NBA are not required to start the process of registration again.

#### 4.1.2. Pre-Assessment Stage

#### 4.1.2.1. Application for Accreditation

- Registered institution may apply online for accreditation of its programs by NBA. Login into eNBA portal using login credentials obtained during the Registration process mentioned above.
- Generate appropriate format for application by selecting Discipline, Level and Programs from pull-down menus as shown in Fig. 3.

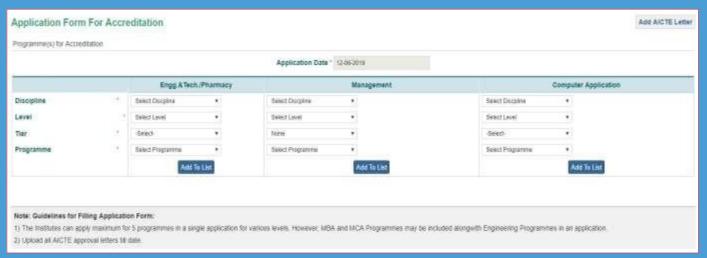


Fig. 3: Generating Application(s) for Accreditation of Specific Program

- Upload all AICTE Approval Letters for the last five years including the Current Academic Year or any other appropriate regulatory authority duly authenticated by the Head of the institution.
- Institutions can apply for accreditation up to five programs through a single application on the e-NBA portal. Management and MCA programs can be clubbed with other programs in a single application. Applications for accreditation can be submitted any time when an institution is fairly confident that its programs comply with the relevant pre-qualifiers, and their system for outcome-based education and accreditation have been put in place and well imbibed by the faculty members of the program.
- Click at **"Submit"** button, for submission of temporary application to NBA for further processing. Application ID gets generated on successful submission of application.

#### 4.1.2.2. Submission of Pre-Qualifiers

After the generation of the temporary application, the institution is required to fill-in the pre-qualifiers (See Annexure II) for program(s) to be accredited through eNBA portal. Login into eNBA portal and Click at "Pre-qualifier / e-SAR" under "Application" from the Left Navigation Panel. eNBA would display your Application No., Program and Level. Click at "Proceed to Pre-qualifiers". e-NBA seeks information on pre-qualifiers under five sub-heads, namely i) Programme-specific Information; ii) Student Admissions; iii) Information on Faculty;

iv) Student Faculty Ratio; and v) Compliance Status. Fill-in all the requisite information for the first sub-head and click at "Save and Next" to move to the next sub-head. Screenshot of program-specific information is given below as an example in **Fig. 4.** 



Fig.4: Screenshot of Pre-qualifier: Program-Specific Information

#### 4.1.2.3. Submission of 10 % of Total Accreditation Fee

The institution is required to submit 10 per cent of the total applicable accreditation fee (as prompted by eNBA portal) (see Annexure I: Fee Structure) along with duly filled-in pre-qualifiers for further processing of the application. This first stage fee is non-refundable. If all the pre-qualifiers applied through an application are not approved, then the application is not processed further and the institution is informed accordingly.

All pre-assessment steps mentioned-above (4.1.2.1 to 4.1.2.3) should be completed within 30 days from the generation of the temporary application. If all these steps are not completed within 30 days, the application needs to be regenerated and PQs needs to be filled again.

#### 4.1.3. Assessment Stage

### 4.1.3.1. Submission of Self-Assessment Report (SAR)

Submission of Self-Assessment Report (SAR) and Assessment by Visiting Team of NBA involves the following steps:

- Once the Pre-Qualifiers are approved, the institution is required to fill-in the e-SARs for the programs whose pre-qualifiers are approved as prompted by eNBA portal.
- To fill-in e-SAR (See Annexure III SAR), login into eNBA portal, click at "PQ/e-SAR" under "Application" and start filling the e-SAR online for each program. The information filled in Pre-Qualifier come prefilled (such as student information and faculty details) in the e-SAR and institutions are required to fill rest of the information. The e-SAR contains more detailed information about the programs and helps the institution to

self-assess itself on each accreditation criteria. It is an opportunity for the institution to showcase its strengths, weaknesses, etc. for evaluation and assessment criteria of NBA. However, e-SAR is expected to be factual and not narrative. Screenshot of the Index Page of eSAR is given below as an example in Fig. 5.

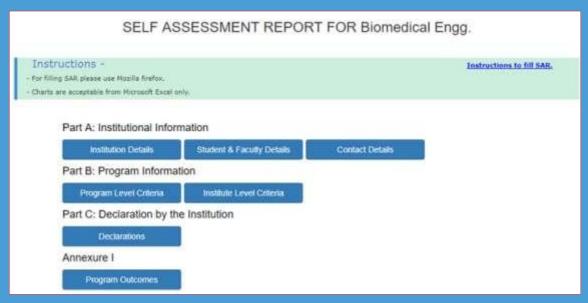


Fig.5: Screenshot of eSAR: Index Page

- Once all e-SAR of individual programs are submitted, click on the final submit button and pay the remaining 90% fees for all the programs whose e-SAR has been submitted (See Annexure I Fee Structure). Institution can view the submitted e-SAR online and save it as PDF. The e-SAR submitted online is automatically forwarded to NBA for further necessary action.
- On submission of e-SAR, institution is invited to suggest dates for the visit and prepare itself for the visit as shown in Fig. 6. Submit five sets of dates for the visit. The institution is required to propose such sets of dates for the visit when the regular classes and all academic activities of the program applied for accreditation are on. NBA selects one set of dates and communicates the same to the institution. After receiving the concurrence of the institution, the dates of visit are fixed, and Visiting Team of NBA conducts the visit.

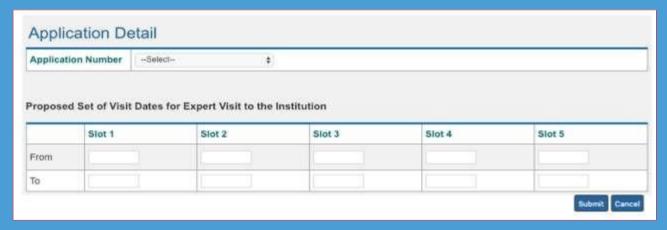


Fig. 6: Propose Five Sets of Dates for Visiting Team

## 4.1.3.2. Visiting Team to the Institution for Accreditation

- Once the Institution confirms the visit date, NBA constitutes the visit team. An accreditation visit to the institution is held for 3 days. However, visit for a single program is held for 2 days. This excludes the previsit meeting, which is held on day 0 at the place of stay. The Visiting Team consists of a Chairperson and two Program Evaluators for each program.
- While constituting a Visiting Team, NBA checks for the conflict of interest, i.e., expert must not be from the same State as of the institution and should not have any professional relation with the institution and/or program. Declaration and Feedback taken from the Chairperson and Evaluators is enclosed as Part C of Annexure IX and X respectively.
- The complete evaluation process including composition of Visiting Team, criteria for nomination, general policies for team formation, etc. have been elaborated in Part III of General Manual available at http://www.nbaind.org/files/general-manual-of-accreditation.pdf.
- The following Evaluation Documents that are helpful to the Visiting Team in preparing themselves for the visit as well as guiding them on processes and procedures to be followed are annexed in this Manual:
  - ✓ Pre-visit Preparation for Chairperson (Annexure IV)
  - ✓ Pre-visit Evaluation Report for Evaluator (Annexure V)
  - ✓ Visit Schedule (Annexure VI)
  - ✓ List of Documents to be Verified during the Visit (Annexure VII)
  - ✓ Evaluation Guidelines (Annexure VIII)
  - ✓ Chairperson's Visit Report (Part A, B and C) (Annexure IX)
  - ✓ Evaluator's Visit Report (Part A, B and C) (Annexure X)
  - ✓ Certificate of Participation (to be filled-in by the Chairperson of the Visiting Team) (Annexure XI)
  - Certificate and Feedback to be filled-in by the Institution (Annexure XII, XIII)

#### 4.1.3.3. Accreditation Visit

The visit of the Evaluation Team is arranged to the institution seeking accreditation of its program(s) to evaluate and validate the assessment of the institution/department through the SAR of the program concerned as per specified accreditation criteria. Although it may not be possible to describe adequately all the factors to be assessed during the on-site visit, some of the common ones are the following:

- i) Outcomes of the education provided;
- ii) Quality assurance processes; including internal reviews;
- iii) Assessment;

- g. Student records of three immediate batches of graduates;
- h. Sample project and design reports (excellent, good and marginal pass) by students;
- i. Sample student Feedback Form;
- j. Sample for industry-institution interaction;
- k. Results of quality assurance reviews;
- l. Records of employment/higher studies of graduates;
- m. Records of academic support and other learning activities; and
- n. Any other document that the Evaluation Team/NBA may require.

#### A) Visit to:

- a. Classrooms;
- b. Laboratories pertaining to the program;
- c. Central and department library; and
- d. Computer Centre.

The Visiting Team should conduct an Exit Meeting with the Management Representative, the Head of the Institution, the Head of Department and other key officials at the end of the on-site visit to present its findings (strengths, concerns, weaknesses and deficiencies). The institution is given a chance to withdraw one or more programs from the process of accreditation. In this case, the Head of the Institution shall have to submit the withdrawal in writing to the Chairperson of the Visiting Team during the Exit Meeting. No request for withdrawal shall be accepted after the exit meeting.

## 4.1.3.4. 360 Degree Feedback

Appraisal 360° works by gathering the opinions of a number of people. A series of carefully structured questions prompt one to assess skills in a number of key areas. A number of other people are then asked to give their perception by answering a set of questions, which are then compiled into a feedback report. It is envisaged that such feedback will help in bringing transparency and objectivity in the evaluation process which will help in improving quality of the accreditation process, the cherished goal of all the stakeholders.

The 360° Feedback Forms are made available online to the Institutions, Chairperson and the Evaluators by NBA. They have the flexibility to either fill-in the form online or download the form and submit the same by mail within 3 days.

A. Feedback Form Filled-in by the Head of the Institution: This format mainly focuses on the feedback on the entire Visiting Team comprising the Chairperson and Evaluators regarding the accreditation and evaluation process and seeking comments about the general behavior of the Visiting Team.

- B. Feedback Form Filled-in by the Chairperson: This format mainly focuses on the feedback on the performance of the evaluators and also about the cooperation and coordination rendered by the institution at the time of accreditation visit.
- C. Feedback Form Filled-in by the Evaluators: This format mainly focuses on the feedback on the Chairperson, Co-evaluators and also about the cooperation and coordination rendered by the institution at the time of accreditation visit.
- D. Feedback form Filled-in by the Chairperson / Evaluators in respect of Service Provider: This format mainly focuses on the feedback on the performance of the service providers during the visit of accreditation.

## 4.1.4. Post-Assessment Stage

## 4.1.4.1. Processing of Evaluation Report

Processing of Evaluation Report submitted by the Visiting Team involves the following steps:

- Once the accreditation visit is completed, the experts prepare the evaluation report and submit it to the NBA.
- The report is first placed before the Moderation Committee. The Moderation Committee considers the Evaluation Report and find out the borderline cases. The observations of the Moderation Committee, for such cases are communicated to the institution for seeking necessary clarification within 10 days of submission of evaluation report. Response of the institution is sent to Chairperson of the Visiting Team.
- The Visiting Team Report, observations of Moderation Committee and the response of the institution are considered by the EEAC (Engineering Evaluation and Accreditation Committee) in the presence of Chairperson of the Visiting Team.
- The recommendations of the EEAC are considered by the concerned Sub Committee of AAC of Engineering for taking a final decision on accreditation status. The final status of accreditation, as per the decision of Sub-committee of AAC, is communicated to the institution by NBA.

## 4.2 Award of Accreditation

- i) Accreditation of the Program for Six years;
- ii) Accreditation of the Program for Three years; and
- iii) No Accreditation of the Program.

## The accreditation is awarded based on the fulfilment of the following requirements:

#### 4.2.1 Award of Accreditation for Six Years

Y	С	W	D
>=7	<=3	0	0

- There should not be any "Deficiency" or "Weakness" in any of the criteria and at least seven criteria must be fully compliant with only "Concerns" in the remaining criteria.
- Number of available Ph.D. in the department should be greater than or equal to 30 per cent of the required number of faculty averaged over two academic years i.e. Current Academic Year (CAY) and Current Academic Year Minus One (CAYM1).
- Faculty Student Ratio in the department should be less than or equal to 1:20 averaged over three academic years i.e. Current Academic Year (CAY), Current Academic Year Minus One (CAYM1) and Current Academic Year Minus Two (CAYM2).
- At least 2 Professors or 1 Professor and 1 Associate Professor (on regular basis) with Ph.D. degree should be available in the respective department for two academic years i.e. Current Academic Year (CAY) and Current Academic Year Minus One (CAYM1).
- The HOD of the department in which the program under consideration is running should be appointed on regular basis and should possess PhD degree in the Current Academic Year (CAY)

#### 4.2.2 Award of Accreditation for Three Years

Υ	D
>=4	0

- There should be at least four criteria fully compliant with zero (0) "Deficiency" in the remaining criteria.
- At least 2 Professors or 1 Professor and 1 Associate Professor (on regular basis) with Ph.D. degree should be available in the respective department for two academic years i.e. Current Academic Year (CAY) and Current Academic Year Minus One (CAYM1).

- The faculty student ratio in the department under consideration should be less than or equal to 1:25 averaged over three academic years i.e. Current Academic Year (CAY), Current Academic Year Minus One (CAYM1) and Current Academic Year Minus Two (CAYM2).
- Number of available Ph.D. in the department should be greater than or equal to 20 per cent of the required number of faculty averaged over two academic years i.e. Current Academic Year (CAY) and Current Academic Year Minus One (CAYM1).
- The HOD of the department in which the program under consideration is running should be appointed on regular basis and should possess PhD degree in the Current Academic Year (CAY)

## **4.2.3** No Accreditation of the Programs

If the program fails to meet the criteria for award of accreditation for three years, it is awarded "Not Accredited" status.

## 4.3 Appeal

If the institution is not satisfied with the NBA's decision on the Status of Accreditation, then the institution can make an appeal against the decision within 30 days of date of receipt of communication from NBA along with the fee given in Annexure I: Fee Structure. The appeal is placed before the Appellate Committee in which the institutions are invited to present their case before the Committee. The recommendations of Appellate Committee are considered by the Academic Advisory Committee (AAC) for taking decision on appeal.

## 4.4 Continuation of Accreditation

Institutions that have already been granted accreditation for a period of three years, are required to submit the Compliance Report at least 6 months before the expiry of validity of accreditation along with the compliance fee.

On receipt of Compliance Report, a two-member Visiting Team of experts is constituted by NBA for the visit of the institution. The report of the Visiting Team is considered by the concerned committees in NBA for continuation (or otherwise) of accreditation for an appropriate period.

## 4.5 Accreditation Fee

Any institution which applied for accreditation is required to pay the fee at various stages as per the details given in Annexure I: Fee Structure.

## 4.6 Reconsideration of Programs

If a program is 'not accredited' or withdrawn during the visit, a fresh application for accreditation of the same program can be considered after one year from the date of previous visit of the Visiting Team.

**Note:** For all other general information, please refer to the General Manual for Accreditation or contact NBA.

# Annexure I

## Fee Structure TIER-I UG Engineering Institutions

## 1. Registration Fee

The Registration Fee amount is Rs.1,00,000 only + (Taxes as applicable from time-to-time)

## 2. Accreditation Fee

a. Processing fees to be paid by the institution for NBA accreditation for any program except Engineering
 Diploma

No. of Programs	Payment to be made with the application plus		
to be Accredited	taxes as applicable from time-to-time (Amount		
	in Rupees)		
1	2,00,000 + Taxes		
2	4,00,000 + Taxes		
3	6,00,000 + Taxes		
4	8,00,000 + Taxes		
5	10,00,000 + Taxes		

b. Processing fees to be paid by the institutions for NBA accreditation of Engineering Diploma Program:

No. of Programs to be Accredited	Payment to be made with the application plus taxes as application plus taxes as applicable (Amount in Rupees)	
1	2,00,000 + Taxes	
2	3,50,000 + Taxes	
3	5,00,000 + Taxes	
4	6,50,000 + Taxes	
5	8,00,000 + Taxes	

## 3. Appeal Fee

Rs. 1,50,000/- per program + Taxes as applicable from time-to-time

## 4. Compliance Fee

## a. UG Engineering Programs

No. of Programs to be Accredited	Payment to be made with the application plus taxes as applicable (Amount in Rupees)	
1	2,00,000 + Taxes	
2	2,50,000 + Taxes	
3	3,00,000 + Taxes	
4	3,50,000 + Taxes	
5	4,00,000 + Taxes	

## b. UG Pharmacy Programs

No. of Programs	Payment to be made with the application plus		
to be Accredited	taxes as applicable (Amount in Rupees)		
1	1,00,000 + Taxes		
2	1,50,000 + Taxes		
3	2,00,000 + Taxes		
4	2,50,000 + Taxes		
5	3,00,000 + Taxes		

## **Mode of Payment**

The institution may pay the fee (Registration/Accreditation) by the following modes:

i. Net Banking

ii. Credit/ Debit Card

iii. NEFT/RTGS as per the details given below:-

A/c Name: National Board of Accreditation

A/c No: 054805000417

IFC Code: ICIC0000548

Branch Address: Bhisham Pitamah Marg, Pragati Vihar, New Delhi - 110003

GST Registration No: 07AAAAN8753G1ZF

PAN Registration No: AAAAN8753G

With regard to the payment through eNBA, please indicate GST Registration No. of your organization.

# Annexure II

# **Pro-forma for Pre-Qualifiers TIER-I UG Engineering Institutions**

## **PART A- Profile of the Institution**

IIdii	ne or the Program appir	ieu ior:			
<b>A1</b> .	Name of the College:		Year (	of Establishment:	
	Location of the College:				
<b>A2.</b>	Address:		City:		
	State:		Pin C	ode:	
	Website:		E-ma	il:	
	STD Code:		Phon	e No:	
	Fax STD Code:		Fax:		
АЗ.	Head of the Institution:				
	Name:				
	Designation:				
	Status of Appointment:				
<b>A4</b> .	Contact details of Head of	the Institution:			
	STD Code:		Telep	phone No:	
	Mobile:		E-ma	il:	
	Fax STD Code:		Fax N	o:	
<b>A5</b> .	Name of the Affiliating Un	iversity:			
	Address:		City:		
	State:		Pin C	ode:	
	Website:		E-ma	il:	
	STD Code:		Phone	e No:	
	Fax STD Code:		Fax:		
<b>A6</b> .	Type of the Institution:				
	University	Deemed University		Government Aided	
	Autonomous	Affiliated			
	Provide Details:				

A7. Ownership Status	A7.	<b>Own</b>	ership	<b>Status</b>
----------------------	-----	------------	--------	---------------

Central Government	State Government	Government Aided	
Self financing	Trust	Society	
Section 25 Company	Any Other (Please specify)	Provide Details	

## A8. Students Admissions (Institution level considering all UG programs):

Item         CAY 2019-20         CAYm1 2017-18				Total	
Sanctioned intake					
Number of students admitted					
% of students admitted for previous three academic years including current academic year ( Total Admitted/Sanctioned Intake )					

#### **Table A8.1**

Kindly note that the year mentioned here is exemplary, institution has to consider the academic years as per the definition of CAY given in the document and according to the prevailing year.

**CAY:** Current Academic Year

**CAYm1:** Current Academic Year minus 1= Current Assessment Year

**CAYm2:** Current Academic Year minus 2= Current Assessment Year minus 1

### **A9.** Campus Information:

Does the College have its own building:

Sports Complex:

Canteen and Hostel (If any):

Medical Room:

Computer Laboratories:

Counselling and guidance:

Placement:

## A10. Names of programs offered by the college:

UG: PG:

Note: Please mention department wise.

## **A11.** Programs to be considered for accreditation vide this application.

Sl. No.	Program Name

Table A 11

## PART B- Program Information as per point A11(Previous Page)

(To be filledin separately for all the programs applied for)

## **B1.** Provide separate information for each program applied for(including shifts, if any):

Name of the Department	Name of the program to be considered		Increase/decrease in intake, if any (mention the No. of seats increased/ decreased)	Year of increase	AICTE Approval Letter No.	

#### Table B1

Note: Please mention all increased intake starting from the first increase for all programs

## \* Write applicable one:

- Applying first time
- Granted accreditation for----years period, i.e. from (year)to(year)
- Not accredited (specify visit dates, year)
- Withdrawn (specify visit dates, year)
- Not eligible for accreditation
- Eligible but not applied

## **B2. Student Admissions (Program specific):**

Item	CAY 2019-20	CAYm1 2018-19	CAYm2 2017-18	CAYm3 2016-17
Total number of students admitted in first year (N1)				
Number of students admitted in 2nd year in the same batch via lateral entry (N2)				
Total number of students admitted in the Program (N1 + N2)				
% of Students Admitted over the previous three academic years starting from CAYm1 (Total Admitted/Sanctioned Intake):				

Kindly note that the years mention here is for example only, institute is required to consider the academic years as per the definition of CAY given in the document and according to the prevailing year. The % of student admitted in the program is to be restricted upto 100%.

#### Table B2.1

CAY: Current Academic Year

CAYm1: Current Academic Year minus 1= Current Assessment Year

CAYm2: Current Academic Year minus 2= Current Assessment Year minus1

CAYm3: Current Academic Year minus 3= Current Assessment Year minus2

## **B3. Information of Faculty**

Please provide the list of faculty in the Department as per the below format separately (year wise) for each year under consideration

SI. No.	Name	PAN No.	Qualification	Area of Specialization	Designation	Date of Joining	Date on which Designated as Professor/ Associate Professor	Currently Associated (Y/N)	Nature of Association (Regular/Contract / Adjunct)	If contractual mention Full time or Part time	Date of Leaving (In case currently associated is "No")
1.											
2.											

Table B3

## **B3.1.** No. of the Available Faculty

SI. No.	Designation/Numbers		f Faculty in the or both UG and PG	
		CAY	CAYm1	
		(2019-20)	(2018-19)	
1.	Professor			
2.	<b>Associate Professor</b>			
3.	Assistant Professor			
4.	Number of Ph.D.*			
	(as per the AICTE norms)			

Table B3.1

Kindly note that the year mentioned here is exemplary, institution has to consider the academic years as per the definition given in the document and according to the prevailing year.

