

Annexure X - Part B

Part B-Program Assessment Worksheet

Program Level Criteria - To be Assessed by the Evaluator

Name of the Institution _____

Name of the Program _____

Criterion 1: Vision, Mission and Program Educational Objectives (50)								
SI.No.	Sub Criteria	Max. Marks	Evaluation Guidelines (Marks)	Marks Awarded		Overall		Observations of Evaluators (Provide Justifications/ Reasons)
				Marks	Total	Marks	Grade (Y,C,W,D)	
1.1.	State the Vision and Mission of the Department and Institute	5	A. Availability of statements of the department (1) B. Appropriateness/Relevance of the Statements (2) C. Consistency of the Department statements with the Institute statements (2)			Overall Marks for 1.1	Overall Grade 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	
1.3.	Indicate where and how the Vision, Mission and PEOs are published and disseminated among stakeholders	15	A. Adequacy in respect of publication & dissemination (3) B. Process of dissemination among stakeholders (3) C. Extent of awareness of Vision, Mission & PEOs among the stakeholder, i.e., primarily faculty and students (9)			Overall Marks for 1.3	Overall Grade for 1.3	
1.4.	State the process for defining the Vision and Mission of the Department, and PEOs of the program	15	A. Description of process for defining the Vision, Mission of the Department (7) B. Description of process for defining the PEOs of the program (8)			Overall Marks for 1.4	Overall Grade for 1.4	
1.5.	Establish consistency of PEOs with Mission of the Department	10	A. Preparation of a matrix of mapping PEOs and elements of Mission statement (5) B. Consistency/justification of mapping of the matrix (5)			Overall Marks for 1.5	Overall Grade for 1.5	
Total of Criterion 1:		50	Overall Marks and Grade for Criterion 1:					

Criterion 2: Program Curriculum and Teaching – Learning Processes (100)								
SI.No.	Sub Criteria	Max. Marks	Evaluation Guidelines	Marks Awarded		Overall		Observations of Evaluators (Provide Justifications/ Reasons)
				Marks	Total	Marks	Grade (Y,C,W,D)	
2.1.	Program Curriculum	30				Overall Marks for 2.1	Overall Grade for 2.1	
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					
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(POs) & Program Specific Outcomes(PSOs)	10	Process used to identify extent of compliance of curriculum for attaining POs & PSOs					
2.2.	Teaching-Learning Processes	70				Overall Marks for 2.2	Overall Grade for 2.2	
2.2.1	Describe the Process followed to improve quality of Teaching Learning	15	A. Adherence to Academic Calendar (2)					
			B. Pedagogical initiatives (2)					
			C. Methodologies to support weak students and encourage bright students(2)					
			D. Quality of classroom teaching (Observation in a Class) (2)					
			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)					
2.2.2.	Quality of end semester examination, internal semester question papers, assignments and evaluation	15	A. Process for internal semester question paper setting, evaluation and effective process implementation (3)					
			B. Process to ensure questions from outcomes/learning levels perspective (2)					
			C. Evidence of COs coverage in tests/ mid-term tests (5)					
			D. Quality of Assignment and its relevance to COs (5)					

2.2.3.	Quality of student projects	20	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)				
			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)				
2.2.4.	Initiatives related to industry interaction	10	A. Industry supported laboratories (2)				
			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)				
2.2.5.	Initiatives related to industry internship/summer training	10	A. Industrial training/tours for students (2)				
			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)				
Total of Criterion 2:		100	Overall Marks and Grade for Criterion 2:				

Criterion 3: Course Outcomes and Program Outcomes (175)								
SI.No.	Sub Criteria	Max. Marks	Evaluation Guidelines	Marks Awarded		Overall		Observations of Evaluators (Provide Justifications/ Reasons)
				Marks	Total	Marks	Grade (Y,C,W,D)	
3.1.	Establish the correlation between the courses and the POs & PSOs	25	A. Evidence of COs being defined for every course (5)			Overall Marks for 3.1	Overall Grade for 3.1	
			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)					
3.2.	Attainment of Course Outcomes	75			Overall Marks for 3.2	Overall Grade for 3.2		
3.2.1	Describe the assessment tools and processes used to gather the data upon which the evaluation of Course Outcome is based	10	A