• At least 2 Professors or 1 Professor and 1 Associate Professor (on regular basis) with Ph.D. degree should be available in the respective department for two academic years i.e. Current Academic Year (CAY) and Current Academic Year Minus One (CAYM1).

B3.2. Details of the Head of the Department for the Program under Consideration
Name:
Qualification:
Ph.D.:
Others:
B.4. Student Faculty Ratio (No of Faculty as per the Sanctioned Intake)
(To be calculated at Department Level)
(No. of UG Programs in the Department (n):)
(No. of PG Programs in the Department (m):
(No. of Students in UG 2 <sup>nd</sup> Year= u1)
(No. of Students in UG 3 <sup>rd</sup> Year= u2)
(No. of Students in UG 4 <sup>th</sup> Year= u3)
(No. of Students in PG 1 <sup>st</sup> Year= p1)
(No. of Students in PG 2 <sup>nd</sup> Year= p2)
(No. of Students = Sanctioned Intake + Actual Admitted Lateral Entry Students)
(The above data to be provided considering all the UG and PG programs of the department)
S=Number of Students in the Department = U1 + U2 + U3 + P1 + P2
F = Total Number of Faculty Members in the Department (excluding first year faculty)

## Student Teacher Ratio (STR) = S / F

Year	CAY	CAYm1	CAYm2
u1.1			
u1.2			
u1.3			
UG1	u1.1+u1.2+u1.3	u1.1+u1.2+u1.3	u1.1+u1.2+u1.3
•••			
u <sub>n</sub> .1			
u <sub>n</sub> .2			
u <sub>n</sub> .3			
UGn	u <sub>n</sub> .1+u <sub>n</sub> .2+u <sub>n</sub> .3	u <sub>n</sub> .1+u <sub>n</sub> .2+u <sub>n</sub> .3	u <sub>n</sub> .1+u <sub>n</sub> .2+u <sub>n</sub> .3
p1.1			
p1.2			
PG1	p1.1+p1.2	p1.1+p1.2	p1.1+p1.2
••••			
pm.1			
pm.2			
PGm	pm.1+pm.2	pm.1+pm.2	pm.1+pm.2
Total No. of Students in the Department <b>(S)</b>	UG1 + UG2 + +UGn + PG1 + PGm	UG1 + UG2 + +UGn + PG1+ +PGm	UG1 + UG2 + +UGn + PG1+ +PGm
No. of Faculty in the Department <b>(F)</b>	F1	F2	F3
Student Faculty Ratio (SFR)	SFR1=S1/F1	SFR2= S2/F2	SFR3= S3/F3
Average SFR	SFR=(SFR1+SFR2+	·SFR3)/3	

#### **Table B 4.1**

Note: All the faculty whether regular or contractual (except Part-Time), will be considered. The contractual faculty (doing away with the terminology of visiting/adjunct faculty, whatsoever) who have taught for 2 consecutive semesters in the corresponding academic year on full time basis shall be considered for the purpose of calculation in the Faculty Student Ratio.

However, following will be ensured in case of contractual faculty:

- i. Shall have the AICTE prescribed qualifications and experience.
- ii. Shall be appointed on full time basis and worked for consecutive two semesters during the particular academic year under consideration.
- iii. Should have gone through an appropriate process of selection and the records of the same shall be made available to the visiting team during NBA visit.

## **Compliance Status to Pre-Visit Qualifiers**

SI. No.	Pre-Visit Qualifiers	Current Status	Compliance Status Complied/Not Complied
	Essential Qu	alifiers	
1	Vision, Mission & PEOs		
	I. Are the Vision & Mission of the Department stated in the Prospectus / Website?		
	ii. Are the PEOs of the Program listed in the Prospectus / Website?		
2	Whether approval of the competent authority (Approval of AICTE/ UGC/ BoG of Universities/ Deemed Universities etc.) for the programs under consideration has been obtained for all the years including current year		
3	Whether faculty student ratio in the department under consideration is better than or equal to 1:25 averaged over CAY, CAYm1 and CAYm2	SFR	
4	Whether at least two Professors or one Professor and one Associate Professor on regular basis with Ph.D. degree is available in the respective Department for CAY and CAYm1.		
5	Whether number of available PhDs in the department is greater than or equal to 20% of the required number of faculty averaged for CAY and CAYm1.		
6	Whether two batches have passed out in the programs under consideration		
7	Whether the HOD of the department in which the program under consideration is running should be appointed on regular basis and should possess PhD degree in the Current Academic Year (CAY)		

SI. No.	Pre-Visit Qualifiers	Current Status	Compliance Status Complied/Not Complied
	Desirable Pa	rameters	
1	Whether department has program assessment and quality improvement committee. If so, its constitution and mandate.		
2	Whether the departments under consideration receives separately earmarked funds for  i. Maintenance of Laboratory/computational facilities(recurring funds)		
	ii. Up-gradation of laboratory/computation facilities(non-recurring funds)		

<sup>\*</sup>Total number of students admitted in first year minus number of students migrated to other institutions, plus the number of students migrated to this institution divided by the sanctioned intake.

<sup>\*\*</sup>Total number of students admitted in first year in the respective program minus number of students migrated to other programs/ institutions plus the number of students migrated to this program divided by the sanctioned intake in the respective program.

# Annexure III

## **SAR CONTENTS**

Serial Code & Link to the Item	Item
PART A	Institutional Information
PART B	Criteria Summary
	Program Level Criteria
1	Vision, Mission and Program Educational Objectives
2	Program Curriculum and Teaching – Learning Processes
3	Course Outcomes and Program Outcomes
4	Students' Performance
5	Faculty Information and Contributions
6	Facilities and Technical Support
7	Continuous Improvement
	Institution Level Criteria
8	First Year Academics
9	Student Support Systems
10	Governance, Institutional Support and Financial Resources
PART C	Declaration by the Institution
Appendix I	Program Outcomes (POs) & Program Specific Outcomes (PSOs)

## PART A: INSTITUTIONAL INFORMATION

1.	1. Name and Address of the Institution:						
2.	2. Name and Address of the Affiliating University:						
3.	3. Year of establishment of the Institution:						
4.	4. Type of the Institution:						
ln:	Institution of National Importance						
Ur	University						
De	Deemed-to-be-University						
Αι	Autonomous						
Ar	Any other (Please specify)						
N	Note						
<b>P</b>	In case of Autonomous and Deemed University, mention the year of grant of status by the autho	rity.					
	n case of University Constituent Institution, please indicate the academic autonomy sta Institution as defined in 12th Plan guidelines of UGC. Institute should apply for Tier 1 only vacademically autonomous.						
5.	5. Ownership Status:						
Ce	Central Government						
St	State Government						
Go	Government Aided						
Se	Self-financing						
Tr	Trust						
So	Society						
Se	Section 25 Company						
Ar	Any Other (Please specify)						
Pr	rovide Details						

## 6. Other Academic Institutions of the Trust/Society/Company, etc., if any:

Name of the Institution (s)	Year of Establishment	Programs of Study	Location	

Table A.6

Note: Add rows as needed.

## 7. Details of all the Programs being Offered by the Institution under Consideration

SI. No.	Program Name	Name of the Department	Year of Start	Intake	Increase/ Decrease in Intake, if any	Year of Increase/ Decrease	AICTE Approval	Accreditation Status*

Table A.7

## \* Write applicable one:

Applying first time

- Granted accreditation for two / three years for the period (specify period)
- Granted accreditation for five / six years for the period (specify period)
- Not accredited (specify visit dates, year)
- Withdrawn (specify visit dates, year)
- Not eligible for accreditation
- Eligible but not applied

## 8. Programs to be Considered for Accreditation vide this Application

Sl. No.	Program Name
1	
N	

Table A.8

## 9. Total Number of Employees

## A. Regular Employees (Faculty and Staff):

Items		CAY		CAYm1		CAYm2	
		Min	Max	Min	Max	Min	Max
Faculty in Engineering M							
	F						
Faculty in Maths, Science &	M						
Humanities teaching in	F						
Engineering Programs							
Non-teaching staff	M						
	F						

Table: A.9a

**Note:** All the faculty whether regular or contractual (except Part-Time), will be considered. The contractual faculty (doing away with the terminology of visiting/adjunct faculty, whatsoever) who have taught for 2 consecutive semesters in the corresponding academic year on full time basis shall be considered for the purpose of calculation in the Faculty Student Ratio.

However, following will be ensured in case of contractual faculty:

- i. Shall have the AICTE prescribed qualifications and experience.
- ii. Shall be appointed on full time basis and worked for consecutive two semesters during the particular academic year under consideration.
- iii. Should have gone through an appropriate process of selection and the records of the same shall be made available to the visiting team during NBA visit.

CAY - Current Academic Year

CAYm1- Current Academic Year minus1= Current Assessment Year

CAYm2 - Current Academic Year minus2=Current Assessment Year minus 1

## B. Contractual Staff Employees (Faculty and Staff): (Not covered in Table A.9a)

Items		CAY		CAYm1		CAYm2	
		Min	Max	Min	Max	Min	Max
- h · ·	М						
Faculty in Engineering	F						
Faculty in Maths, Science &	М						
Humanities teaching in	F						
Non-topphing staff	М						
Non-teaching staff	F						

Table: A.9b

## **10. Total Number of Engineering Students**

Item	CAY	CAYm1	CAYm2
Total no. of boys			
Total no. of girls			
Total no. of students			

**Table: A.10** 

(Instruction: The data may be categorized in tabular form separately for undergraduate, postgraduate engineering, other program, if applicable)

Note: In case, the institution is running programs other than engineering programs, a separate table giving similar details is to be included.

#### 11. Vision of the Institution

#### 12. Mission of the Institution

## 13. Contact Information of the Head of the Institution and NBA coordinator, if designated:

١.	name:
	Designation:
	Mobile No:

Email id:

ii.	NBA	coord	dinato	r, if	design	nated
			2111000	. ,	aco.5.	

Name:

Designation:

Mobile No:

Email id:

## PART B: CRITERIA SUMMARY

## Name of the Program\_

Criterion No.	Criteria	Marks/Weightage				
Program Level Criteria						
1.	Vision, Mission and Program Educational Objectives	50				
2.	Program Curriculum and Teaching -Learning Processes	100				
3.	Course Outcomes and Program Outcomes	175				
4.	Students' Performance	100				
5.	Faculty Information and Contributions	200				
6.	Facilities and Technical Support	80				
7.	Continuous Improvement	75				
	Institution Level Criteria					
8.	First Year Academics	50				
9.	Student Support Systems	50				
10.	Governance, Institutional Support and Financial Resources	120				
	Total	1000				

## PART B: PROGRAM LEVEL CRITERIA

CRITERION 1
-------------

#### 1.1. State the Vision and Mission of the Department and Institution (5)

(Vision statement typically indicates aspirations and Mission statement states the broad approach to achieve aspirations)

(Here Institution Vision and Mission statements have been asked to ensure consistency with the department Vision and Mission statements; the assessment of the Institution Vision and Mission will be taken up in Criterion 10)

## 1.2. State the Program Educational Objectives (PEOs) (5)

(State the PEOs (3 to 5) of program seeking accreditation)

## 1.3. Indicate where the Vision, Mission and PEOs are published and disseminated among stakeholders (15)

(Describe where (websites, curricula, posters, etc.) the Vision, Mission and PEOs are published and detail the process which ensures awareness among internal and external stakeholders with effective process implementation)

(Internal stakeholders may include Management, Governing Board Members, faculty, support staff, students etc. and external stakeholders may include employers, industry, alumni, funding agencies, etc.)

# **1.4.** State the process for defining the Vision and Mission of the Department, and PEOs of the program (15) (Articulate the process involved in defining the Vision and Mission of the department and PEOs of the program.)

## 1.5. Establish consistency of PEOs with Mission of the Department (10)

(Generate a "Mission of the Department – PEOs matrix" with justification and rationale of the mapping)

PEO Statements	M1	M2	••••	Mn
PEO1:				
PEO2:				
PEON:				

**Table: B.1.5** 

- **Note i)** M1, M2... Mn are distinct elements of Mission statement. Enter correlation levels 1, 2 or 3 as defined below:
  - 1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High) If there is no correlation, put "-"
  - **ii)** Wherever the word "process" is used in this document its meaning is process formulation, notification to all the concerned, and implementation

CRITERION 2	Program Curriculum and Teaching -Learning Processes	100
-------------	---	-----

## 2.1. Program Curriculum (30)

## 2.1.1. State the process for designing the program curriculum (10)

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

## 2.1.2. Structure of the Curriculum (5)

Course	Course	Total 1	Total Number of contact hours				
Code	Title	Lecture (L)	Lecture (L) Tutorial (T) Practical# (P) Total Hours				
Total							

**Table: B.2.1.2** 

# Seminars, project works may be considered as practical

## 2.1.3. State the Components of the Curriculum (5)

Program curriculum grouping based on course components

Course Component	Curriculum Content (% of total number of credits of the program)	Total number of contact hours	Total number of credits
Basic Sciences			
Engineering Sciences			
Humanities and Social Sciences			
Program Core			
Program Electives			
Open Electives			
Project(s)			
Internships/Seminars			
Any other (Please specify)			
Total number of Credits			

**Table: B.2.1.3** 

## 2.1.4. State the process used to identify extent of compliance of the curriculum for attaining the Program Outcomes and Program Specific Outcomes as mentioned in Appendix I of SAR (10)

(State the process details)

## 2.2. Teaching-Learning Processes (70)

### 2.2.1. Describe Processes followed to Improve Quality of Teaching & Learning (15)

(Processes may include adherence to academic calendar and improving instruction methods using pedagogical initiatives such as real world examples, collaborative learning, quality of laboratory experience with regard to conducting experiments, recording observations, analysis of data, etc. encouraging bright students, assisting weak students, etc. The implementation details and impact analysis need to be documented)

## 2.2.2. Quality of End Semester Examination, Internal Semester Question Papers, Assignments and Evaluation (15)

(Mention the initiatives, implementation details and analysis of learning levels related to quality of semester tests, assignments and evaluation)

## 2.2.3. Quality of Student Projects (20)

(Quality of the project is measured in terms of consideration to factors including, but not limited to, environment, safety, ethics, cost, type (application, product, research, review, etc.) and standards. Processes related to project identification, allotment, continuous monitoring, evaluation including demonstration of working prototypes and enhancing the relevance of projects. Mention Implementation details including details of POs and PSOs addressed through the projects with justification)

## 2.2.4. Initiatives related to Industry Interaction (10)

(Give details of the industry involvement in the program such as industry-attached laboratories, partial delivery of appropriate courses by industry experts, etc. Mention the initiatives, implementation details and impact analysis)

## 2.2.5. Initiatives related to Industry Internship/Summer Training (10)

(Mention the initiatives, implementation details and impact analysis)

CRITERION 3	Course Outcomes (CO) and Program Outcomes (PO)	175
-------------	--	-----

## 3.1. Establish the Correlation between the Courses and the Program Outcomes (POs) & Program Specific Outcomes (25)

- NBA defined Program Outcomes (POs) as mentioned in Appendix I of SAR and Program Specific Outcomes (PSOs) as defined by the Program. Six to ten matrices of core courses are to be mentioned with at least one per semester.
- Select core courses to demonstrate the mapping/correlation with all POs and PSOs.
- Number of Outcomes for a Course is expected to be around 6.

## **Program Articulation Matrix**

Course	P01	P02	P03	P04	P05	P06	P07	P08	P09	P010	P011	P012
C101												
C202												
C303												
C4												

Table B.3.1a

### **Course Articulation Matrix**

СО	Statement	P01	P02	P03	P04	P05	P06	P07	P08	P09	P010	P011	P012
C202.1													
C202.2													
C202.n													
C202													

Table B.3.1b

Add and delete rows for Course Outcomes (COs) as needed

Note

### i) Enter correlation levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High) If there is no correlation, put "-"

- ii) Add more columns for PSOs
- iii) The tables B.3.1a and B.3.1b can be prepared in landscape mode, if required.

### 3.2. Attainment of Course Outcomes (75)

## 3.2.1. Describe the Assessment Tools and Processes used to gather the Data upon which the Evaluation of Course Outcome is based (10)

Describe different assessment tools (semester end examinations, mid-semester tests, laboratory examinations, student portfolios, etc) to measure the student learning and hence attainment of course outcomes. (Student portfolio is a collection of artifacts that demonstrate skills, personal characteristics and accomplishments created by the student during study period.)

The process adopted to map the assessment questions, parameters of assessment rubrics, etc. to the course outcomes to be explained with examples. The process of data collection from different assessment tools and the analysis of collected data to arrive at CO attainment levels need to be explained with examples

### 3.2.2. Record the Attainment of Course Outcomes of all Courses with respect to set Attainment Levels (65)

Program shall set Course Outcome attainment levels for all courses.

### **Measuring Course Outcomes Attained through Semester End Examinations (SEE)**

Target may be stated in terms of percentage of students getting equal or more than the target set by the Program in SEE for each CO.

### **Measuring CO Attainment through Cumulative Internal Examinations (CIE)**

Target may be stated in terms of percentage of students getting more than class average marks or set by the program in each of the associated COs in the assessment instruments (midterm tests, assignments, mini projects, reports and presentations, etc. as mapped with the Cos)

### 3.3. Attainment of Program Outcomes and Program Specific Outcomes (75)

# 3.3.1. Describe Assessment Tools and Processes used for Measuring the Attainment of each Program Outcome and Program Specific Outcome (10)

(Describe the assessment tools and processes used to gather the data upon which the evaluation of each of the Program Outcome and Program Specific Outcome is based indicating the frequency with which these processes are carried out. Describe the assessment processes that demonstrate the degree to which the Program Outcomes and Program Specific Outcomes are attained and document the attainment levels)

### 3.3.2. Provide Results of Evaluation of each PO & PSO (65)

(The attainment levels by direct (student performance) and indirect (surveys) are to be presented through Program level Course-PO&PSO matrices as indicated).

### **PO Attainment**

Course	P01	P02	P03	P04	P05	P06	P07	P08	P09	P010	P011	P012
C101												
C202												
C409												
Direct Attainmen												

**Table B: 3.3.2a** 

Survey	P01	P02	P03	P04	P05	P06	P07	P08	P09	P010	P011	P012
Survey1												
Survey2												
Survey3												
Indirect Attainment												

**Table B: 3.3.2b** 

**Note:** Add more columns as needed for *PSOs*.

Mention the type of survey conducted and the location of its source.

C101, C102 are indicative courses in the first year. Similarly, C409 is final year course. First numeric digit indicates year of study and remaining two digits indicate course nos. in the respective year of study.

- Direct attainment level of a PO/PSO is determined by taking average across all courses addressing that PO/PSO.
- Indirect attainment level of a PO/PSO is determined based on the student exit surveys, employer surveys, co-curricular activities, extracurricular activities, etc.

CRITERION 4 Students' Performance 100	ance 100
---------------------------------------	----------

Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	CAY	CAYm 1	CAYm 2
Sanctioned intake of the program (N)			
Total number of students admitted in first year minus number of students migrated to other programs/institutions, plus no. of students migrated to this program (N1)			
Number of students admitted in 2 <sup>nd</sup> year in the same batch via lateral entry (N2)			
Separate division students, if applicable (N3)			
Total number of students admitted in the Program (N1 + N2 + N3)			

Table B: 4a

**CAY – Current Academic Year** 

**CAYm1- Current Academic Year minus1= Current Assessment Year** 

CAYm2 - Current Academic Year minus2=Current Assessment Year minus 1

LYG - Last Year Graduate minus 1

LYGm1 - Last Year Graduate minus 1

LYGm2 - Last Year Graduate minus 2

Year of entry	N1 + N2 + N3 (As defined above)	Number of students who have successfully graduated without backlogs in any semester/year of study (Without Backlog means no compartment or failures in any semester/year of study)							
		I Year III Year IV Year							
CAY									
CAYm1									
CAYm2									
CAYm3									
CAYm4 (LYG)									
CAYm5 (LYGm1)									
CAYm6 (LYGm2)									

Table B: 4b

Year of entry	N1 + N2 + N3 (As defined	Number of students who have successfully graduated (Students with backlog in stipulated period of study)						
	above)	l Year	II Year	III Year	IV Year			
CAY								
CAYm1								
CAYm2								
CAYm3								
CAYm4 (LYG)								
CAYm5 (LYGm1)								
CAYm6 (LYGm2)								

Table B: 4c

For Example from data entry perspective:

Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	CAY (2016-17)	CAYm1 (2015-16)	CAYm2 (2014-15)
Sanctioned intake of the program (N)	120	120	120
Total number of students admitted in first year minus number of students migrated to other programs/institutions plus no. of students migrated to this program (N1)	100	100	110
Number of students admitted in 2nd year in the same batch via lateral entry (N2)	Nil	24	24
Separate division (N3)	Nil	Nil	Nil
Total number of students admitted in the Program (N1+N2+N3)	100	124	134

Year of entry	N1 + N2 + N3 (As defined above)	Number of students who have successfully graduated without backlogs in any semester/year of study					
		I Year	II Year	III Year	IV Year		
CAY (2016-17)	100 (100+00+0)						
CAYm1 (2015-16)	124 (100+24+0)	60					

CAYm2 (2014-15)	134 (110+24+0)	50	40+20		
CAYm3 (2013-14)	134 (110+24+0)	90	80+20	70+20	
CAYm4 (LYG) (2012-13)	124 (100+24+0)	100	90+20	85+18	85+15
CAYm5 (LYGm1) (2011-12)	130 (120+10+0)	80	70+10	60+10	50+10
CAYm6 (LYGm2) (2010-11)	144 (120+24+0)	70	60+15	54+10	50+10

Year of entry	N1 + N2 + N3 (As defined above)	Number of students who have successfully graduated (Students with backlog in stipulated period of study)					
		I Year	II Year	III Year	IV Year		
CAY (2016-17)	100 (100+00+0)						
CAYm1 (2015-16)	124 (100+24+0)	40					
CAYm2 (2014-15)	124 (100+24+0)	50	45+4				
CAYm3 (2013-14)	134 (110+24+0)	20	20+4	15+3			
CAYm4 (LYG) (2012-13)	124 (100+24+0)	0	0+4	5+4	5+4		
CAYm5 (LYGm1) (2011-12)	130 (120+10+0)	30	30+10	25+4	50+10		
CAYm6 (LYGm2) (2010-11)	144 (120+24+0)	30	25+5	25+5	20+5		

### 4.1. Enrolment Ratio (20)

Enrolment Ratio= N1/N

Item (Students enrolled at the First Year Level on average basis during the previous three academic years starting from current academic year)	Marks
>=90% students enrolled	20
>=80% students enrolled	18
>=70% students enrolled	16
>=60% students enrolled	14
Otherwise	0

**Table B: 4.1** 

### 4.2. Success Rate in the Stipulated Period of the Program (20)

### 4.2.1. Success Rate without Backlogs in any Semester/Year of study (15)

SI= (Number of students who have graduated from the program without backlog)/(Number of students admitted in the first year of that batch and actually admitted in 2nd year via lateral entry and separate division, if applicable)

Average SI = Mean of Success Index (SI) for past three batches

Success rate without backlogs in any semester/year of study = 15 × Average SI

Graduate, LYG	Graduate minus 1, LYGm1	Graduate minus 2, LYGm2
	,	·   '

### **Table B: 4.2.1**

### 4.2.2. Success rate in stipulated period of study [Total of with backlog + without backlog] (5)

SI= (Number of students who graduated from the program in the stipulated period of course duration)/ (Number of students admitted in the first year of that batch and actually admitted in 2nd year via lateral entry and separate division, if applicable)

Average SI = mean of Success Index (SI) for past three batches

Success rate =  $5 \times \text{Average SI}$ 

Item	Last Year of	Last Year of	Last Year of
	Graduate, LYG	Graduate minus 1,	Graduate minus 2,
	(CAYm6)	LYGm1 (CAYm5)	LYGm2 (CAYm6)
Number of students admitted in the corresponding			
First Year + admitted in 2nd year via lateral entry			
and separate division, if applicable			
Number of students who have graduated with			
backlogs in the stipulated period			
Success Index (SI)			
Average Success Index			

**Table B: 4.2.2** 

Note: If 100% students clear without any backlog then also total marks scored will be 20 as both 4.2.1 & 4.2.2 will be applicable simultaneously.

### 4.3. Academic Performance in Second Year (10)

Academic Performance = Average API (Academic Performance Index), where

API = ((Mean of  $2^{nd}$  Year Grade Point Average of all successful Students on a 10 point scale) or (Mean of the percentage of marks of all successful students in Second Year/10)) x (number of successful students/number of students appeared in the examination)

Successful students are those who are permitted to proceed to the Third year.

Academic Performance	CAYm1	CAYm2	CAYm3
Mean of CGPA or Mean Percentage of all successful students (X)			
Total No. of successful students (Y)			
Total No. of students appeared in the examination (Z)			
$API = X^* (Y/Z)$	Ap1	Ap2	Ap3
Average $API = (AP1 + AP2 + AP3)/3$			

**Table B: 4.3** 

### 4.4. Placement, Higher Studies and Entrepreneurship (30)

Assessment Points = 30 × average placement

Academic Performance	CAYm1	CAYm2	CAYm3
Total No. of Final Year Students (N)			
No. of students placed in companies or Government Sector (x)			
No. of students admitted to higher studies with valid qualifying scores (GATE or equivalent State or National Level Tests, GRE, GMAT etc.) (y)			
No. of students turned entrepreneur in engineering/technology (z)			
x + y + z =			
Placement Index : $(x + y + z)/N$	P1	P2	P3
Average placement= (P1 + P2 + P3)/3			
Assessment Points = 30 × average placement			

**Table B: 4.4** 

### 4.4a. Provide the Placement Data in the below mentioned Format with the Name of the Program and the

	Programs Name and Assessment Year									
Sl. No.	Name of the Student Placed	Enrollment No.	Name of the Employer	Appointment Letter Reference No. with Date						

**Table B: 4.4a** 

### **Assessment Year:**

### 4.5. Professional Activities (20)

### 4.5.1. Professional Societies/Chapters and Organizing Engineering Events (5)

(The Department shall provide relevant details)

### 4.5.2. Publication of Technical Magazines, Newsletters, etc. (5)

(The Department shall list the publications mentioned earlier along with the names of the editors, publishers, etc.)

### 4.5.3 Participation in Inter-institution Events by Students of the Program of Study (10)

(The Department shall provide a table indicating those publications, which received awards in the events/conferences organized by other institutes)

CRI	CRITERION 5 Faculty Information and Contributions						200								
Name of the Faculty Member	Degree (highest degree)	University	Year of attaining higher gindustrion	Association with the Institution	Designation	Date on which Designated as Professor/ Associate Professor	Date of Joining the Institution	Department	Specialization	Research Paper Publications	Ph.D. Guidance	Faculty Receiving Ph.D. during about the Assessment Years	Currently Associated (Y/N)	(In case Currently Associated is ("No")	Nature of Association (Regular/Contract)

**Table B.5.1** 

**Note:** Please provide details for the faculty of the department, cumulative information for all the shifts for all academic years starting from current year in above format in Annexure - II (B.3).

# 5.1. Student-Faculty Ratio (SFR) (20) (To be calculated at Department Level) No. of UG Programs in the Department (n): \_\_\_\_\_\_ No. of PG Programs in the Department (m): \_\_\_\_\_ No. of Students in UG 2nd Year= u1 No. of Students in UG 3rd Year= u2 No. of Students in UG 4th Year= u3 No. of Students in PG 1st Year= p1

No. of Students in PG 2nd Year= **p2** 

### No. of Students = Sanctioned Intake + Actual Admitted Lateral Entry Students

(The above data to be provided considering all the UG and PG programs of the department)

S=Number of Students in the Department = UG1+UG2+UG3+PG1+PG2

**F** = Total Number of Faculty Members in the Department (excluding first year faculty)

### Student Teacher Ratio (STR) = S / F

Year	CAY	CAYm1	CAYm2
u1.1			
u1.2			
u1.3			
UG1	u1.1+u1.2+u1.3	u1.1+u1.2+u1.3	u1.1+u1.2+u1.3
•••			
u <sub>n</sub> .1			
u <sub>n</sub> .2			
u <sub>n</sub> .3			
UGn	u <sub>n</sub> .1+u <sub>n</sub> .2+u <sub>n</sub> .3	u <sub>n</sub> .1+u <sub>n</sub> .2+u <sub>n</sub> .3	u <sub>n</sub> .1+u <sub>n</sub> .2+u <sub>n</sub> .3
p1.1			
p1.2			
PG1	p1.1+p1.2	p1.1+p1.2	p1.1+p1.2
••••			
pm.1			
pm.2	4. 2	4. 5	4
PGm	pm.1+pm.2	pm.1+pm.2	pm.1+pm.2
Total No. of Students in the Department <b>(S)</b>	UG1 + UG2 + +UGn + PG1 + PGm= S1	UG1 + UG2 + +UGn + PG1+ PGm= S2	UG1 + UG2 + + UGn + Pg1+ + PGm = S3
No. of Faculty in the Department <b>(F)</b>	F1	F2	F3
Student Faculty Ratio <b>(SFR</b> )	SFR1=S1/F1	SFR2= S2/F2	SFR3= S3/F3
Average SFR	SFR=(SFR1+SFR2+	SFR3)/3	

### **Table B 5.1**

Marks to be given proportionally from a maximum of 20 to a minimum of 10 for average SFR between 15:1 to 25:1, and zero for average SFR higher than 25:1. Marks distribution is given as below:

**Note:** All the faculty whether regular or contractual (except Part-Time), will be considered. The contractual faculty (doing away with the terminology of visiting/adjunct faculty, whatsoever) who have taught for 2 consecutive semesters in the corresponding academic year on full time basis shall be considered for the purpose of calculation in the Faculty Student Ratio.

However, following will be ensured in case of contractual faculty:

- i. Shall have the AICTE prescribed qualifications and experience.
- ii. Shall be appointed on full time basis and worked for consecutive two semesters during the particular academic year under consideration.
- iii. Should have gone through an appropriate process of selection and the records of the same shall be made available to the visiting team during NBA visit.

# **5.1.1.** Provide the information about the regular and contractual faculty as per the format mentioned below:

	Total number of regular faculty in the department	Total number of contractual faculty in the department
CAY		
CAYm1		
CAYm2		

**Table 5.1.1** 

### **5.2. Faculty Cadre Proportion (20)**

The reference Faculty cadre proportion is 1(F1):2(F2):6(F3)

- F1: Number of Professors required =  $1/9 \times N$  Number of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (N) as per 5.1
- F2: Number of Associate Professors required =  $2/9 \times 10^{-2} \times 10$
- F3: Number of Assistant Professors required =  $6/9 \times 1$  Number of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (N) as per 5.1

Year	Professo	rs	Associate P	rofessors	<b>Assistant Professors</b>	
	Required F1	Available	Required F2	Available	Required F3	Available
CAY						
CAYm1						
CAYm2						
Average Numbers	RF1=	AF1=	RF2=	AF2=	RF3=	Af3=

**Table B: 5.2** 

Cadre Ratio Marks= 
$$\left[ \underbrace{\frac{AF1}{RF1}} + \underbrace{\frac{AF2}{RF2} \times 0.6} \right] + \underbrace{\frac{AF3}{RF3} \times 0.4} \right] \times 10$$

- If AF1 = AF2 = 0 then zero marks
- Maximum marks to be limited if it exceeds 20

**Example:** Intake = 60 (i.e. total no. of students= 180); Required number of Faculty: 9; RF1= 1, RF2=2 and RF3=6

- **Case 1:** AF1/RF1= 1; AF2/RF2 = 1; AF3/RF3 = 1; Cadre proportion marks =  $(1+0.6+0.4) \times 10 = 20$
- **Case 2:** AF1/RF1= 1; AF2/RF2 = 3/2; AF3/RF3 = 5/6; Cadre proportion marks = (1+0.9+0.3) x 10 = limited to 20
- **Case 3:** AF1/RF1=0; AF2/RF2=1/2; AF3/RF3=8/6; Cadre proportion marks =  $(0+0.3+0.53) \times 10 = 8.3$

### 5.3. Faculty Qualification (20)

FQ =  $2.0 \times [(10X + 4Y)/F)]$  where x is no. of regular faculty with Ph.D., Y is no. of regular faculty with M. Tech., F is no. of regular faculty required to comply 20:1 Faculty Student ratio (no. of faculty and no. of students required are to be calculated as per 5.1)

	X	Υ	F	$FQ = 2.0 \times [(10X + 4Y)/F)]$
CAY				
CAYm1				
CAYm2				
Average Assessment				

**Table B: 5.3** 

### 5.4. Faculty Retention (10)

No. of regular faculty members in CAYm1=

CAY=

Item Marks	
(% of faculty retained during the period of assessment keeping CAYm2 as base year)	
>= 90% of required Faculty members retained during the period of assessment keeping CAYm2 as base year	10
>=75% of required Faculty members retained during the period of assessment keeping CAYm2 as base year	08
>= 60% of required Faculty members retained during the period of assessment keeping CAYm2 as base year	06
>= 50% of required Faculty members retained during the period of assessment keeping CAYm2 as base year	04
< 50% of required Faculty members retained during the period of assessment keeping CAYm2 as base year	0

**Table B: 5.4** 

### 5.5. Faculty Competencies in Correlation to Program Specific Criteria (10)

(List the program specific criteria and the competencies (specialization, research publications, course developments, etc.) of faculty to correlate the program specific criteria and competencies)

### 5.6. Innovations by the Faculty in Teaching and Learning (10)

Innovations by the Faculty in teaching and learning shall be summarized as per the following description.

Contributions to teaching and learning are activities that contribute to the improvement of student learning. These activities may include innovations not limited to, use of ICT, instruction delivery, instructional

methods, assessment, evaluation and inclusive class rooms that lead to effective, efficient and engaging instruction. Any contributions to teaching and learning should satisfy the following criteria:

- The work must be made available on Institute website
- The work must be available for peer review and critique
- The work must be reproducible and developed further by other scholars

The department/institution may set up appropriate processes for making the contributions available to the public, getting them reviewed and for rewarding. These may typically include statement of clear goals, adequate preparation, use of appropriate methods, significance of results, effective presentation and reflective critique

### 5.7. Faculty as Participants in Faculty Development/Training Activities/STTPs (15)

- A faculty scores maximum five points for participation
- Participation in 2 to 5 days Faculty/ Faculty development program: 3 Points
- Participation > 5 days Faculty / Faculty development program: 5 points

Name of the Faculty	Max. 5 per Faculty				
	CAYm1	CAYm2	CAYm3		
Sum					
RF= Number of Faculty required to comply with 20:1 Student- Faculty ratio as per 5.1					
Assessment = 3 × (Sum/0.5 RF) (Marks limited to 15)					
Average assessment over last three years (Marks limited to 15) =					

**Table B: 5.7** 

### 5.8. Research and Development (75)

### **5.8.1.** Academic Research (20)

Academic research includes research paper publications, Ph.D. guidance, and faculty receiving Ph.D. during the assessment period.

- Number of quality publications in refereed/SCI Journals, citations, Books/Book Chapters etc. (15)
- Ph.D. guided /Ph.D. awarded during the assessment period while working in the institute (5)

All relevant details shall be mentioned.

### 5.8.2. Sponsored Research (20)

Funded research from outside:

(Provide a list with Project Title, Funding Agency, Amount and Duration)

Funding Amount (Cumulative during CAYm1, CAYm2 and CAYm3):

Amount > 50 Lakh - 20 Marks,

Amount > 40 and < 50 Lakh - 15 Marks.

Amount > 30 and < 40 Lakh - 10 Marks,

Amount > 15 and < 30 Lakh - 5 Marks,

Amount < 15 Lakh - 0 Marks

### **5.8.3.** Development activities (15)

### Provide details:

- Product Development
- Research laboratories
- Instructional materials
- Working models/charts/monograms, etc.

### 5.8.4. Consultancy (from Industry) (20)

(Provide a list with Project Title, Funding Agency, Amount and Duration)

Funding Amount (Cumulative during CAYm1, CAYm2 and CAYm3):

Amount > 10 Lacs - 20 Marks,

Amount <10 and > 8 Lakh - 15 Marks,

Amount < 8 and > 6 Lakh - 10 Marks,

Amount < 6 and > 4 Lakh - 5 Marks,

Amount < 4 and > 2 Lakh - 2 Marks,

Amount < 2 Lakh - 0 Mark

### 5.9. Faculty Performance Appraisal and Development System (FPADS) (10)

Faculty members of Higher Educational Institutions today have to perform a variety of tasks pertaining to diverse roles. In addition to instruction, faculty members need to innovate and conduct research for their self-renewal, keep abreast with changes in technology, and develop expertise for effective implementation of curricula. They are also expected to provide services to the industry and community for understanding and contributing to the solution of real life problems in industry. Another role relates to the shouldering of administrative responsibilities and co-operation with other Faculty, Heads-of-Departments and the Head of Institution. An effective performance appraisal system for faculty is vital for optimizing the contribution of individual Faculty to institutional performance.

The assessment is based on:

- A well-defined system for faculty appraisal for all the assessment years (5)
- Its implementation and effectiveness (5)

### 5.10. Visiting/Adjunct/Emeritus Faculty, etc. (10)

Adjunct faculty also includes Industry experts. Provide details of participation and contributions in teaching and learning and /or research by visiting/adjunct/Emeritus faculty, etc. for all the assessment years:

- Provision of visiting/adjunct faculty (1)
- Minimum 50 hours per year interaction with adjunct faculty from industry/retired professors etc.(9)

(Minimum 50 hours interaction in a year will result in 3 marks for that year; 3marks x 3years= 9marks)

CRITERION 6	Facilities and Technical Support	80
-------------	----------------------------------	----

### 6.1. Adequate and well equipped laboratories, and technical manpower (40)

SI. No.	Name of the	No. of students	Name of the			Technical Manpower support				
Noi	Laboratory	per setup (Batch Size)	Important equipment	(all the courses for which the lab is utilized)	Name of the technical staff	Designation	Qualification			
1.										
N.										

**Table B: 6.1** 

### 6.2. Laboratories Maintenance and Overall Ambiance (10)

(Self-Explanatory)

### **6.3.** Safety Measures in Laboratories (10)

Sl. No.	Name of the Laboratory	Safety measures
1.		
N.		

**Table B: 6.3** 

### 6.4. Project Laboratory (20)

(Mention facilities & Utilization)

CRITERION 7	Continuous Improvement	75
-------------	------------------------	----

### 7.1. Action Taken based on the Results of Evaluation of each of the COs, POs & PSOs (30)

Identify the areas of weaknesses in the program based on the analysis of evaluation of COs, POs & PSOs attainment levels. Measures identified and implemented to improve POs& PSOs attainment levels for the assessment year including curriculum intervention, pedagogical initiatives, support system improvements, etc.

Action to be written as per table in 3.3.2

**Examples of Analysis and Proposed Action Sample 1-** Course outcomes for a laboratory course did not measure up, as some of the lab equipment did not have the capability to do the needful (e.g., single trace oscilloscopes available where dual trace would have been better, or, non-availability of some important support software, etc.).

**Action taken:** Equipment up-gradation was carried out (with details of up-gradation)

**Sample 2-** In a course on EM theory student performance has been consistently low with respect to some COs. Analysis of answer scripts and discussions with the students revealed that this could be attributed to a weaker course on vector calculus.

**Action taken:** Revision of the course syllabus was carried out (instructions / text books have been changed, when deemed appropriate).

**Sample 3-** In a course that had group projects, it was determined that the expectations from this course about PO3 (like: "to meet the specifications with consideration for the public health and safety, and the cultural, societal, and environmental considerations") were not realized as there were no discussions about these aspects while planning and execution of the project.

Action taken: Project planning, monitoring and evaluation included in rubrics related to these aspects.

### Pos & PSOs Attainment Levels and Actions for improvement – CAY only

Pos	Target Level	Attainment Level	Observations					
Po1: State	Po1: Statement as mentioned in Annexure I							
Po1								
Action 1:								
Action N:								
Po2: State	ment as mentior	ned in Annexure I						
Po2								
Action 1:								
Action N:								

PO3: Statement as mentioned in Annexure I						
Po3						
Action 1:						
Action N:						
PO4: Statement as mentioned in Annexure I						
Po4						
Action 1:						
Action N:						
PO5: Statement as mentioned in Annexure I						
Po5						
Action 1:						
Action N:						
PO6: Statement as mentioned in Annexure I						
Po6						
Action 1:						
Action N:						
PO7: Statement as mentioned in Annexure I						
Po7						
Action 1:						
Action N:						
PO8: Statement as mentioned in Annexure I						
Po8						
Action 1:						
Action N:						
PO9: Statement as mentioned in Annexure I						
Po9						
Action 1:						
Action N:						
PO10: Statement as mentioned in Annexure I						
Po10						
Action 1:						
Action N:						
Po11: Statement as mentioned in Annexure I						
Po11						
Action 1:						
Action N:						
Po12: Statement as mentioned in Annexure I						
Po12						
Action 1:						
Action N:						
Similar information is to be provided for PSOs						

**Table B: 7.1** 

### 7.2. Academic Audit and Action Taken thereof during the Period of Assessment (15)

(Academic Audit system/process and its implementation in relation to Continuous Improvement)

### 7.3. Improvement in Placement, Higher Studies and Entrepreneurship (10)

Assessment is based on improvement in:

- Placement: number, quality placement, core industry, pay packages, etc.
- Higher studies: performance in GATE, GRE, GMAT, CAT, etc. and admissions in premier institutions
- Entrepreneurs

### 7.4. Improvement in the quality of students admitted to the program (20)

Assessment is based on improvement in terms of ranks/score in qualifying state level/national level entrances tests, percentage marks in Physics, Chemistry and Mathematics in 12th Standard and percentage marks of the lateral entry students.

Item	Item				
	No. of Students admitted				
National Level Entrance Examination (Name of the Entrance Examination)	Opening Score/Rank				
(**************************************	Closing Score/Rank				
State/Institution/Level Entrance	No. of Students admitted				
Examination/Others	Opening Score/Rank				
(Name of the Entrance Examination)	Closing Score/Rank				
	No. of Students admitted				
Name of the Entrance Examination for Lateral Entry or lateral entry details	Opening Score/Rank				
Eutoral Entry of Internal Citity details	Closing Score/Rank				
Average CBSE/Any other Board Result (Physics, Chemistry & Mathematics)					

**Table B: 7.4** 

CRITERION 8	First Year Academics	50
-------------	----------------------	----

### 8.1. First Year Student-Faculty Ratio (FYSFR) (5)

Data for first year courses to calculate the FYSFR:

\*Note: If FYSFR is greater than 25, then assessment equal to zero.

Year	Number of students (approved intake strength)	Number of faculty members (considering fractional load)	FYSFR	*Assessment = (5 × 20)/ FYSFR (Limited to Max. 5)
CAY				
CAYm1				
CAYm2				
Average				

### **Table B: 8.1**

### 8.2. Qualification of Faculty Teaching First Year Common Courses (5)

Assessment of qualification = (5x + 3y)/RF, x= Number of Regular Faculty with Ph.D., y = Number of Regular Faculty with Post-graduate qualification RF= Number of faculty members required as per SFR of 20:1, Faculty definition as defined in 5.1

Year	X	Y	RF	Assessment of faculty qualification $(5x + 3y)/RF$
CAY				
CAYm1				
CAYm2				
	Avera			

**Table B: 8.2** 

### 8.3. First Year Academic Performance (10)

Academic Performance = ((Mean of 1st Year Grade Point Average of all successful Students on a 10 point scale) or (Mean of the percentage of marks in First Year of all successful students/10)) x (number of successful students/number of students appeared in the examination)

Successful students are those who are permitted to proceed to the second year.

### 8.4. Attainment of Course Outcomes of First Year Courses (10)

# 8.4.1. Describe the Assessment Processes used to Gather the Data upon which the Evaluation of Course Outcomes of First Year is Done (5)

(Examples of data collection processes may include, but are not limited to, specific exam questions, laboratory tests, internally developed assessment exams, oral exams assignments, presentations, tutorial sheets, etc.)

### 8.4.2. Record the Attainment of Course Outcomes of all First Year Courses (5)

Program shall have set attainment levels for all first year courses.

(The attainment levels shall be set considering average performance levels in the institution level examination or any higher value set as target for the assessment years. Attainment level is to be measured in terms of student performance in internal assessments with respect to the COs of a subject plus the performance in the institution level examination)

### Refer to 3.1.1 for further details

### 8.5. Attainment of Program Outcomes from First Year Courses (20)

### 8.5.1. Indicate Results of Evaluation of each Relevant PO and/or PSO, if applicable (10)

The relevant program outcomes that are to be addressed at first year need to be identified by the institution.

Program Outcome attainment levels shall be set for all relevant POs and/or PSOs through first year courses.

(Describe the assessment processes that demonstrate the degree to which the Program Outcomes and Program Specific Outcomes are attained through first year courses and document the attainment levels. Also include information on assessment processes used to gather the data upon which the evaluation of each Program Outcome is based indicating the frequency with which these processes are carried out).

### PO/PSO Attainment: Mention first year courses

Course	Course Title	P01	P02	P03	P04	Po5	Po6	Po7	P08	P09	P010	P011	P012
C101													
C102													
••••													

Table B: 8.5.1

- Add more columns for PSOs, if needed.
- If necessary, present the table in Landscape format

### 8.5.2. Actions Taken based on the results of evaluation of relevant POs and PSOs (10)

(The attainment levels by direct (student performance) are to be presented through Program level Course-PO matrix as indicated)

PO Attainment Levels and Actions for improvement – CAY only – Mention for relevant Pos

Pos	Target Level	Attainment Level	Observations
Po1: State	ement as mentior	ned in Annexure I	
Po1			
Action 1:			
Action N:			
Po2: State	ement as mentior	ned in Annexure I	
Po2			
Action 1:			
Action N:			
PO3: State	ement as mentio	ned in Annexure I	
Po3			
Action 1:			
Action N:			
PO4: State	ement as mentio	ned in Annexure I	
Po4			
Action 1:			
Action N:			
PO5: State	ement as mentio	ned in Annexure I	
Po5			
Action 1:			
Action N:			
PO6: State	ement as mentio	ned in Annexure I	
Po6			
Action 1:			
Action N:			
PO7: State	ement as mentio	ned in Annexure I	
Po7			
Action 1:			
Action N:			
PO8: State	ement as mentio	ned in Annexure I	
Po8			
Action 1:			
Action N:			

Pos	Target Level	Attainment Level	Observations				
PO9: State	ment as mention	ned in Annexure I					
Po9							
Action 1:							
Action N:	Action N:						
PO10: Stat	PO10: Statement as mentioned in Annexure I						
Po10							
Action 1:							
Action N:							
Po11: State	ement as mentic	oned in Annexure I					
Po11							
Action 1:							
Action N:	Action N:						
Po12: State	Po12: Statement as mentioned in Annexure I						
Po12							
Action 1:							
Action N:							

**Table B: 8.5.2** 

Write similar action statements for relevant PSOs

CRITERION 9	Student Support Systems	50
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### 9.1 Mentoring System to Help at Individual Level (5)

Type of mentoring: Professional guidance/career advancement/course work specific/laboratory specific/all-round development. Number of faculty mentors: Number of students per mentor: Frequency of meeting:

(The institution may report the details of the mentoring system that has been developed for the students for various purposes and also state the efficacy of such system)

### 9.2. Feedback Analysis and Reward / Corrective Measures Taken, if any (10)

Feedback collected for all courses: YES/NO

Specify the feedback collection process; Average Percentage of students who participate; Specify the feedback analysis process; Basis of reward/ corrective measures, if any; Indices used for measuring quality of teaching& learning and summary of the index values for all courses/teachers; Number of corrective actions taken.

### 9.3. Feedback on Facilities (5)

Assessment is based on student feedback collection, analysis and corrective action taken.

### 9.4. Self-Learning (5)

(The institution needs to specify the facilities, materials and scope for self-learning / learning beyond syllabus, Webinars, Podcast, MOOCs, etc. and evaluate their effectiveness)

### 9.5. Career Guidance, Training, Placement (10)

(The institution may specify the facility, its management and its effectiveness for career guidance including counseling for higher studies, campus placement support, industry interaction for training/internship/placement, etc.)

### 9.6. Entrepreneurship Cell (5)

(The institution may describe the facility, its management and its effectiveness in encouraging entrepreneurship and incubation) (Success stories for each of the assessment years are to be mentioned)

### 9.7. Co-curricular and Extra-curricular Activities (10)

(The institution may specify the co-curricular and extra-curricular activities) (Quantify activities such as NCC, NSS, etc.)

CRITERION 10
CRITERION 10

### 10.1. Organization, Governance and Transparency (55)

### 10.1.1. State the Vision and Mission of the Institute (5)

(Vision statement typically indicates aspirations and Mission statement states the broad approach to achieve aspirations)

### 10.1.2. Availability of the Institutional Strategic Plan and its Effective Implementation and Monitoring (25)

# 10.1.3. Governing Body, Administrative Setup, Functions of Various Bodies, Service Rules, Procedures, Recruitment and Promotional Policies (10)

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.

The published rules including service rules, policies and procedures; year of publication shall be listed. Also state the extent of awareness among the employees/students.

### 10.1.4. Decentralization in Working and Grievance Redressal Mechanism (5)

List the names of the faculty members who have been delegated powers for taking administrative decisions. Mention details in respect of decentralization in working. Specify the mechanism and composition of grievance redressal cell including Anti Ragging Committee & Sexual Harassment Committee.

### 10.1.5. Delegation of Financial Powers (5)

Institution should explicitly mention financial powers delegated to the Principal, Heads of Departments and relevant in-charges of workshops / Laboratories. Demonstrate the utilization of financial powers for each of the assessment years.

### 10.1.6. Transparency and Availability of Correct/Unambiguous Information in Public Domain (5)

(Information on policies, rules, processes and dissemination of this information to stakeholders is to be made available on the web site)

### 10.2. Budget Allocation, Utilization, and Public Accounting at Institution Level (15)

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

Total Income at Institutional Level: For CFY, CFYm1, CFYm2 & CFYm3

CFY: Current Financial Year - CFYm1 (Current Financial Year minus 1), CFYm2 (Current Financial Year minus 2), CFYm3 (Current Financial Year minus 3)

### For CFY

	Total Income in CFY				Actual expenditure in CFY (till)		
Fee	Govt.	Grant(s)	Other Sources (specify)	Recurring including Salaries	Non- recurring	Special Projects/Any other, specify	Expenditure per student

**Table B:10.2a** 

Note: Similar tables are to be prepared for CFYm1, CFYm2 & CFYm3.

Iteams	Budgeted in CFY	Actual expenses in CFY (till)	Budgeted in CFYm1	Actual Expenses in CFYm1	Budgeted in CFYm2	Actual Expenses in CFYm2	Budgeted in CFYm3	Actual Expenses in CFYm3
Infrastructure Built-Up								
Library								
Laboratory equipment								
Laboratory consumables								
Teaching and non-teaching staff salary								
Maintenance and spares								
R&D								
Training and Travel								
Miscellaneous expenses *								
Others, specify								
Total								

**Table B:10.2b** 

### 10.2.1. Adequacy of Budget Allocation (5)

(The institution needs to justify that the budget allocated over the years was adequate)

### 10.2.2. Utilization of Allocated Funds (5)

(The institution needs to state how the budget was utilized during the last three years)

### 10.2.3. Availability of the Audited Statements on the Institute's Website (5)

(The institution needs to make audited statements available on its website)

### **10.3.** Program Specific Budget Allocation, Utilization (30)

Total Budget at program level: For CFY, CFYm1, CFYm2 & CFYm3

CFY: Current Financial Year - CFYm1 (Current Financial Year minus 1) CFYm2 (Current Financial Year minus 2) CFYm3 (Current Financial Year minus 3)

### **For CFY**

Total Budget in CFY		Actual expenditu	re in CFY (till)	Total No. of students in CFY	
Non recurring Recurring		Non recurring	Recurring	Expenditure per student	

**Table B: 10.3a** 

Note: Similar tables are to be prepared for CFYm1, CFYm2 & CFYm3.

Iteams	Budgeted in CFY	Actual expenses in CFY(till)	Budgeted in CFYm1	Actual Expenses in CFYm1	Budgeted in CFYm2	Actual Expenses in CFYm2	Budgeted in CFYm3	Actual Expenses in CFYm3
Laboratory equipment								
Software								
Laboratory consumable								
Maintenance and spares								
R & D								
Training and Travel								
Miscellaneous expenses *								
Total								

**Table B:10.3b** 

<sup>\*</sup> Items to be mentioned.

\* Items to be mentioned.

### 10.3.1. Adequacy of Budget Allocation (10)

(Institution needs to justify that the budget allocated over the assessment years was adequate for the program)

### 10.3.2. Utilization of Allocated Funds (20)

(Institution needs to state how the budget was utilized during the last three assessment years)

### 10.4. Library and Internet (20)

(Indicate whether zero deficiency report was received by the Institution for all the assessment years. Effective availability/purchase records and utilization of facilities/equipment etc. to be documented and demonstrated)

### 10.4.1. Quality of Learning Resources (hard/soft) (10)

- Relevance of available learning resources including e-resources
- Accessibility to students
- Support to students for self-learning activities

### 10.4.2. Internet (10)

- Name of the Internet provider:
- Available bandwidth:
- Wi Fi availability:
- Internet access in labs, classrooms, library and offices of all Departments:
- Security arrangements

### **DECLARATION**

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

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

It is submitted that information provided in this Self-Assessment Report is factually correct. I understand and agree that an appropriate disciplinary action against the Institution will be initiated by the NBA in case any false statement/information is observed during pre-visit, visit, post visit and subsequent to grant of accreditation.

Date:	Signature & Name
Place:	Head of the Institution with seal

### **APPENDIX I OF SAR**

- 1. **Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- 2. **Problem Analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- 3. **Design/Development Of Solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- 4. **Conduct Investigations of Complex Problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- 5. **Modern Tool Usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- 6. **The Engineer and Society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- 7. **Environment and Sustain ability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- 8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- 9. **Individual and Team Work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multi disciplinary settings.
- 10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

- 11. **Project Management and Finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multi disciplinary environments.
- **12 Life-long Learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

### (B) PROGRAM SPECIFIC OUTCOMES (PSOs)

**Program should specify 2-4 Program Specific Outcomes.** 

# **Annexure IV**

### **PRE-VISIT PREPARATIONS**

# UG Engineering - TIER-I (To be filled by the Chairperson)

Name of Institution:	
Visit Dates:	
Programs under Consideration:	
1	2
3	4
5	
Brief about Institutional Criteria (Cr	iteria 8, 9 & 10)
(Assessment for Criteria 8 (8.3, 8.4 8	8.5) and 10 (10.3) is different for individual program)
Observations on the Evaluators Pre-\	isit Assessments*

\*Note: Observations on various programs, if any (including major strengths, weaknesses and deficiencies)

### **Advisory to the Chairperson**

Chairperson is requested to impress upon the Head of the institution to put on the website the Vision, Mission, Programme Educational Objectives as well the information on the institution website relevant to the stakeholders.

# Annexure V

#### PRE-VISIT EVALUATION REPORT

# **UG Engineering - TIER-I**

(To be filled-in by the Evaluator)

Nam	e of Program :					
Visit	Dates:					
Nam	ne of Evaluator:					
Crite	erion 1. Vision, Mission and	d Program	Educational Ol	ojectives		
SI.	Criteria	Availability	Appropriateness/	Adequacy of	Documentary	Poin

SI. No.	Criteria	Availability (Please tick)	Appropriateness/ Observations	Adequacy of Documentary Evidences Provided with SAR (Conclusive /Non Conclusive)	Documentary Evidences to be Verified	Points of Interaction with the Stakeholders (if any)
1.	Vision and Mission Statements					
2.	Consistency between institution and department Vision and Mission statements					
3.	Correlation parameters of PEO-Mission matrix are consistent and justified					

# **Summary of Observations**

Name of Institution:

- a. Any major shortcomings, observed in data provided in SAR?
- b. Significant weakness(es) observed in SAR which need to be examined during the visit:
- c. Significant strengths which need re-confirmation during the visit:
- d. Specific checking of the points to be done during the visit:
- e. Is the data provided here-in consistent with the information on the website of the institution (if available on website)?

#### Criterion 2. Program Curriculum and Teaching-Learning Processes

SI. No.	Criteria	Availability (Please tick)	Appropriateness/ Observations	Adequacy of Documentary Evidences Provided with SAR (Conclusive /Non Conclusive)	Documentary Evidences to be Verified	Points of Interaction with the Stakeholders (if any)
1.	Curriculum is well balanced structure & appropriate for a degree program					
2.	Attainment of POs and PSOs					
3.	Is identified Content beyond Syllabus appropriate and adequate?					
4.	Process is in place to ensure quality of internal semester question papers, assignments and their evaluation as per outcomes/learning levels perspective					
5.	Adequate process in place to Identify projects, allocation methodology, their monitoring and evaluation.					
6.	Projects are relevant and contribute towards attainment of Pos					
7.	Initiatives, implementation details and Impact analysis of industry institution interaction and actions taken thereof					
8.	Initiatives, implementation details and Impact analysis on industrial training					

- a. Any major shortcomings, observed in data provided in SAR?
- b. Significant weakness(es) observed in SAR which need to be examined during the visit:
- c. Significant strengths which need re-confirmation during the visit:
- d. Specific checking of the points to be done during the visit:
- e. Is the data provided here-in consistent with the information on the website of the institution (if available on website)?

#### Criterion 3. Course Outcomes and Program Outcomes

SI. No.	Criteria	Availability (Please tick)	Appropriateness/ Observations	Adequacy of Documentary Evidences Provided with SAR (Conclusive /Non Conclusive)	Documentary Evidences to be Verified	Points of Interaction with the Stakeholders (if any)
1.	Mapping of course outcomes with program					
2.	Assessment processes for evaluation of course outcomes					
3.	Demonstration of attainment of POs & PSOs					

#### **Summary of Observations:**

- a. Any major shortcomings, observed in data provided in SAR?
- b. Significant weakness(es) observed in SAR which need to be examined during the visit:
- c. Significant strengths which need re-confirmation during the visit:
- d. Specific checking of the points to be done during the visit:
- e. Is the data provided here-in consistent with the information on the website of the institution (if available on website)?

#### **Criterion 4. Students' Performance**

SI. No.	Criteria	Availability (Please tick)	Appropriateness/ Observations	Adequacy of Documentary Evidences Provided with SAR (Conclusive /Non Conclusive)	Documentary Evidences to be Verified	Points of Interaction with the Stakeholders (if any)
1.	Whether the percentage of students enrolled during the period of assessment on average basis is > 50%					
2.	Professional activities stated in achieving PO and PSOs					

- a. Any major shortcomings, observed in data provided in SAR?
- b. Significant weakness(es) observed in SAR which need to be examined during the visit:
- c. Significant strengths which need re-confirmation during the visit:
- d. Specific checking of the points to be done during the visit:
- e. Is the data provided here-in consistent with the information on the website of the institution (if available on website)?

#### **Criterion 5. Faculty Information and Contributions**

SI. No.	Criteria	Availability (Please tick)	Appropriateness/ Observations	Adequacy of Documentary Evidences Provided with SAR (Conclusive /Non Conclusive)	Documentary Evidences to be Verified	Points of Interaction with the Stakeholders (if any)
1.	Student faculty ratio is better than or equal to 1:25					
2.	Innovative methods adopted by faculty in teaching and learning					
3.	<ul><li>a. Academic Research</li><li>b. Sponsored Research</li><li>c. Development Activities</li><li>d. Consultancy from Industry</li></ul>					
4.	Well defined performance appraisal and development system is implemented for faculty					
5.	Provision of visiting/adjunct/ emeritus faculty. Their participation and contribution details					

- a. Any major shortcomings, observed in data provided in SAR?
- b. Significant weakness(es) observed in SAR which need to be examined during the visit:
- c. Significant strengths which need re-confirmation during the visit:
- d. Specific checking of the points to be done during the visit:
- e. Is the data provided here-in consistent with the information on the website of the institution (if available on website)?

#### **Criterion 6. Facilities and Technical Support**

SI. No.	Criteria	Availability (Please tick)	Appropriateness/ Observations	Adequacy of Documentary Evidences Provided with SAR (Conclusive /Non Conclusive)	Documentary Evidences to be Verified	Points of Interaction with the Stakeholders (if any)
1.	<ul><li>a. Adequate &amp; well equipped laboratories</li><li>b. Qualified technical support staff</li></ul>					
	to run all program specific curriculum					
2.	Availability of facilities and their effective utilization in project labs					
3.	Maintenance and Safety measures in laboratories					

- a. Any major shortcomings, observed in data provided in SAR?
- b. Significant weakness(es) observed in SAR which need to be examined during the visit:
- c. Significant strengths which need re-confirmation during the visit:
- d. Specific checking of the points to be done during the visit:
- e. Is the data provided here-in consistent with the information on the website of the institution (if available on website)?

#### **Criterion 7. Continuous Improvement**

SI. No.	Criteria	Availability (Please tick)	Appropriateness/ Observations	Adequacy of Documentary Evidences Provided with SAR (Conclusive /Non Conclusive)	Documentary Evidences to be Verified	Points of Interaction with the Stakeholders (if any)
1.	a. Areas of weaknesses are identified b. Measures to improve POs & PSOs attainment levels are implemented					
2.	a. Academic Audit Process b. Implementation					
3.	Improvement in:  a. Quality of student admitted in the program  b. Placement ,Higher Studies and Entrepreneurship					

- a. Any major shortcomings, observed in data provided in SAR?
- b. Significant weakness(es) observed in SAR which need to be examined during the visit:
- c. Significant strengths which need re-confirmation during the visit:
- d. Specific checking of the points to be done during the visit:
- e. Is the data provided here-in consistent with the information on the website of the institution (if available on website)?



# Visit Schedule for NBA- Tier I Institutions Team Constitution: Chairperson + 2 Program Evaluators

# Day 0

Time	Program Evaluators (PEs)	Team Chairperson (TC)
Evening	Arrival at Hotel	
18:30 - 20:00	Team meeting: Chaired by TC at Hotel	Introductions: PE and TC at Hotel
	<ul> <li>Review of pre-visit evaluation reports of all Programs</li> </ul>	<ul> <li>Collate pre-visit evaluation reports of all Programs</li> </ul>
	<ul> <li>Identify and discuss issues common to all Programs</li> </ul>	<ul> <li>Finalize the scope/ purpose of meetings scheduled</li> </ul>
		Briefing to PEs on evaluation process during visit followed by Q&A session
20:00 - 21:30	Team Dinner	

# Day 1: Morning Session 9:00am to 1:00pm

# Arrival 8:45am at the College

Time	Participants	Theme	Observations		
PART - I					
9:00am -	Entire Team	Introductions	At the College		
9:20am					
9:20am-	Entire Team and Management	Principal's Presentation about	Certainly not more		
10:00am	/Institution representatives	the Institution	minutes than 45		
10:20am -	Chairperson	Visit Central facilities, 1st Year	*1 See notes		
12:30pm		Labs, meet 1st Year faculty			
PART - II					
10:15am -	Experts in respective	Presentation by HoD	*2		
11:00am	departments				
11:00am -	Experts in respective departments	Meeting with Program faculty	*3		
12:00pm					
12:00pm -	Experts in respective departments	Individual meetings with a few	*4		
12:30pm		(3-4) faculty as decided by the experts			
12:30pm -	Entire team meets alone	To share thoughts			
1:00pm					
1:00pm -	:00pm - Working Lunch at the College				

Day 1: Afternoon: 2:15pm to 5:30pm

Time	Participants	Work Theme	Observation
2:15pm -	Chairperson	Discussion and Study of	*5
4:30pm		Admin-Different committees and	
		their working	
2:15pm -	Experts	Laboratories to see equipment	Friday is normally a working day.
4:30pm		adequacy, Conduct of lab sessions*2	So, labs would be functioning
4:30pm -			
5:30pm		A meeting at the College to review the	day's work
Day 1 the			
college ends			

### Day 2: Morning Session 9:30am - 1:00pm

Time	<b>Participants</b>	Work Theme	Observations
PART - I			
9:30am - 10:00am	All Team	Lectures. Every member on his own	Either one or two halves. Allows
To be adjusted as			one to see conduct of teaching.
per the time table			
of institution			
10:00am-12:00Noon	Chairperson	Study Budget, Accounts, etc.	
PART - II			
10:00am - 1:00pm	Experts	Study all evidences for attainment of Pos	*6
12:00pm - 1:00pm	Chairperson	Visit to placement office	
1:00pm - 2:00pm		Working Lunch at the College	

# Day 2: Afternoon Session 2:00pm - 4:15pm

Time	Participants	Work Theme	Observations		
2:00pm - 3:00pm	Experts	Visit and study of projects, towards attainment of POs	*7		
2:30pm - 3:00pm	Chairperson	Alumni, Parents, Employers			
3:00pm - 3:30pm	All Team	Faculty meeting	*8		
3:30pm onwards All Team Students		*8			
5:30pm Depart for place of stay					

#### Day 3

11:00am - 11:45am	Exit Meeting: Chairperson presents exit comments
12:00pm	Visit concludes

#### **Notes:**

- \*1. Visit to central facilities and first year facilities is for collecting observations on criterion 1-Institution's vision, mission, PEOs so that consistency amongst these could be checked; and (more importantly) for criterion 8. First year academics- all details needed as per Evaluation Guidelines to be collected jointly.
- \*2. HoD's presentation would be on the lines of the suggested template and will provide details needed subsequently.
- \*3. Meeting with program faculty. This is an academic meeting. It is for criteria: Criterion 2: Program Curriculum and Teaching-Learning Processes (100), criterion 3: Course Outcomes and Program Outcomes (175) (more than quarter of the weight). This discussion could also be around: (a) Process of designing curriculum, its structure and components (b) Projects and assignments, (c) Extent of Compliance of curriculum for attaining POs and PSOs, etc.
  - The discussion may allow you to identify evidence that you wish to see (like in-sem question papers, answer scripts, tutorial sheets, assignments, etc) and examine on the next day (apart from the evidence that you might have asked for prior to the visit). The faculty list is to be obtained, verified and later given to the Chairperson.
- \*4. These are meetings with individual faculty that allows them to share their views which they may not wish to express in public e.g. some aspects of academic processes that they feel could be better.
- \*5. Criterion 10: Governance, Institutional Support and Financial Resources (120)
  - Allows you to understand how different governance bodies work and evaluate these. Institution's Vision and Mission statements, budgets, spending, funds availability, administrative offices are studied for rules and regulations, working of different statutory bodies like: Anti Ragging Committee, Sexual Harassment Committee, Internet, Library. It is suggested that the Chairperson + one Evaluator could do a quick visit to all departments under consideration to get an overall picture of the institution.
- \*6. Assessment of all the evidences that you have asked for should be with you for assessment, particularly with respect to criterion 2 and 3. This is perhaps the most comprehensive task of the visit.
- \*7. A good one and a half hour is provided (may be extended a bit, if needed) as much of the assessment of attainment levels of some of the POs is expected to be done here. Particularly, POs {6 to 10}.
- \*8. For the meeting with the students, it may be a good idea to have a preliminary list of questions to be raised.

# **Annexure VII**

# List of Documents / Records to be verified during the Visit (Records of last three years to be made available, wherever applicable) TIER-I UG Engineering Institutions

The list below is just a guideline. The Institution may prepare their own list of documents in support of the SAR that they are submitting.

#### **Institution Specific**

- I.1. 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, 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.2. Rules, policies and procedures published by the Institution including service book and academic regulations along with the proof that the employees/students are aware of the rules and procedures.
- 1.3. Budget allocation and utilization: Audited Statement of Accounts.
- I.4. Informative web site.
- 1.5. Library resources books and journal holdings.
- 1.6. Listing of core, computing and manufacturing, etc.
- 1.7. Records of T & P, career and guidance cells.
- 1.8. Records of safety checks and critical installations.
- 1.9. Medical care records and usages of ambulance, etc.
- 1.10. Academic calendar, schedule of tutorial and makeup classes.
- I.11. Handouts/files along with Outcomes; list of additional topics to meet the outcomes.
- 1.12. Set of question papers, assignments, evaluation schemes, etc.
- 1.13. Feedback form, analysis of feedback and corrective actions.
- I.14. Documented feedback received from the stake-holders (e.g., Industries, Parents, Alumni, Financiers, etc.) of the Institution.
- 1.15. List of faculty along with their qualifications teaching first year courses.
- 1.16. Results of the First Year students.

#### **Program Specific**

#### Each program for which an institution seeks accreditation or reaccreditation must have in place:

- P.1 NBA accreditation reports of the past visits, if any.
- P.2 Department budget and allocations (last 3 years data).
- P.3 Admission seats filled and ranks (last 3 years data).
- P.4 List/Number of students who cleared the program in 4 years (last 3 years data).
- P.5 Average Grade point (CGPA) (last 3 years data of students' CGPA/ percentage).
- P.6 Placement and higher studies data (last 3 years 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 and computing facility within department.
- 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, POs, PEOs, Mission and Vision statements.
- P.23 Mapping of Course Outcomes with Program Outcomes.
- P.24 Course files, plan of course delivery, question papers, answer scripts, assignments, reports of assignments, project reports, report of design projects, list of laboratory experiments, reports of laboratory experiments, etc.
- P.25. Rubrics developed to validate the POs.
- P.26. Improvement in curriculum for mapping POs and PSOs.
- P.27. Direct and indirect assessment to show attainment of POs and PSOs.
- P.28. Stake-holders involvement in the process of improvement of PEOs and POs.

# Annexure VIII

# Evaluation Guidelines with Indicative Exhibits / Context to be Observed/Assessed - SAR Tier – I (UG Engineering) First Time Accreditation

### Criterion 1: Vision, Mission and Program Educational Objectives (50)

Sub	Criteria	Marks	<b>Evaluation Guidelines</b>
1.1.	State the Vision and Mission of	05	A. Availability of the Vision and Mission statements
	the Department and institution		of the Department (1)
			B. Appropriateness/Relevance of the Statements (2)
			C. Consistency of the Department statements with the
			institution statements (2)
			(Here institution Vision and Mission statements have
			been asked to ensure consistency with the department
			Vision and Mission statements; the assessment of the
			institution Vision and Mission will be done in Criterion
			10)

#### **Exhibits/Context to be Observed/Assessed:**

- A. Vision and Mission Statements
- B. Correctness from definition perspective
- C. Consistency between institution and Department statements

1.2.	State the Program Educational	05	A.	Listing of the Program Educational Objectives (3
	Objectives (PEOs)			to 5) of the program under consideration (5)

#### **Exhibits/Context to be Observed/Assessed:**

A. Availability and correctness of the PEOs statements

1.3.	Indicate where and how the Vision, Mission and PEOs are	Α.	Adequacy in respect of publication and dissemination (3)
	published and disseminated	В.	Process of dissemination among stakeholders (3)
	among stakeholders	C.	Extent of awareness of Vision, Mission and PEOs among the stakeholders (9)

- A. Adequacy Department Vision, Mission and PEOs: Availability on institution website under relevant program link; Availability at department notice boards, HoD Chamber, department website, if Available; Availability in department level documents/course of study
- B. Process of dissemination: Documentary evidence to indicate the process which ensures awareness among internal and external stakeholders with effective process implementation
- C. Extent of Awareness: Based on interaction with internal and external stakeholders

1.4.	State the process for defining	15	Α.	Description of process involved in defining the
	the Vision and Mission of the			Vision, Mission of the Department (07)
	Department, and PEOs of the		В.	Description of process involved in defining the
	program			PEOs of the program (08)

#### **Exhibits/Context to be Observed/Assessed:**

A. Documentary evidence to indicate the process which ensures effective participation of internal and external department stakeholders with effective process implementation

1.5.	Establish consistency of PEOs with Mission of the Department	A.	Preparation of a matrix of PEOs and elements of Mission statement (5)
		В.	Consistency/justification of co-relation parameters of the above matrix (5)

#### **Exhibits/Context to be Observed/Assessed:**

A. Availability of a matrix having PEOs and Mission elements B. Justification for each of the elements mapped in the matrix

#### **Criterion 2: Program Curriculum and Teaching-Learning Processes (100)**

Sub	Criteria	Marks	<b>Evaluation Guidelines</b>
2.1.	Program Curriculum	30	
	State the process for designing the program curriculum		Process used to demonstrate how the program curriculum is evolved and periodically reviewed considering the POs and PSOs. Also consider the involvement of the Industry(10).

#### **Exhibits/Context to be Observed/Assessed:**

Documentary evidence to indicate the process which demonstrate how the program curriculum is evolved and periodically reviewed considering the POs and PSOs.

2.1.2	Structure of the Curriculum	05	Refer to SAR: Expectation in 2.1.2 & 2.1.3 is that the
			curriculum is well balanced structure & appropriate for
			a degree program(5).

#### **Exhibits / Context to be Observed / Assessed**

2.1.3	State the components of the	05	Refer to SAR: Expectation in 2.1.2 & 2.1.3 is that the
	curriculum		curriculum is well balanced structure & appropriate for
			a degree program(5).

#### **Exhibits / Context to be Observed / Assessed**

Documentary evidence

2.1.4	State the process used to identify	10	Process used to identify extent of compliance of
	extent of compliance of the		curriculum for attaining POs & PSOs (10)
	curriculum for attaining the		
	Program utcomes (POs) & Program		
	Specific Outcomes(PSOs)		

#### **Exhibits / Context to be Observed / Assessed**

Documentary evidence to indicate the process which ensures mapping/compliance of Curriculum with the POs & PSOs.

Sub	Criteria	Marks	<b>Evaluation Guidelines</b>
2.2.	Teaching-Learning Process	70	
2.2.1.	Describe the process followed to improve quality of Teaching Learning.	15	<ul> <li>A. Adherence to Academic Calendar (2)</li> <li>B. Use of various instructional methods and pedagogical initiatives (2)</li> <li>C. Methodologies to support weak students and encourage bright students (2)</li> <li>D. Quality of classroom teaching (Observation in a Class) (2)</li> <li>E. Conduct of experiments (Observation in Lab) (2)</li> <li>F. Continuous Assessment in the laboratory (3)</li> <li>G. Student feedback of teaching learning process and action taken (2)</li> </ul>

- A. Availability of Academic Calendar based on University academic calendar and its effective compliance
- B. Documentary evidence to support implementation of pedagogical initiatives such as real life examples, collaborative learning, ICT supported learning, interactive class rooms, etc.
- C. Guidelines to identify weak and bright students; post identification actions taken; impact observed
- D. Class room ambience; efforts to keep students engaged (also to be verified during interaction with the students)
- E. Quality of laboratory experience with respect to conducting, recording observations, analysis etc.(also to be verified during interaction with the students)
- F. Internal Semester examination and internal marks thereof, Practical record books, each experiment assessment, final marks based on assessment of all the experiments and other assessments, if any
- G. Feedback format, frequency, analysis and actions taken (also to be verified during interaction with students)

2.2.2.	Quality of internal semester	15	A.	Process for internal semester question paper setting and
	Question papers, Assignments			evaluation and effective process implementation (3)
	and Evaluation.		В.	Process to ensure questions from outcomes/learning
				levels perspective (2)
			C.	Evidence of COs coverage in class test / mid-term tests
				(5)
			D.	Quality of Assignment and its relevance to COs (5)

- A. Process of internal semester question paper setting, model answers, evaluation and its compliance
- B. Question paper validation to ensure desired standard from outcome attainment perspective as well as learning levels perspective
- C. Mapping of questions with the Course outcomes
- D. Assignments to promote self-learning, survey of contents from multiple sources, assignment evaluation and feedback to the students, mapping with the COs

2.2.3.	Quality of student projects	20	A. Identification of projects and allocation methodology
			to Faculty Members (2)
			B. Types and relevance of the projects and their contribution towards attainment of POs and PSOs (2)
			C. Project related to Industry (3)
			D. Process for monitoring and evaluation (2)
			E. Process to assess individual and team performance (3)
			F. Quality of completed projects/working prototypes (5)
			G. Evidences of papers published /Awards received by
			projects, etc. (3)

#### **Exhibits/Context to be Observed/Assessed:**

- A. Projects identification and guide allocation process
- B. Projects classification (application, product, research, review etc.) consideration to factors such as environment, safety, ethics, cost, standards and mapping with program outcomes and program specific outcomes
- C. Continuous monitoring mechanism and evaluation
- D. Methodology (appropriately documented) to assess individual contribution/understanding of the project as well as collective contribution/understanding
- E. Based on Projects demonstration
- F. Quality of place (host) where the paper has been published /quality of competition in which award has been won

Sub	Criteria	Marks	Evaluation Guidelines
2.2.4.	Initiatives related to industry	10	A. Industry supported laboratories (2)
	interaction		B. Industry involvement in the program design and Curriculum (3)
			C. Industry involvement in partial delivery of any regular courses for students (3)
			D. Impact analysis of industry institute interaction and actions taken thereof (2)

- A. Type of industries, type of labs, objectives, utilization and effectiveness
- B. Documentary evidence
- C. Analysis and actions taken thereof

2.2.5.	Initiatives related to industry	10	A. Industrial training/tours for students (2)
	internship/summer training		B. Industrial /internship /summer training of more than
			two weeks and post training Assessment (3)
			C. Impact analysis of industrial training (2)
			D. Student feedback on initiative (3)

#### **Exhibits/Context to be Observed/Assessed:**

A and B. Type of Industries, planned or non-planned activity, objectives clearly defined, no. of students participated, relevant area of training, visit report documented

C and D. Impact analysis and feedback format, analysis and actions taken (also to be verified during interaction with students)

#### **Criterion 3: Course Outcomes and Program Outcomes (175)**

Sub	Criteria	Marks	<b>Evaluation Guidelines</b>
3.1.	Establish the correlation between the courses and the POs	25	A. Evidence of COs being defined for every course (5)
	and PSOs		B. Availability of COs embedded in the syllabi (5)
			C. Explanation of Course Articulation Matrix table to be ascertained (5)
			D. Explanation of Program Articulation Matrix tables to be ascertained (10)

#### **Exhibits/Context to be Observed/Assessed:**

- A. Appropriateness of the statements shall be seen for at least one course each from 2nd, 3rd and final year of study
- B. Mapping to be verified for at least two matrices
- C. Mapping to be verified for at least one course per year of study; program outcomes and program specific outcomes getting mapped with the core courses are also to be verified

3.2.	<b>Attainment Course Outcomes</b>	75	
3.2.1	Describe the assessment processes used to gather the data upon which the evaluation of Course Outcome is based.	10	<ul><li>A. List of assessment processes (2)</li><li>B. The quality /relevance of assessment processes and tools used (8)</li></ul>

# **Exhibits/Context to be Observed/Assessed:**

A and B. Evidence for appropriate assessment processes including data collection, verification, analysis, decision making.

3.2.2.	Record the attainment of Course	65	A.	Verify the attainment levels as per the benchmark set
	Outcomes of all courses with			for all courses (65)
	respect to set attainment levels.			

#### **Exhibits/Context to be Observed/Assessed:**

A. Methodology to define set levels and its compliance; data collection, verification, analysis and decision making; details for one course per year of study to be verified

3.3.	Attainmentof Program Outcomes and Program Specific Outcomes	75	
3.3.1.	Describe assessment tools and processes used for assessing the attainment of each of the POs and PSOs	10	A. List of assessment tools and processes (5)     B. The quality/relevance of assessment tools/processes used (5)

A and B. Direct and indirect assessment tools and processes; effective compliance; direct assessment methodology, indirect assessment formats-collection-analysis; decision making based on direct and indirect assessment

3.3.2	Provide results of evaluation of	65	A. Verification of documents, results and level of
	each PO and PSO		attainment of each PO/PSO (50)
			B. Overall levels of attainment (15)

#### **Exhibits/Context to be Observed/Assessed:**

A and B. Appropriate attainment level and documentary evidences; details for POs and PSOs attainment from core courses to be verified. Also atleast two POs and two PSOs attainment levels shall be verified

# **Criterion 4: Students' Performance (100)**

Sub	Criteria	Marks	<b>Evaluation Guidelines</b>
4.1.	Enrolment Ratio (20)	20	<ul> <li>A. &gt;= 90% students enrolled at the First Year Level on average basis during the previous three academic years starting from current academic year (20)</li> <li>B. &gt;= 80% students enrolled at the First Year Level on average basis during the previous three academic years starting from current academic year (18)</li> <li>C. &gt;= 70% students enrolled at the First Year Level on average basis during the previous three academic years starting from current academic year (16)</li> <li>D. &gt;= 60% students enrolled at the First Year Level on average basis during the previous three academic years starting from current academic year (14)</li> <li>E. Otherwise '0'.</li> </ul>

# **Exhibits/Context to be Observed/Assessed:**

A, B and C. Data to be verified for each of the assessment years

4.2.	Success Rate in the stipulated period of the program	20	
4.2.1.	Success rate without backlogs in any Semester/year of study  Without Backlog means no compartment or failures in any semester/year of study	15	SI= (Number of students who graduated from the program without backlog)/(Number of students admitted in the first year of that batch and actually admitted in 2nd year via lateral entry and separate division, if applicable)  Average SI = Mean of success index (SI) for past three batches Success rate without backlogs in any year of study = 15 × Average SI

# **Exhibits/Context to be Observed/Assessed:**

Data to be verified for each of the assessment years

4.2.2.	Success rate in stipulated period	5	SI= (Number of students who graduated from the
	(actual duration of the program)		program in the stipulated period of course
	[Total of with backlog +		duration)/(Number of students admitted in the first year
	without backlog]		of that batch and actually admitted in 2nd year via lateral
			entry and separate division, if applicable)
			Average SI = mean of success index (SI) for past three
			batches Success rate = 5 × Average SI

A. Data to be verified for each of the assessment years

Note: if 100% students clear without any backlog then also total marks scored will be 40 as both 4.2.1 and 4.2.2 will be applicable simultaneously.

4.3.	Academic Performance in Second Year	10	Academic Performance = 1.5 * Average API (Academic Performance Index)
			API = ((Mean of 2nd Year Grade Point Average of all successful Students on a 10 point scale) or (Mean of the percentage of marks of all successful students in Third Year/10)) x (successful students/number of students appeared in the examination)  Successful students are those who are permitted to proceed to the third year

# **Exhibits/Context to be Observed/Assessed:**

A. Data to be verified for at least one of the assessment years

4.4.	Placement, Higher studies and	30	Assessment Points = $30 \times average$ of three years of [ (x
	Entrepreneurship		+ y + z)/N] where, x = Number of students placed in
			companies or Government sector through on/off
			campus recruitment
			y = Number of students admitted to higher studies with
			valid qualifying scores (GATE or equivalent State or
			National level tests, GRE, GMAT etc.)
			z = No. of students turned entrepreneur in
			engineering/technology N =Total number of final year
			students

A. Data to be verified for at least one of the assessment years

4.5.	Professional Activities	20	
4.5.1.	Professional societies / chapters and organizing engineering events	05	<ul> <li>A. Availability and activities of professional societies/chapters (3)</li> <li>B. Number, quality of engineering events (organized at institution) (2) (Level - Institution /State/National/International)</li> </ul>

# **Exhibits/Context to be Observed/Assessed:**

Self - Explanatory

4.	5.2.	Publication	of	technical	05	A.	Quality and Relevance of the contents and Print
		magazines, nev	vslet	ters, etc.			Material (3)
						В.	Participation of Students from the program (2)

# **Exhibits/Context to be Observed/Assessed:**

- A. Documentary evidence
- B. Documentary evidence Students participation (also to be confirmed during interaction with the students)

4.5.3.	Participation in inter-institute	10	A.	Events within the state (2)
	events by students of the		В.	Events outside the state (3)
	program of study (at other		C.	Prizes/awards received in such events (5)
	institutions)			

# **Exhibits/Context to be Observed/Assessed:**

 ${\rm A}\,{\rm B}\,{\rm \&}\,{\rm C}.$  Quality of events and documentary evidence

Total:	100	
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**Criterion 5: Faculty Information and Contributions (200)** 

Sub	Criteria	Marks	<b>Evaluation Guidelines</b>
5.1.	Student-Faculty Ratio (SFR)	20	Marks to be given proportionally from a maximum of 20
			to a minimum of 10 for average SFR between 15:1 to
			25:1, and zero for average SFR higher than 25:1. Marks
			distribution is given as below:
			< = 15 - 20 Marks
			< = 17 - 18 Marks
			< = 19 - 16 Marks
			< = 21 - 14 Marks
			< = 23 - 12 Marks
			< = 25 - 10 Marks
			> 25 - 0 Marks

- SFR is to be verified considering the faculty of the entire department.
- No. of Regular faculty calculation considering Regular faculty definition\*; Faculty appointment letters,
   time table, subject allocation file, salary statements.
- No. of students calculation as mentioned in the SAR(please refer table under criterion 5.1)
- Faculty Qualification as per AICTE guidelines shall only be counted

\*Note: All the faculty whether regular or contractual (except Part-Time), will be considered. The contractual faculty (doing away with the terminology of visiting/adjunct faculty, whatsoever) who have taught for 2 consecutive semesters in the corresponding academic year on full time basis shall be considered for the purpose of calculation in the Faculty Student Ratio.

However, following will be ensured in case of contractual faculty:

- i. Shall have the AICTE prescribed qualifications and experience.
- ii. Shall be appointed on full time basis and worked for consecutive two semesters during the particular academic year under consideration.
- iii. Should have gone through an appropriate process of selection and the records of the same shall be made available to the visiting team during NBA visit.

5.2.	Faculty Cadre Proportion	20	Cadre Proportion Marks =
			$\left[\begin{array}{c} AF1 \\ RF1 \end{array}\right] + \left(\begin{array}{c} AF2 \\ RF2 \end{array}\right) + \left(\begin{array}{c} AF3 \\ RF3 \end{array}\right) \times 10$ • If AF1 = AF2= 0 then zero marks • Maximum marks to be limited if it exceeds 20 (Refer calculation in SAR)

(Faculty Qualification and experience required for cadre posts shall only be considered as per AICTE norms/guidelines)

- Cadre wise No. of faculty available; Faculty qualification and experience and eligibility;
   Appointment/Promotion orders
- Cadre wise no. of faculty required as per AICTE guidelines (refer calculation in SAR)

5.3.	Faculty Qualification	20	FQ=2.0x[(10X+4Y)/F)] where X is no. of faculty with Ph.D., Y is no. of faculty with M.Tech, F is no. of faculty required to comply 1:20 Faculty Student ratio (no. of faculty and no. of students required to be calculated as per 5.1)

# **Exhibits/Context to be Observed/Assessed:**

• Documentary evidence - Faculty Qualification

5.4	Faculty Retention	10	<ul> <li>A. ≥ 90% of required Faculties retained during the period of assessment keeping CAYm2 as base year (10)</li> <li>B. ≥75% of required Faculties retained during the period of assessment keeping CAYm2 as base year (08)</li> </ul>
			<ul> <li>C. ≥ 60% of required Faculties retained during the period of assessment keeping CAYm2 as base year (06)</li> </ul>
			<ul> <li>D. ≥50% of required Faculties retained during the period of assessment keeping CAYm2 as base year (04)</li> <li>E. Otherwise (0)</li> </ul>

• Faculty date of joining; at least three month (July-April-May) salary statement for each of the assessment years

5.5	Faculty competencies in	10	A. Specialization
	correlation to Program Specific		B. Research Publications
	Criteria		C. Course Developments
			D. Other relevant points

#### Exhibits/Context to be Observed/Assessed: solf

5.6	Innovations by the Faculty in	10	A.	Statement of clear goals, use of appropriate methods,
	Teaching and Learning			significance of results, effective presentation (4)
			В.	Availability of work on the Institute Website (2)
			C.	Availability of work for peer review and critique (2)
			D.	Reproducibility and Reusability by other scholars for
				further development (2)

#### **Exhibits/Context to be Observed/Assessed:**

A. Availability on Institute website; awareness among faculty and students of the department

B and C. Self-explanatory

D. Innovations that contribute to the improvement of student learning, typically include use of ICT, instruction delivery, instructional methods, assessment, evaluation etc.

5.7	Faculty as participants in	15	For each year: Assessment = 3×Sum/0.5RF
	Faculty development /training activities /STTPs		Average assessment over last three years starting from CAYm1 (Marks limited to 15)

#### **Exhibits/Context to be Observed/Assessed:**

- Relevance of the training/development program
- No. of days; No. of faculty

5.8	Research and Development	75	A. Number of quality publications in refereed/SCI
5.8.1.	Academic Research	20	Journals, citations, Books/Book Chapters etc. (15)  B. PhD awarded during the assessment period while working in the institute (5)

- A. Quality of publications; publications copy
- B. Documentary evidence

5.8.2.	Sponsored Research	20	Funded research from outside; Cumulative during CAYm1,				
			CAYm2 and CAYm3 Amount>Rs.50 Lakh	2		0	
			Marks Amount>Rs.40 Lakh and <rs.50 -15="" amount="" lakh="" marks="">Rs.30 Lakh and <rs.40 -10="" amount="" lakh="" marks="">Rs.15 Lakh and <rs.30 -5="" lakh="" marks<="" td=""><td></td><td></td><td></td><td></td></rs.30></rs.40></rs.50>				

#### **Exhibits/Context to be Observed/Assessed:**

Documentary evidence: Funding agency; Duration, Research progress; Outcome

5.8.3.	Development Activities	15	В. С.	Product Development Research laboratories Instructional materials Working models/Charts/monograms, etc.	
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#### **Exhibits/Context to be Observed/Assessed:**

Self -explanatory

5.8.4.	Consultancy	20	Consultancy; Cumulative during CAYm1	, CAYm2 and CAYm3
	(From Industry)		Amount>Rs.10 Lakh	-20 Marks
	•		Amount <rs.10 and="" lakh="">Rs.8 Lakh</rs.10>	-15 Marks
			Amount <rs.8 and="" lakh="">Rs.6 Lakh</rs.8>	-10 Marks
			Amount <rs.6 and="" lakh="">Rs.4 Lakh</rs.6>	-5 Marks
			Amount <rs.4 and="" lakh="">Rs.2 Lakh</rs.4>	-2 Marks
			Amount <rs.2 lakh<="" td=""><td>- 0 Marks</td></rs.2>	- 0 Marks

#### **Exhibits/Context to be Observed/Assessed:**

Documentary evidence: Funding agency; Duration; Research progress; Outcome

5.9	Faculty Performance Appraisal and Development System (FPADS)	10	Α.	A well-defined performance appraisal and development system instituted for all the assessment years (5)
			В.	Its implementation and effectiveness (5)

#### **Exhibits/Context to be Observed/Assessed:**

- A. Notified performance appraisal and development system; Appraisal Parameters; Awareness
- B. Implementation, Transparency and Effectiveness

5.10	Visiting/Adjunct/Emeritus	10	•	Provision of Visiting /Adjunct/Emeritus faculty etc.(1)
	Faculty etc.		•	Minimum 50 hours per year interaction (per year to
				obtain three marks: $3 \times 3 = 9$ )

#### **Exhibits/Context to be Observed/Assessed:**

Documentary evidence

Total:	200	

#### **Criterion 6: Facilities and Technical Support (80)**

Sub	Criteria	Marks	Evaluation Guidelines
6.1.	Adequate and well equipped	40	A. Adequate well-equipped laboratories to run all the
	laboratories, and technical		program-specific curriculum (25)
	manpower		B. Availability of adequate and qualified technical
			supporting staff (15)

#### **Exhibits/Context to be Observed/Assessed:**

- A. Adequacy; well-equipped laboratories; utilization
- B. Self explanatory

6.2	2. Laboratories: Maintenance and overall ambience.	10	•	Maintenance and overall ambience (10)

#### **Exhibits/Context to be Observed/Assessed:**

Self-explanatory

6.3.	Safety measures in laboratories	10	•	Safety measures in laboratories (10)

#### **Exhibits/Context to be Observed/Assessed:**

Self-explanatory

6.4.	Project laboratory/Facilities	20	•	Facilities & Utilization (20)

#### **Exhibits/Context to be Observed/Assessed:**

Self-explanatory

Total:	80	
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#### **Criterion 7: Continuous Improvement (75)**

Sub	Criteria	Marks	<b>Evaluation Guidelines</b>
7.1.	Actions taken based on the	30	A. Documentation of POs & PSOs attainment levels (15)
	results of evaluation of each of		B. Identification of gaps/shortfalls (5)
	the POs and PSOs		C. Plan of action to bridge the gap and its
			Implementation (10)

#### **Exhibits/Context to be Observed/Assessed:**

• Documentary evidence in respect of each of the Pos

7.2 Academic Audit and actions	15	A. Assessment shall be based on conduct and actions
taken during the period of		taken in relation to continuous improvement (15)
Assessment		

#### **Exhibits/Context to be Observed/Assessed:**

A. Academic Audit assessment criteria, frequency, conduct mechanism, action plan based on audit, implementation and effectiveness

7.3.	Improvement in Placement, Higher Studies and Entrepreneurship	10	Assessment is based on improvement in: (Refer placement index 4.5)
			A. Improvement in Placement numbers, quality, core hiring industry and pay packages (5)
			B. Improvement in Higher Studies admissions for pursuing PhD. in premier institutions (3)
			C. Improvement in number of Entrepreneurs (2)
			(Marks to be given proportionately considering nos. in the base year CAYm3)

#### **Exhibits/Context to be Observed/Assessed:**

A, B and C: Nos. in each year of the assessment; improvement considering CAYm3 as a base year

7.4.	Improvement in the quality of	20	A. Assessment is based on improvement in terms of
	students admitted to the		ranks/score in qualifying state level/national level
	program		entrances tests, percentage Physics, Chemistry and
	program:		Mathematics marks in 12th Standard and percentage
			marks of the lateral entry students.

#### **Exhibits/Context to be Observed/Assessed:**

A. Documentary evidence - list of students admitted; admission authority guidelines; ranks/scores; comparative status considering CAYm3 as a base year

Total:	75	
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#### **Criterion 8: First Year Academics (50)**

Sub	Criteria	Marks	Evaluation Guidelines
8.1.	First Year Student- Faculty	05	For each year of assessment = $(5 \times 20)$ / FYSFR
	Ratio (FYSFR)		(Limited to Max. 5) Average of Assessment of data in CAY, CAYm1 and CAYm2
			*Note: If FYSFR is greater than 25, then assessment equal
			to zero.

#### **Exhibits/Context to be Observed/Assessed:**

- No. of Regular faculty calculation considering Regular faculty definition and fractional load; Faculty appointment letters; Salary statements
- No. of students calculation as mentioned in the SAR

8.2.	Qualification of Faculty Teaching	05	A.	Assessment of faculty qualification $(5x + 3y)/RF$
	First Year Common Courses		В.	Average of Assessment of previous three academic
				years including current academic year. (Refer 8.2. for
				x, y and RF)

#### **Exhibits/Context to be Observed/Assessed:**

Documentary evidence - Faculty Qualification

8.3.	First Year Academic Performance	10	Academic Performance = ((Mean of 1st Year Grade Point Average of all successful Students on a 10 point scale) or (Mean of the percentage of marks in First Year of all successful students/10)) x (successful students/number of students appeared in the examination) (Successful students are those who are permitted to proceed to the Second year)
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#### **Exhibits/Context to be Observed/Assessed:**

Data to be verified for at least one of the assessment years

8.4.	<b>Attainment of Course Outcomes</b>	10	
	of first year courses		
8.4.1	Describe the assessment processes used to gather the data upon which the evaluation of Course Outcomes of first year is based.	05	A. List of assessment processes (1)  B. The relevance of assessment tools used (4)

• A and B. Direct and indirect assessment (if applicable), tools and processes; effective compliance; direct assessment methodology, indirect assessment formats-collection-analysis; decision making

8.4.2.	Record the attainment of	05	A. Verify the records as per the benchmark set for the
	Course Outcomes of all first		courses (5)
	year courses		

#### **Exhibits/Context to be Observed/Assessed:**

A. Documentary evidence - Attainment for atleast 3 courses

8.5.	Attainment of Program	20	
	Outcomes of all first year		
	courses		
8.5.1.	Indicate results of evaluation of each relevant PO/PSO	10	<ul><li>A. Process of computing POs/PSOs attainment level from the COs of related first year courses (5)</li><li>B. Verification of documents validating the above process (5)</li></ul>

#### **Exhibits/Context to be Observed/Assessed:**

A and B. Documentary evidence for each relevant PO/PSO

8.5.2.	Actions taken based on the	10	A. Appropriate actions taken (10)
	results of evaluation of relevant		
	POs / PSOs		

#### **Exhibits/Context to be Observed/Assessed:**

A. Documentary evidence for each relevant PO/PSO

|--|

#### **Criterion 9: Student Support Systems (50)**

Sub	Criteria	Marks	Evaluation Guidelines
9.1.	Mentoring system to help at	05	A. Details of the mentoring system that has been
	individual level		developed for the students for various purposes and
			also state the efficacy of such system (5)

#### **Exhibits/Context to be Observed/Assessed:**

A. Mentoring system terms of reference; implementation; effectiveness (also to be verified during interaction with the students)

9.2.	Feedback analysis an /reward	10	Α.	Methodology being followed for analysis of feedback
	corrective measures taken, if			and its effectiveness (5)
	any		В.	Record of corrective measures taken (5)

#### **Exhibits/Context to be Observed/Assessed:**

A. Feedback questions, collection process, analysis, actions taken, effectiveness

#### **Exhibits/Context to be Observed/Assessed:**

Self explanatory

9.4.	Self Learning	05	A.	Scope for self-learning (2)
			В.	The institution needs to specify the facilities,
				materials for learning beyond syllabus, Webinars,
				Podcast, MOOCs etc. and demonstrate its effective
				utilization (3)

#### **Exhibits/Context to be Observed/Assessed:**

Self explanatory

9.5.	Career Guidance, Training, 10 Placement	10	<ul><li>A. Availability of career guidance facilities (2)</li><li>B. Counseling for higher studies (GATE/GRE, GMAT, etc.) (2)</li></ul>
			C. Pre-placement training (3)
			D. Placement process and support (3)

#### **Exhibits/Context to be Observed/Assessed:**

Availability, implementation, effectiveness (also to be verified during interaction with the students)

9.6.	Entrepreneurship Cell	05	A.	Entrepreneurship initiatives (3)
			В.	Data on students benefitted (2)

Availability, implementation, effectiveness (also to be verified during interaction with the students)reference; implementation; effectiveness (also to be verified during interaction with the students)

9.7.	Co-curricular and Extra-	10	A. Availability of sports and cultural facilities (3)
	curricular Activities		B. NCC, NSS and other clubs (3)
			C. Annual students activities (4)

#### **Exhibits/Context to be Observed/Assessed:**

Availability, implementation, effectiveness (also to be verified during interaction with the students)

Total:	FO	
lotal.	50	
1 ocali	30	

#### Criterion 10: Governance, Institutional Support and Financial Resources (120)

Sub	Criteria	Marks	Evaluation Guidelines
10.1.	Organization, Governance and	55	
	Transparency		
10.1.1.	State the Vision and Mission of the institute	05	A. Availability of the Vision and Mission statements of the institution (2)
			B. Appropriateness/Relevance of the Statements (3)

#### **Exhibits/Context to be Observed/Assessed:**

- A. Institution Vision and Mission statements: Availability of statements on institution website; Availability at Central facilities such as Library, Computer Center, Principal Chamber etc. Availability of one set of statements in each of the departments; Availability in institution level documents
- B. Correctness from definition perspective

10.1.2.	Availability of the Institutional	25	Availability of a 5 year Strategic Plan.
	Strategic Plan and its Effective		
	Implementation and Monitoring		

#### **Exhibits/Context to be Observed/Assessed:**

10.1.3.	Governing body, administrative	10	A.	List the Governing Body Composition and its Sub
	setup, functions of various			Committees, senate, and all other academic and
	bodies, service rules			administrative bodies; their memberships, functions,
	procedures, recruitment and			and responsibilities; frequency of the meetings;
	promotional policies.			participation details of external members and
				attendance therein (4)
			В.	The published service rules, policies and procedures
				with year of publication (3)
			c.	Minutes of the meetings and action-taken reports (3)
1		1	1	

#### **Exhibits/Context to be Observed/Assessed:**

Self - explanatory

10.1.4. Decentralization in working and	05	A. Organizational Structure, List of Administrative
grievance redressal mechanism		Committees and Administrative Heads who have
		been delegated powers for taking administrative
		decisions (1)

	В.	Specify	the	mechanism	and	composition	of
		grievand	ce rec	Iressal cell (1)			
	C.	Action ta	aken re	eport of repres	entatio	ons (sample) (3)	

A B & C. Documentary evidence

10.1.5.	Delegation of financial powers	05	A.	Financial powers delegated to the Principal, Heads of
				Departments and relevant in-charges (2)
			В.	Demonstrate the utilization of financial powers for
				each of the assessment years (3)

#### **Exhibits/Context to be Observed/Assessed:**

- A. Circulars notifying financial powers
- B. Documentary evidence to exhibit utilization at each levels during assessment years

10.1.6. Transparency and ava of correct/unambigu information in public	us omain	<ul> <li>A. Information on the policies, rules, processes is to be made available on web site (2)</li> <li>B. Dissemination of the information about student, faculty and staff (2)</li> <li>C. Mandatory disclosure as per AICTE/AISHE on the website. (1)</li> </ul>
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#### **Exhibits/Context to be Observed/Assessed:**

A. and B. Website and Documentary evidence

10.2.	Budget Allocation, Utilization, and Public Accounting at institution level	15	
10.2.1.	Adequacy of Budget allocation	05	A. Quantum of budget allocation for three years (3)
			B. Justification of budget allocated for three years (2)

#### **Exhibits/Context to be Observed/Assessed:**

- A. Budget formulation, finalization and approval process
- B. Requirement allocation -adequacy justification thereof

10.2.2. Utilization of allocated funds	05	A.	Budget utilization for three years (05)
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#### **Exhibits/Context to be Observed/Assessed:**

A. Balance sheet; effective utilization; random verification for atleast two of the three assessment years

10.2.3.	Availability of the audited	05	A. Availability of Audited statements on website (5)
	statements on the institution's		
	website		

#### A. Website

10.3.	Program Specific Budget Allocation, Utilization	30	To be evaluated in consultation with the Program Experts
10.3.1.	Adequacy of budget allocation	10	A. Quantum of budget allocation for three years (5)
			B. Justification of budget allocated for three years (5)

#### **Exhibits/Context to be Observed/Assessed:**

- A. Budget formulation, finalization and approval process
- B. Requirement allocation -adequacy justification thereof

10.3.2. Utilization of allocated funds	20	A. Budget utilization for three years (20)
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#### **Exhibits/Context to be Observed/Assessed:**

A. Balance sheet; effective utilization; random verification for atleast two of the three assessment years

10.4.	Library and Internet	20	
10.4.1.	Quality of learning resources (hard/soft)	10	A. Availability of relevant learning resources including e-resources and Digital Library (7)
			B. Accessibility to students (3)

#### **Exhibits/Context to be Observed/Assessed:**

Availability; Adequacy; Effectiveness

(Also to be verified during interactions with the faculty and students)

10.4.2.	Internet	10	A.	Available bandwidth (4)
			В.	Wi Fi availability (2)
			C.	Internet access in labs, classrooms, library and offices
				of all Departments (2)
			D.	Security mechanism (2)

#### **Exhibits/Context to be Observed/Assessed:**

Availability; Adequacy; Effectiveness

(Also to be verified during interactions with the faculty and students)

Total:	120	
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### **Chairperson's Visit Report**

# **Undergraduate Engineering Program TIER-I**

Name of the Institution	
Name of the Program	•••
Visit Dates	

Nan	-	
Pro	gram 1	
	Program Evaluator 1	Name: Organization:
	Program Evaluator 2	Name Organization:
Pro	gram 2	
	Program Evaluator 1	Name: Organization:
	Program Evaluator 2	Name: Organization:
Pro	gram 3	
	Program Evaluator 1	Name: Organization:
	Program Evaluator 2	Name: Organization:
Pro	gram 4	
	Program Evaluator 1	Name: Organization:
	Program Evaluator 2	Name: Organization:

#### Program 5

Program Evaluator 1	Name:
Frogram Evaluator 1	Organization:
Dragram Evaluator 2	Name:
Program Evaluator 2	Organization:

Institution	n Details
Year of	Establishment:
Physical 1	Infrastructure and Ambience:
Number of	f Programs being run in the Institution*
Total Num	nber of Students:
(I) In UG p	orograms
(II) In PG p	programs
Name of F	Programs Applied for Accreditation
(l) <b>.</b>	
(II) <b>.</b>	

<sup>\*</sup>to be verified from the SAR

#### **Information for Evaluation**

#### Award of Accreditation [TIER I (UG)]

1. Accreditation for Six years will be accorded to a program on fulfilment of the following requirements:

Y	С	W	D
>=7	<=3	0	0

- There should not be any "Deficiency" or "Weakness" in any of the criteria and at least seven criteria must be fully compliant with only "Concerns" in the remaining criteria.
- Number of available Ph.D. in the department should be greater than or equal to 30 per cent of the required number of faculty averaged over two academic years i.e. Current Academic Year (CAY) and Current Academic Year Minus One (CAYM1).
- Faculty Student Ratio in the department should be less than or equal to 1:20 averaged over three academic years i.e. Current Academic Year (CAY), Current Academic Year Minus One (CAYM1) and Current Academic Year Minus Two (CAYM2).
- At least 2 Professors or 1 Professor and 1 Associate Professor (on regular basis) with Ph.D. degree should be available in the respective department for two academic years i.e. Current Academic Year (CAY) and Current Academic Year Minus One (CAYM1).
- The HOD of the department in which the program under consideration is running should be appointed on regular basis and should possess PhD degree in the Current Academic Year (CAY)

### 2. Accreditation for Three years will be accorded to a program on fulfilment of the following requirements:

Y	D
>=4	0

- There should be at least four criteria fully compliant with zero (0) "Deficiency" in the remaining criteria.
- At least 2 Professors or 1 Professor and 1 Associate Professor (on regular basis) with Ph.D. degree should be available in the respective department for two academic years i.e. Current Academic Year (CAY) and Current Academic Year Minus One (CAYM1).
- The faculty student ratio in the department under consideration should be less than or equal to 1:25 averaged over three academic years i.e. Current Academic Year (CAY), Current Academic Year Minus One (CAYM1) and Current Academic Year Minus Two (CAYM2).
- Number of available Ph.D. in the department should be greater than or equal to 20 per cent of the required

#### **National Board of Accreditation**

The HOD of the department in which the program under consideration is running should be appointed on regular basis and should possess PhD degree in the Current Academic Year (CAY)

#### 3. No Accreditation of the program

If the program fails to meet the criteria for award of accreditation for three years, it is awarded "Not Accredited" Status.

Name of the Program 1:
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**Department/Programme Specific Criteria:** 

S. No.	Criteria	Max. Marks	Marks Awarded	Grade (Y, C, W, D)	Remarks
1.	Vision, Mission and Program Educational Objectives	50			
2.	Program Curriculum and Teaching-Learning Processes	100			
3.	Course Outcomes and Program Outcomes	175			
4.	Students' Performance	100			
5.	Faculty Information and Contributions	200			
6.	Facilities and Technical Support	80			
7.	Continuous Improvement	75			
	TOTAL	780			

S. No.	Criteria	Max. Marks	Marks Awarded	Grade (Y, C, W, D)	Remarks
8.	First Year Academics*	50			
9.	Student Support Systems	50			
10.	Governance, Institutional Support and Financial Resources*	120			
	TOTAL	220			
	GRAND TOTAL (A +B)	1000			

<sup>\*</sup>Assessment for Criteria 8 (8.3, 8.4 &8.5) and 10 (10.3) is different for individual program.

Total Grade: No. of Y:	; C:	; W:	; D:	
Signature				
(Chairperson)				

Name of the Program 2:
------------------------

**Department/Programme Specific Criteria:** 

S. No.	Criteria	Max. Marks	Marks Awarded	Grade (Y, C, W, D)	Remarks
1.	Vision, Mission and Program Educational Objectives	50			
2.	Program Curriculum and Teaching-Learning Processes	100			
3.	Course Outcomes and Program Outcomes	175			
4.	Students' Performance	100			
5.	Faculty Information and Contributions	200			
6.	Facilities and Technical Support	80			
7.	Continuous Improvement	75			
	TOTAL	780			

S. No.	Criteria	Max. Marks	Marks Awarded	Grade (Y, C, W, D)	Remarks
8.	First Year Academics*	50			
9.	Student Support Systems	50			
10.	Governance, Institutional Support and Financial Resources*	120			
	TOTAL	220			
	GRAND TOTAL (A +B)	1000			

<sup>\*</sup>Assessment for Criteria 8 (8.3, 8.4 &8.5) and 10 (10.3) is different for individual program.

Total Grade:				
No. of Y:	; C:	; W:	; D:	
Signature				
(Chairperson)				

Name of the Program 3:	
------------------------	--

**Department/Programme Specific Criteria:** 

S. No.	Criteria	Max. Marks	Marks Awarded	Grade (Y, C, W, D)	Remarks
1.	Vision, Mission and Program Educational Objectives	50			
2.	Program Curriculum and Teaching-Learning Processes	100			
3.	Course Outcomes and Program Outcomes	175			
4.	Students' Performance	100			
5.	Faculty Information and Contributions	200			
6.	Facilities and Technical Support	80			
7.	Continuous Improvement	75			
	TOTAL	780			

S. No.	Criteria	Max. Marks	Marks Awarded	Grade (Y, C, W, D)	Remarks
8.	First Year Academics*	50			
9.	Student Support Systems	50			
10.	Governance, Institutional Support and Financial Resources*	120			
	TOTAL	220			
	GRAND TOTAL (A +B)	1000			

<sup>\*</sup>Assessment for Criteria 8 (8.3, 8.4 &8.5) and 10 (10.3) is different for individual program.

Total Grade: No. of Y:	; C:	; W:	; D:	
Signature				
(Chairperson)				

Name of the Program 4:
------------------------

**Department/Programme Specific Criteria:** 

S. No.	Criteria	Max. Marks	Marks Awarded	Grade (Y, C, W, D)	Remarks
1.	Vision, Mission and Program Educational Objectives	50			
2.	Program Curriculum and Teaching-Learning Processes	100			
3.	Course Outcomes and Program Outcomes	175			
4.	Students' Performance	100			
5.	Faculty Information and Contributions	200			
6.	Facilities and Technical Support	80			
7.	Continuous Improvement	75			
	TOTAL	780			

S. No.	Criteria	Max. Marks	Marks Awarded	Grade (Y, C, W, D)	Remarks
8.	First Year Academics*	50			
9.	Student Support Systems	50			
10.	Governance, Institutional Support and Financial Resources*	120			
	TOTAL	220			
	GRAND TOTAL (A +B)	1000			

<sup>\*</sup>Assessment for Criteria 8 (8.3, 8.4 &8.5) and 10 (10.3) is different for individual program.

Total Grade:				
No. of Y:	; C:	; W:	; D:	
Signature				
(Chairperson)				

Name of the Program 5:	
------------------------	--

**Department/Programme Specific Criteria:** 

S. No.	Criteria	Max. Marks	Marks Awarded	Grade (Y, C, W, D)	Remarks
1.	Vision, Mission and Program Educational Objectives	50			
2.	Program Curriculum and Teaching-Learning Processes	100			
3.	Course Outcomes and Program Outcomes	175			
4.	Students' Performance	100			
5.	Faculty Information and Contributions	200			
6.	Facilities and Technical Support	80			
7.	Continuous Improvement	75			
	TOTAL	780			

S. No.	Criteria	Max. Marks	Marks Awarded	Grade (Y, C, W, D)	Remarks
8.	First Year Academics*	50			
9.	Student Support Systems	50			
10.	Governance, Institutional Support and Financial Resources*	120			
	TOTAL	220			
	GRAND TOTAL (A +B)	1000			

<sup>\*</sup>Assessment for Criteria 8 (8.3, 8.4 &8.5) and 10 (10.3) is different for individual program.

Total Grade: No. of Y:	; C:	; W:	; D:	
Signature				
(Chairperson)				

#### **Overall Observations**

1.

SI No	Name of the Program		Intake		Admissions	Student-Faculty Ratio
		CAY	CAYm1	CAYm2	Average of CAY, CAYm1 and CAYm2	Average of CAY, CAYm1 and CAYm2

Also, see the Evaluator's Report for the above parameters and if you disagree with the same, kindly give your comment.

#### 2. About the progress since last accreditation (to be filled in for institution who have applied for reaccreditation)

Kindly mention the changes made as recommended by NBA, since the previous visit.

#### 3. Observation on general facilities and about the programs.

Kindly mention general observations about facilities like labs, library, etc. and a general review about the programs.

- 1st year
- Academic Ambience
- Student Support Systems
- Strengths, Weaknesses, Concerns, Suggestions

#### 4. Status of imbibing of outcome based accreditation. For Example:

- Formulation of PEOs, PSOs, COs and mappings carried out and implemented
- Methodology for assessing the attainment of outcomes
- Continual improvement process status
- Stakeholders (especially the faculty, HoD, students, etc.) awareness about the process

# Annexure IX Part B

## Part B-Program Assessment Worksheet Program Level Criteria - To be Assessed by Evaluator

Name of the Institut	tion
Name of the Program	

SI. No.	Sub Criteria	Max. Marks	<b>Evaluation Guidelines (Marks)</b>	1	arks rded	Overal	Marks	Observations of Evaluators (Provide
				Marks	Total	Marks	Grade (Y,C,W, D)	Justifications/ Reasons)
8.1.	First Year Student- Faculty Ratio (FYSFR)	5	For each year of assessment = (5 × 20) / FYSFR (Limited to Max. 5) Average of previous three academic years including Current Academic Year			Overall Marks for 8.1	Overall Grade for 8.1	Mention numbers
			*Note: If FYSFR is greater than 25, then assessment equal to zero.					
8.2.	Qualification of Faculty Teaching First Year Common Courses	5	A. Assessment of faculty qualification (5x + 3y)/RF B. Average of Assessment of previous three academic years including Current Academic Year (Refer 8.2. for x, y and RF)			Overall Marks for 8.1	Overall Grade for 8.1	Mention numbers
8.3.	First Year Academic Performance	10	Academic Performance = ((Mean of 1st Year Grade Point Average of all successful Students on a 10 point scale) or (Mean of the percentage of marks in First Year of all successful students/10)) x (successful students/number of students appeared in the examination) (Successful students are those who are permitted to proceed to the Second year)			Overall Marks for 8.3	Overall Grade for 8.3	Mention numbers

8.4.	Attainment of Course Outcomes of first year courses	10		Overall Marks for 8.4	Overall Grade for 8.4	
8 4 1	Describe the assessment processes used to gather the data upon which the evaluation of Course Outcomes of first year is based	5	A. List of assessment processes (1)			
0.4.1.		,	B. The relevance of assessment tools used (4)			
8.4.2.	Record the attainment of Course Outcomes of all first year courses	5	Verify the records as per the benchmark set for the courses (5)			
8.5.	Attainment of Program Outcomes of all first year courses	20				
8.5.1.	Indicate results of evaluation of	10	A. Process of computing POs/PSOs attainment level from the COs of related first year courses (5)			
each relevan PO/PSO	each relevant PO/PSO		B. Verification of documents validating the above process (5)	Overall Marks	Grade	
8.5.2.	Actions taken based on the results of evaluation of relevant POs /PSOs	10	Appropriate actions taken (10)	for 8.5	for 8.5	
Total	of Criterion 8:	8:				

Crite	rion 9: Student Su	ipport Sy	ystems (50)					
SI. No.	Sub Criteria	Max. Marks	<b>Evaluation Guidelines (Marks)</b>	Ma Awa	arks rded	Overal	l Marks	Observations of Evaluators (Provide
				Marks	Total	Marks	Grade (Y,C,W, D)	Justifications/ Reasons)
9.1.	Mentoring system to help at individual level	5	Details of the mentoring system that has been developed for the students for various purposes and also state the efficacy of such system (5)			Overall Marks for 9.1	Overall Grade for 9.1	
9.2.	9.2. Feedback analysis and reward /corrective measures taken, if any	10	A. Methodology being followed for analysis of feedback and its effectiveness (5)			Overall Marks for 9.1	Overall Grade for 9.1	
			B. Record of corrective measures taken (5)			101 9.1		
9.3.	Feedback on facilities	5	Feedback collection, analysis and corrective action (5)			Overall Marks for 9.3	Overall Grade for 9.3	
			A. Scope for self-learning (2)				Grade	
9.4.	.4. Self Learning	5	B. Self Learning facilities, materials for learning beyond syllabus, Webinars, Podcast, MOOCs etc. and demonstrate its effective utilization (3)			Overall Marks for 9.4		
			A. Availability of career guidance facilities (2)					
9.5.	Career Guidance, Training,		B. Counseling for higher studies (GATE/GRE, GMAT, etc.) (2)			Overall Marks for 9.5	Grade	
	Placement		C. Pre-placement training (3)			101 9.3	for 9.5	
	-		D. Placement process and support (3)					

9.6.	Entrepreneurship	5	A. Entrepreneurship initiatives (3)			Overall Marks	Overall Grade	
9.0.	Cell	3	B. Data on students benefitted (2)			for 9.6		
	Co-curricular		A. Availability of sports and cultural facilities (3)			Overall	Overall	
9.7.	and Extra- curricular Activities	10	B. NCC, NSS and other clubs (3)			Marks for 9.7	Grade	
			C. Annual students activities (4)					
Tota	al of Criterion 9:	Overall Marks and Grade for Cri	terior	າ 9:				

Criterio	Criterion 10: Governance, Institutional Support and Financial Resources (120)										
SI. No.	Sub Criteria	Max. Marks	<b>Evaluation Guidelines (Marks)</b>	Ma Awa	arks rded	Overall Marks		Observations of Evaluators (Provide			
				Marks	Total	Marks	Grade (Y,C,W, D)	Justifications/ Reasons)			
10.1	Organization, Governance and Transparency	55									
10.1.1	State the Vision and Mission of the Institute	5	A. Availability of the Vision & Mission statements of the Institute (2)			-	Overall Grade for 10.1				
			B. Appropriateness/Relevance of the Statements (3)			Overall Marks					
10.1.2	Availability of the Institutional Strategic Plan and its Effective Implementation and Monitoring	25	Availability of a 5 year Strategic Plan.			for 10.1					

10.1.3	Governing body, administrative setup, functions of various bodies, service rules procedures, recruitment and promotional policies.	10	A. List the Governing Body Composition and its Sub Committees, senate, and all other academic and administrative bodies; their memberships, functions, and responsibilities; frequency of the meetings; participation details of external members and attendance therein (4)  B. The published service rules, policies and procedures with year of publication (3)				
	poticies.		C. Minutes of the meetings and action-taken reports (3)				
	Decentralisati on in working and grievance redressal mechanism	on in working and grievance 5 redressal	A. Organizational Structure, List of Administrative Committees and Administrative Heads who have been delegated powers for taking administrative decisions (1)		Overall Marks	Overall Grade	
			B. Specify the mechanism and composition of grievance redressal cell (1)		for 10.1	for 10.1	
			C. Action taken report of representations (sample) (3)		_		
10.1.5	Delegation of financial	5	A. Financial powers delegated to the Principal, Heads of Departments and relevant incharges (2)				
	powers		B. Demonstrate the utilization of financial powers for each of the assessment years (3)				
10.1.6	Transparency and availability of correct/unamb iguous information in public domain		A. Information on the policies, rules, processes is to be made available on web site (2)				
		vailability of prect/unamb 5 guous of formation in	B. Dissemination of the information about student, faculty and staff (2)				
			C. Mandatory disclosure as per AICTE/AISHE on the website. (1)				

10.2	Budget Allocation, Utilization, and	16	Expenditure per student:				
10.2	Public Accounting at Institute level	15	Fee per student			Overall Grade for 10.2	
40.2.4	Adequacy of	5	A. Quantum of budget allocation for three years (3)				
10.2.1	Budget allocation		B. Justification of budget allocated for three years (2)		Marks for 10.2		
10.2.2	Utilization of allocated funds	5	Budget utilization for three years (5)				
10.2.3	Availability of the audited statements on the institution's website	5	Availability of audited statements on website (5)				
10.3	Program Specific Budget Allocation, Utilization	30	To be evaluated in consultation with Program Experts	th the			
10.3.1	Adequacy of	10	A. Quantum of budget allocation for three years (5)		Overall Marks for	Overall Grade for	
10.3.1	budget allocation	10	B. Justification of budget allocated for three years (5)		10.3	10.3	
10.3.2	Utilization of allocated funds	20	Budget utilization for three years (20)				
10.4	Library and Internet	20					
10.4.1	Quality of learning resources	10	A. Availability of relevant learning resources including e-resources and Digital Library (7)		Overall Marks for 10.4	Overall Grade for 10.4	
	(hard/soft)		B. Accessibility to students (3)				

10.4.2	Internet		A. Available bandwidth (4)				
		10	B. Wi Fi availability (2)		Overall	Ovorall	
			C. Internet access in labs, classrooms, library and offices of all Departments (2)			Overall Grade for 10.4	
			D. Security mechanism (2)				
Total of Criterion 10: 120		120	Overall Marks and Grade for Cr	iterion 10:			

# Annexure IX Part C

## Declaration and Feedback (To be filled-in by the Chairperson)

#### **Declaration Form**

Name and Address of the Institution visited:

I do hereby declare that I don't have or didn't have a close or active association with the above institution in any of the following form

- 1. I am neither employed currently nor was employed in the past as faculty, staff or Consultant by the institution.
- 2. I am neither engaged currently nor was engaged in the past in any discussion or negotiation of employment with the institution;
- 3. I have never attended the above institution as a student;
- 4. I have never received an honorary degree from the institution;
- 5. I have not guided institution for preparation or mock up exercise
- 6. I do not own a membership in the institution's Board of Trustees/Advisory Board/Academic Advisory Board;
- 7. I am / was not a member of any committee of the Institution/Department/Program
- 8. No close/family relative of mine is a student or employee of the institution
- 9. I do not own a membership in the institution's Board of Trustees/Industry Advisory Board.

I hereby declare that I have no conflict of interest in the proposed NBA accreditation assignment for this institution and I will follow the NBA conflict of interest Policies. I shall abide by the code of conduct and will conduct myself in professional manner and uphold the dignity and esteem of the position bestowed upon me.

Name:
Signature:
Date:

Feedback Form to be filled-in by the Chairperson about the Institution and Team Members (to be send to NBA)

**Purpose:** (This form is designed to have a fair opinion about the team members who have assisted you during the visit. This will enable the NBA to improve its system and make it more effective. We thank you in advance for the time and effort you are investing in filling out this form.)

1	Program Evaluators
(i)	Please comment on the evaluation methodology adopted by the Evaluators.
(ii)	Whether the Evaluator has tendered any advice to improve the system? If yes, please specify.  a. Name (s) of the Evaluator:  b. Advice:
(iii)	Did each of the Evaluators were well prepared and filled-in the Pre-Visit Report with specific issues for which they wished to gather proper evidence, etc.?
(iv)	Whether the Evaluators were specific about the relevant topics related to the program? If no, please specify.
(v)	Whether the Evaluator interacted with students and faculty in groups or with students and faculty in private? If yes, please specify the name of the students/faculty.
(vi)	Please comment on the general behaviour and etiquette of the Evaluators during the visit.
2	Institution
(I)	Please comment on the general behaviour and etiquette of the Head of the Institution/other key officials.
(ii)	Please comment on the cooperation and coordination rendered by the institution.
(iii)	In case of any suspicious/unethical activity, kindly specify.

**Signature of the Chairperson** 

Tier I Institutions

## **Evaluator's Visit Report**

# **Undergraduate Engineering Program TIER-I**

Name of the Institution	
Name of the Program	J <b>=</b> 1
Visit Dates	

#### **Program Evaluator Summary**

#### **Overview**

•		, ,	three day accreditation visit from
(name of the program)		, to e	valuate od Engineering program
	ith the evaluation team r		to exchange the of Self-Assessment Report (SAR) and
of the respective He visited the various fa	tution was given byead of the Department/ acilities of the program. accreditation criteria,	and on the Program Coordinator). The Apart from comprehensive	Dean The e program was given by the (Name le respective program evaluators also le review of documental evidences discussions with the
Faculty Employers Staff members		Alumni Parents  Students	
The Program Evaluati	on Team found that (ge	neral findings about the pro	ogram to be mentioned)

#### **Program Details**

Name of the Pro	gram:				
Year of					
Commencement					
	Year	Sanctioned Intake	Actual Ad	lmitted (without	Lateral Entr
	CAY (20 20)				
	CAY m1 (20 20)				
Student	CAY m2 (20 20)				
	Total Students in the				
	Programme 1st to Final Year				
	Average of the CAY,				
	CAY m1 and CAYm2				
			CAY	CAYm1	CAYm2
Faculty	Regular	Professor			
(Attach a Copy		Associate professor			
of faculty list		Assistant professor			
compared with	Contractual	Professor			
Time Table)		Associate professor			
		Assistant professor			
	No. of Ph.D available in the	dept.			
	Student - Faculty ratio				
	(averaged over CAY,				
	CAY m1 and CAYm2)				
	(Refer criterion-5.1)				
		No. of years			
_	First Accreditation	accredited for			
Previous		With effect from			
Accreditation		No. of years			
(if any)	Previous Accreditation	accredited for			
		With effect from			

**CAY: Current Academic Year** 

CAYm1: Current Academic Year minus 1= Current Assessment year

CAYm2: Current Academic Year minus 2= Current Assessment year minus 1

**Note:** All the faculty whether regular or contractual (except Part-Time), will be considered. The contractual faculty (doing away with the terminology of visiting/adjunct faculty, whatsoever) who have taught for 2 consecutive semesters in the corresponding academic year on full time basis shall be considered for the purpose of calculation in the Faculty Student Ratio.

However, following will be ensured in case of contractual faculty:

- i. Shall have the AICTE prescribed qualifications and experience.
- ii. Shall be appointed on full time basis and worked for consecutive two semesters during the particular academic year under consideration.
- iii. Should have gone through an appropriate process of selection and the records of the same shall be made available to the visiting team during NBA visit.

#### **Explicit observations about the program**

(Please use additional sheets, if necessary, to elaborate)

Program title	
Strengths:	
1	
2	
Concerns:	
1	
2	
Weakness/Areas of improvement:	
1	
2	
Deficiencies:	
1	
2	
Other Observations, if any:	
1	
2.	

#### **Information for Evaluation**

#### Award of Accreditation [TIER I (UG)]

1. Accreditation for Six years will be accorded to a program on fulfilment of the following requirements:

Y	С	W	D
>=7	<=3	0	0

- There should not be any "Deficiency" or "Weakness" in any of the criteria and at least seven criteria must be fully compliant with only "Concerns" in the remaining criteria.
- Number of available Ph.D. in the department should be greater than or equal to 30 per cent of the required number of faculty averaged over two academic years i.e. Current Academic Year (CAY) and Current Academic Year Minus One (CAYM1).
- Faculty Student Ratio in the department should be less than or equal to 1:20 averaged over three academic years i.e. Current Academic Year (CAY), Current Academic Year Minus One (CAYM1) and Current Academic Year Minus Two (CAYM2).
- At least 2 Professors or 1 Professor and 1 Associate Professor (on regular basis) with Ph.D. degree should be available in the respective department for two academic years i.e. Current Academic Year (CAY) and Current Academic Year Minus One (CAYM1).
- The HOD of the department in which the program under consideration is running should be appointed on regular basis and should possess PhD degree in the Current Academic Year (CAY)

### 2. Accreditation for Three years will be accorded to a program on fulfilment of the following requirements:

Y	D
>=4	0

- There should be at least four criteria fully compliant with zero (0) "Deficiency" in the remaining criteria.
- At least 2 Professors or 1 Professor and 1 Associate Professor (on regular basis) with Ph.D. degree should be available in the respective department for two academic years i.e. Current Academic Year (CAY) and Current Academic Year Minus One (CAYM1).
- The faculty student ratio in the department under consideration should be less than or equal to 1:25 averaged over three academic years i.e. Current Academic Year (CAY), Current Academic Year Minus One (CAYM1) and Current Academic Year Minus Two (CAYM2).
- Mumber of available Ph.D. in the department should be greater than or equal to 20 per cent of the required number of faculty averaged over two academic years i.e. Current Academic Year (CAY) and Current Academic Year Minus One (CAYM1).
- The HOD of the department in which the program under consideration is running should be

#### 3. No Accreditation of the program

If the program fails to meet the criteria for award of accreditation for three years, it is awarded "Not Accredited" Status.

#### **Department/Programme Specific Criteria:**

Sl. No.	Criteria	Max.	Marks	Grade	Remarks
		Marks	Awarded	(Y, C, W, D)	
1.	Vision, Mission and Program	50			
	Educational Objectives				
2.	Program Curriculum and				
	Teaching-Learning Processes	100			
3.	Course Outcomes and	175			
	Program Outcomes				
4.	Students' Performance	100			
5.	Faculty Information and	200			
	Contributions				
6.	Facilities and Technical Support	80			
7.	Continuous Improvement	75			
	TOTAL	780			

Signature	Signature
(Program Evaluator 1)	(Program Evaluator 2)

#### **Declaration of Conformity with Evaluator's Report by the Team Chair**

on certa	in criterion:		
	Criteria	Comments	

# Annexure X Part B

# Part B-Program Assessment Worksheet Program Level Criteria - To be Assessed by Evaluator

Name of the Institut	tion
Name of the Program	

SI. No.	Sub Criteria	Max. Marks	<b>Evaluation Guidelines (Marks)</b>	Marks Awarded		Overall Marks		Observations of Evaluators (Provide			
				Marks	Total	Marks	Grade (Y,C,W, D)	Justifications/ Reasons)			
	State the Vision		A. Availability of statements of the Departments (1)								
1.1.	State the Vision and Mission of the Department	5	B. Appropriateness/Relevance of the Statements (2)		Overall Marks	Overall Grade					
	and Institute		C. Consistency of the Department statements with the Institute statements (2)			for 1.1	for 1.1				
1.2.	State the Program Educational Objectives(PEOs)	5	Program Educational Objectives (3 to 5) (5) Availability & correctness			Overall Marks for 1.2	Overall Grade for 1.2				
	Indicate where		A. Adequacy in respect of publication & dissemination(3)				l Overall				
	and how the Vision, Mission and PEOs are		B. Process of dissemination among stakeholders (3)			Overall					
1.3.	published and disseminated among stakeholders	ublished and isseminated mong anakeholders 15	C. Extent of awareness of Vision, Mission & PEOs among the stakeholder, i.e., primarily faculty and students (9)			Marks for 1.3	Grade for 1.3				
	State the process for defining the Vision and	1_	A. Description of process for defining the Vision, Mission of the Department (7)			Overall					
1.4.	Mission of the Department, and PEOs of the program	Aission of the Department, and PEOs of the	Mission of the Department, and PEOs of the	Mission of the Department, and PEOs of the	Mission of the Department, and PEOs of the	B. Description of process for defining the PEOs of the program (8)		Marks for 1.4	Marks for 1.4	Grade for 1.4	

1.5	Establish consistency of PEOs with Mission of the	10	A. Preparation of a matrix of mapping PEOs and elements of Mission statement (5)  B. Consistency/justification of	Overall Marks for 1.5	Overall Grade for 1.5	
Total	Department of Criterion 1:	50	mapping of the matrix (5)  Overall Marks and Grade for Criterion 1	1:		

Criteri	on 2: Program (	Curriculu	m and Teaching – Learning Proc	esses	s (100	))		
SI. No.	Sub Criteria	Max. Marks			arks rded	Overal	l Marks	Observations of Evaluators (Provide
				Marks	Total	Marks	Grade (Y,C,W, D)	Justifications/ Reasons)
2.1.	Program Curriculum	30						
2.1.1.	State the process for designing the program curriculum	10	Process used to demonstrate how the program curriculum is evolved and periodically reviewed considering the POs and PSOs. Also consider the involvement of the Industry			Overall Marks for 1.3	Grade	
2.1.2.	Structure of the Curriculum	5	Refer to SAR: Expectation in 2.1.2 & 2.1.3 is that the curriculum is well balanced structure & appropriate for a degree program					
2.1.3.	State the components of the curriculum	5	Refer to SAR: Expectation in 2.1.2 & 2.1.3 is that the curriculum is well balanced structure & appropriate for a degree program					

2.1.4.	State the process used to identify extent of compliance of the curriculum for attaining the Program Outcomes(PO s) & Program Specific Outcomes(PS Os)	10	Process used to identify extent of compliance of curriculum for attaining POs & PSOs					
2.2.	Teaching- Learning Processes	70						
			A. Adherence to Academic Calendar (2)		Overall Marks for 2.2			
			B. Pedagogical initiatives (2)					
	Describe the Process		C. Methodologies to support weak students and encourage bright students (2)					
2.2.1.	followed to improve quality of	15	D. Quality of classroom teaching (Observation in a Class) (2)			Overall Grade for 2.2		
	Teaching Learning		E. Conduct of experiments (Observation in Lab )(2)					
			F. Continuous Assessment in the laboratory (3)		-			
			G. Student feedback on teaching learning process and actions taken (2)					

	Quality of end semester examination,		A. Process for internal semester question paper setting, evaluation and effective process implementation (3)				
2.2.2.	internal semester question papers,	15	B. Process to ensure questions from outcomes/learning levels perspective (2)		Overall Marks for 2.2	Grade	
	assignments and evaluation		C. Evidence of COs coverage in tests/ mid-term tests (5)				
	evaluation		D. Quality of Assignment and its relevance to COs (5)				
			A. Identification of projects and allocation methodology to Faculty (2)				
			B. Types and relevance of the projects and their contribution towards attainment of POs and PSOs (2)				
	Quality of		C. Project related to Industry (3)				
2.2.3.	student projects	20	D. Process for monitoring and evaluation (2)				
			E. Process to assess individual and team performance (3)				
			F. Quality of completed projects/working prototypes (5)				
			G. Evidences of papers published /Awards received by projects etc. (3)				
	Initiatives		A. Industry supported laboratories (2)				
2.2.4.	rolated to	istry 10	B. Industry involvement in the program design and Curriculum (3)				

			C. Industry involvement in partial delivery of any regular courses for students (3)			
			D. Impact analysis of industry institute interaction and actions taken thereof (2)			
			A. Industrial training/tours for students (2)			
2.2.5.		10	B. Industrial internship /summer training of more than two weeks and post training Assessment (3)			
	industry		C. Impact analysis of industrial training (2)			
			D. Student feedback on initiative (3)			
Total	of Criterion 2:	100	Overall Marks and Grade for Cr	iterion 2	2:	

Criteri	on 3: Course O	utcomes	and Program Outcomes (175)					
SI. No.	Sub Criteria	Max. Marks	Evaluation Guidelines (Marks)		arks rded	Overal	l Marks	of Evaluators (Provide
				Marks	Total	Marks	Grade (Y,C,W, D)	Justifications/ Reasons)
			A. Evidence of COs being defined for every course (5)			Overall Marks for 3.1	Grade	
	Establish the correlation between the courses and the POs & PSOs	elation een the ses and POs &	B. Availability of COs embedded in the syllabi (5)					
3.1.			C. Explanation of Course Articulation Matrix table to be ascertained (5)					
			D. Explanation of Program Articulation Matrix tables to be ascertained (10)					

3.2.	Attainment of Course Outcomes	75					
3.2.1.	Describe the assessment tools and processes used to gather the data upon which	10	A. List of assessment processes (2)				
	the evaluation of Course Outcome is based		B. The quality / relevance of assessment processes & tools used (8)		Marks	Overall Grade for 3.2	
3.2.2.	Record the attainment of Course Outcomes of all courses with respect to set attainment levels	65	Verify the attainment levels as per the benchmark set for all courses (65)		for 3.2		
3.3.	Attainment of Program Outcomes and Program Specific Outcomes	75		<u>-</u>			
2 2 4	Describe assessment tools and processes used for assessing the	40	A. List of assessment tools & processes (5)				
3.3.1.	attainment of each of the POs & PSOs	10	B. The quality/relevance of assessment tools/processes used (5)		Overall Marks	Overall Grade	
3.2.2.	Provide results of evaluation of each PO & PSO	65	A. Verification of documents, results and level of attainment of each PO/PSO (50)		for 3.3	for 3.3	
			B. Overall levels of attainment (15)				
Tot	al of Criterion 3:	175	Overall Marks and Grade for Criterion 3:	,			

SI. No.	Sub Criteria	Max. Marks	<b>Evaluation Guidelines (Marks)</b>	Marks Awarded		Overal	l Marks	Observations of Evaluators (Provide
				Marks	Total	Marks	Grade (Y,C,W, D)	Justifications,
			A. >= 90% students enrolled at the First Year Level on average basis during the previous three academic years starting from current academic year (20)			Overall		
			B. >= 80% students enrolled at the First Year Level on average basis during the previous three academic years starting from current academic year (18)				Overall	
4.1.	Enrolment Ratio	ent 20	C. >= 70% students enrolled at the First Year Level on average basis during the previous three academic years starting from current academic year(16)		Marks for 4.1	Grade for 4.1		
			D. >= 60% students enrolled at the First Year Level on average basis during the the previous three academic years starting from current academic year(14)					
			E. Otherwise '0'.					
4.2.	Success Rate in the stipulated period of the program	20						

4.2.1.	Success rate without backlogs in any Semester/year of study Without Backlog means: No repeat(s) in any course in any semester/year of study	15	SI= (Number of students who graduated from the program without repeat(s) in any course)/(Number of students admitted in the first year of that batch and actually admitted in 2nd year via lateral entry and separate division, if applicable) Average SI = Mean of success index (SI) for past three batches Success rate without backlogs in any year of study = 15 × Average SI		Overall Marks for 4.1	Overall Grade for 4.1	Mention Numbers
4.2.2.	Success rate in stipulated period (actual duration of the program) [Total of with Backlog + without Backlog]	5	SI= (Number of students who graduated from the program in the stipulated period of course duration)/(Number of students admitted in the first year of that batch and actually admitted in 2nd year via lateral entry and separate division, if applicable) Average SI = mean of success index (SI) for past three batches Success rate = 5 × Average SI				Mention Numbers
4.3.	Academic Performance in Second Year	10	Academic Performance = Average API (Academic Performance Index)  API = ((Mean of 2nd Year Grade Point Average of all successful Students on a 10 point scale) or (Mean of the percentage of marks of all successful students in Second Year/10)) x (successful students/number of students appeared in the examination) Successful students are those who are permitted to proceed to the third year		Overall Marks for 4.3	Overall Grade for 4.3	Mention Numbers

4.4.	Placement, Higher studies and Entrepreneurs hip	30	Assessment Points = 30 × average placement, i.e., (P1+P2+P3)/3 Placement Index (P) =[ (x + y + z)/N]; where, x = Number of students placed in companies or Government sector through on/off campus recruitment y = Number of students admitted to higher studies with valid qualifying scores (GATE or equivalent State or National level tests, GRE, GMAT etc.) z = No. of students turned entrepreneur in engineering/technology . N =Total number of final year students			Overall Marks for 4.4	Grade	Mention Numbers along with the calculations
4.5.	Professional Activities	20						
	Professional societies/chap		A. Availability & activities of professional societies/chapters (3)					
4.5.1.	ters and organizing engineering events	5	B. Number, quality of engineering events (organized at institute, Level-Institute/State/National/International) (2)					
_	Publication of technical		A. Quality & Relevance of the contents and Print Material (3)			Overall Marks for 4.5	Overall Grade for 4.5	
4.5.2.	magazines, newsletters, etc.	5	B. Participation of Students from the program (2)					
	Participation in inter-		A. Events within the state (2)					
	institute		B. Events outside the state (3)					
4.5.3.	events by students of the program of study (at other institutions)	10	C. Prizes/awards received in such events (5)					
Total	of Criterion 4:	100	Overall Marks and Grade for Ci	riterio	on 4:			

SI. No.	Sub Criteria	Max. Marks	<b>Evaluation Guidelines (Marks)</b>	Marks Awarded		Overall Marks		of Evaluators (Provide
				Marks	Total	Marks	Grade (Y,C,W, D)	Justifications/ Reasons)
5.1.	Student- Faculty Ratio (SFR)	20	Marks to be given proportionally from a maximum of 20 to a minimum of 10 for average SFR between 15:1 to 25:1, and zero for average SFR higher than 25:1. Marks distribution is given as below:  < = 15 - 20 Marks < = 17 - 18 Marks < = 19 - 16 Marks < = 21 - 14 Marks < = 23 - 12 Marks < = 25 - 10 Marks  Note: All the faculty whether regular or contractual (except Part-Time), will be considered. The contractual faculty (doing away with the terminology of visiting/ adjunct faculty, whatsoever) who have taught for 2 consecutive semesters in the corresponding academic year on full time basis shall be considered for the purpose of calculation in the Faculty Student Ratio.  However, following will be ensured in case of contractual faculty:  i. Shall have the AICTE prescribed qualifications and experience. ii. Shall have the AICTE prescribed apualifications and experience. iii. Shall have the AICTE prescribed apualifications and experience. iii. Shall have the AICTE prescribed apualifications and experience. iii. Shall have the AICTE prescribed apualifications and experience. iiii. Shall have the AICTE prescribed apualifications and experience. iiii. Shall have the AICTE prescribed apualifications and experience. iiiii. Shall be appointed on full time basis and worked for consecutive two semesters during the particular academic year under consideration. iiii. Should have gone through an appropriate process of selection and the records of the same shall be made available to the visiting team during NBA visit.			Overall Marks for 5.1	Overall Grade for 5.1	

			C 1 D				
5.2.	Faculty Cadre Proportion	20	Cadre Proportion Marks = $\begin{bmatrix} \frac{AF1}{RF1} & \frac{AF2}{RF2} \times 0.6 & \frac{AF3 \times 0.4}{RF3} \times 10 \end{bmatrix}$ • If AF1 = AF2= 0 then zero marks • Maximum marks to be limited if it exceeds 20 (Refer calculation in SAR)		Overall Marks for 5.2	Overall Grade for 5.2	Mention Numbers
5.3.	Faculty Qualification	20	FQ = 2.0 x [{10X +4Y}/F] where X is no. of faculty with Ph.D., Y is no. of faculty with M.Tech, F is no. of faculty required to comply 1:20 Faculty Student ratio (no. of faculty and no. of students required to be calculated as per 5.1)		Overall Marks for 5.3	Overall Grade for 5.3	Mention Numbers
			A. ≥ 90% of required Faculties retained during the period of assessment keeping CAYm2 as base year (10)  B. ≥ 75% of required			Grade for 5.3  Overall Grade for 5.4	
			Faculties retained during the period of assessment keeping CAYm2 as base year (8)		Overall		
5.4.	Faculty Retention	10	C. ≥ 60% of required Faculties retained during the period of assessment keeping CAYm2 as base year (6)		Marks for 5.4		
		D. ≥ 50% Faculties r period of a	D. ≥ 50% of required Faculties retained during the period of assessment keeping CAYm2 as base year (4)				
			E. Otherwise (0)				
5.5.	Faculty competencies in correlation to Program Specific Criteria	10	<ul><li>A. Specialization</li><li>B. Research Publications</li><li>C. Course Developments</li><li>D. Other relevant points</li></ul>		Overall Marks for 5.5	Overall Grade for 5.5	

5.6.	Innovations by the Faculty in Teaching and Learning	10	A. Statement of clear goals, use of appropriate methods, significance of results, effective presentation and reflective presentation (4)  B. Availability of work on Institute Website (2)  C. Availability of work for peer review and critique (2)  D. Reproducibility and Reusability by other scholars for further development (2)		Overall Marks for 5.6	Overall Grade for 5.6	
5.7.	Faculty as participants in Faculty development /training activities /STTPs	15	For each year: Assessment = 3 × Sum/0.5RF Average assessment over previous three years starting from CAYm1 (Marks limited to 15)		Overall Marks for 5.7	Overall Grade for 5.7	Mention numbers
5.8.	Research and Development	75					
5.8.1.	Academic Research	20	A. Number of quality publications in refereed/SCI Journals, citations, Books/Book Chapters etc. (15)				Mention numbers for Sub -
			B. PhD awarded during the assessment period while working in the institute (5)				
5.8.2.	Sponsored Research	20	Funded research from outside; Cumulative for CAYm1, CAYm2 and CAYm3:  Amount > 50 Lakh - 20 Marks Amount > 40 Lakh and <= 50 Lakh - 15 Marks  Amount > 30 Lakh and <= 40 Lakh - 10 Marks  Amount >= 15 Lakh and <= 30 Lakh - 5 Marks  Amount < 15 Lakh - 0 Mark		Overall Marks for 5.8	Overall Grade for 5.8	Criteria 5.8.2 (Sponsored research) and 5.8.4(Consu Itancy)

5.8.3.	Development Activities	15	A. Product Development B. Research laboratories C. Instructional materials D. Working models/charts/monograms etc.					
5.8.4.	Consultancy (From Industry)	20	Consultancy; Cumulative Cumulative for CAYm1, CAYm2 and CAYm3:  Amount > 10 Lakh - 20 Marks Amount >= 8 Lakh and <= 10 Lakh - 15Marks Amount >= 6 Lakh and < 8Lakh - 10 Marks Amount >= 4 Lakh and < 6 Lakh - 5 Marks Amount >= 2 Lakh and < 4 Lakh - 2 Mark Amount < 2 Lakh - 0 Mark			Overall Marks for 5.8	Overall Grade for 5.8	Mention numbers for Sub - Criteria 5.8.2 (Sponsored research) and 5.8.4(Consu Itancy)
5.9.	Faculty Performance Appraisal and Development	10	A. A well defined performance appraisal and development system instituted for all the assessment years (5)			Overall Marks for 5.9	Overall Grade for 5.9	
	System (FPADS)		B. Its implementation and effectiveness (5)					
	Visiting/Adjun		Provision of Visiting /Adjunct/Emeritus faculty etc.(1)			Overall	Overall	
5.10.		ct/Emeritus 10	Minimum <b>50</b> hours per year interaction per year to obtain three marks : 3 x 3 = 9			Marks for 5.10	Grade for 5.10	Mention numbers
Total	Total of Criterion 5: 200 Overall Marks and Grade for Criterion 5:							

SI. No.	Sub Criteria	Max. Marks	<b>Evaluation Guidelines (Marks)</b>	Marks Awarded		Overall Marks		Observations of Evaluators (Provide
				Marks	Total	Marks	Grade (Y,C,W, D)	Justifications/
6.1.	Adequate and well equipped laboratories, and technical manpower	40	A. Adequate well-equipped laboratories to run all the program-specific curriculum (25)			Overall Marks	Overall Grade	
			B. Availability of adequate and qualified technical supporting staff (15)			for 6.1	for 6.1	
6.2.	Laboratories: Maintenance and overall ambience	10	Maintenance and overall ambience (10)			Overall Marks for 6.2	Overall Grade for 6.2	
6.3.	Safety measures in laboratories	10	Safety measures in laboratories (10)			Overall Marks for 6.3	Overall Grade for 6.3	
6.4.	Project laboratory/fac ilities	20	Facilities & Utilization (20)			Overall Marks for 6.4	Overall Grade for 6.4	
Total of Criterion 6:		80	Overall Marks and Grade for Cri	iterio	n 6:			

SI. No.	Sub Criteria	Max. Marks	<b>Evaluation Guidelines (Marks)</b>	Marks Awarded		Overall Marks		Observations of Evaluators (Provide
				Marks	Total	Marks	Grade (Y,C,W, D)	Justifications/
	Actions taken based on the		A. Documentation of POs and PSOs attainment levels (15)					
7.1.	results of evaluation of each of the	40	B. Identification of gaps/shortfalls (5)			Overall Marks for 7.1	Overall Grade for 7.1	
	COs, POs and PSOs		C. Plan of action to bridge the gap and its Implementation (10)					
7.2.	Academic Audit and actions taken during the period of Assessment	15	Assessment shall be based on its conduct and actions taken in relation to continuous improvement (15)			Overall Marks for 7.2	Overall Grade for 7.2	
	Improvement in Placement,		A. Improvement in Placements numbers, quality, core hiring industry and pay packages (5)			Overall	Overall	
7.3.	Higher Studies and Entrepreneurs	10	B. Improvement in Higher Studies admissions (3)			Marks for 7.3	Grade for 7.3	
	hip		C. Improvement in number of Entrepreneurs (2)					
7.4.	Improvement in the quality of students admitted to the progr	20	Assessment is based on improvement in terms of ranks/score in qualifying state level/national level entrances tests, percentage Physics, Chemistry and Mathematics marks in 12th Standard and percentage marks of the lateral entry students			Overall Marks for 7.4	Overall Grade for 7.4	
Total	of Criterion 7:	75	Overall Marks and Grade for Ci	riterio	on 7:			

# Annexure X Part C

#### Part C Declaration and Feedback

(To be filled by Evaluators)

Declaration Form								
Na	Name and Address of the Institution visited:							
	ereby declare that I am /was not actively associated with the above mentioned institution in any of e following form :-							
1	I am neither employed currently nor was employed in the past as faculty, staff or Consultant by the institution;							
2	I am neither engaged currently nor was engaged im the past in any discussion or begotitation of employment with the institution;							
3	I have never attended the above institution as a student;							
4	I have never received an honorary degree from the institution;							
5 6	No close/family relative of mine is a student or employee of the institution; I do not own a membership in the institution's Board of Trustees/Advisory Board /Acadeamic Advisory Board;							
7	I have not gone on mock visit to the said institute							
8	I have not guided institution for preparation or mock up exercise.							
9	I am / was not a member of any committee of the Institution/Department/Program.							
th co	ereby declare that I have no conflict of interest in the proposed NBA accreditation assignment for is institution and I will abide by the NBA conflict of interest policy . I shall abide by the code of induct and will conduct myself in professional manner and uphold the dignity and esteem of the sition bestowed upon me.							
Na	me:							
Sig	gnature:							
Da	te:							

## Feedback Form to be filled by the Evaluator about the Institution, Co-evaluator and Chairperson

### (Directly to be send only through e-mail to NBA (ID: <u>feedback.nba@nbaind.org</u>) Not to be handed over to Chairman of visiting team)

Purpose- This form is designed to have a fair opinion about the team members who have assisted you during the visit. This will enable the NBA to improve its system and make it more effective. We thank you in advance for the time and effort you are investing in filling out this form.

1.	Please comment on the ability of the chairperson to resolve disputes, if any, between the evaluators.
2.	Whether the team chair had done his homework and was aware about the SAR?
3.	Did the pre-visit evening meeting evolve a clear methodology based on the homework done by each member of the team?
4.	Whether the chairperson was keen to find facts and verify evidences.
5.	Whether the chairperson has extended openness with the evaluators? If no, please specify.
6.	Please comment on the general behaviour and etiquette of the chairperson during the visit.
7.	Whether the co-evaluators seemed well prepared with their respective homework?
8.	Whether the team members for a program co-ordinate well with each other? If not, please elaborate.
9.	Please comment on the general behaviour and etiquette of the co-evaluator.
10.	Please comment on the cooperation rendered by the co-evaluator.
11.	Please comment on the general behaviour and etiquette of the Head of the Institution / other key officials.
12.	Please comment on the cooperation and coordination rendered by the institution.
13.	In case of any suspicious/unethical activity, kindly specify.

Signature of the Evaluator

#### Feedback Form to be filled by all the visitors about Service Provider

(to be filled separately by each evaluator)

**Purpose-**This form is designed to have a fair opinion about the Service Provider hired by the NBA. This will enable the NBA to improve its system and make it more effective. We thank you in advance for the time and effort you are investing in filling out this form.

1. Name of the Institution:			
2. Date (s) of visit:			
3. Name of the Service Provider:			

Kindly fill the following table:

Basis of Assessment	Rating
Customer Service	
Travel Management	
Consulting Services	
Lodging Requirements	
Travel Documentation	
Overall Experience	
Signature	

(Kindly rate on scale of 1 to 3:1 for excellent, 2 for satisfactory and 3 for Poor Service)

**Specific Comments (If Any):** 

Thank you for your feedback!

# Annexure XI

### **CERTIFICATE OF PARTICIPATION**

## (To be Fill-in by the Chairperson of the Visiting Team) TIER-I UG Engineering Institutions

Name of the Experts	Discipline	Date	Arrival Time	Departure Time	Used NBA Transport Yes/No

# Annexure XII

### **CERTIFICATE**

## (to be filled-in by the Institution) TIER-I UG Engineering Institutions

l,								(Nar	ne and	l desi	gnation of th	ne Head of	f the institu	ıtion
hereby	certify	that	no	gifts	in	cash	or	kind	and	/or	souvenirs	were	offered	by
						(	Nam	e of th	e inst	itutio	<b>on)</b> to the me	embers of	the Expert	who
visited the Institution from					to _	(visit dates).								

Signatures & Name of the Head of the institution with Seal

## Feedback Form to be filled by the Institution Regarding Accreditation Visit

### **TIER-I UG Engineering Institutions**

### **Purpose**

This form is designed to have a fair opinion of the team which has visited your institution. This will enable the NBA to improve its system and make it more effective. We thank you in advance for the time and effort you are investing in filling out this form.

1.	Name of the Institution:		
2.	Programme(s)evaluated:		
3.	Date(s) of visit:		
	Name of Chairperson:		
	Names of Evaluators:		
	1	2	3
	4	5	6
	7	8	9
	10	11	12

- 6. Please comment on the evaluation methodology adopted by the team during the visit.
- 7. Whether the evaluators have tendered any advice to improve the system? If yes, please specify.
- I) Name of the Evaluator:
- ii) Advice:

- 8. Whether any of the evaluators were specific about the relevant topics related to the programme? If no, please specify.
- 9. Whether the evaluators interacted with students and faculty in groups or with students and faculty in private? If yes, please specify the name of the students / faculty.
- 10. Whether the Head of the Institution or any representative of the management was also present during the interaction? If yes, please specify.
  - i) Name of the Representative:
  - ii) Observation of the Representative about Interaction:
- 11. Whether Evaluators have been facilitated by the institution for outdoor activity? If yes, please specify.
  - i) On whose insistence:
  - ii) What activity:
- 12. Whether the exit meeting met the purpose i.e., to share the Visiting Team's perceptions and general observations about the institution and programmes.
- 13. Specify the participants of the Exit Meeting.
- 14. Please comment on the general behavior of the Visiting Team (Chairperson and Evaluators) during the visit? Whether hospitality was extended to the Visiting Team? If yes, please specify the participants and the kind of hospitality offered.

Signature of the Head of the Institution

Thank you for your feedback!



### **National Board of Accreditation**

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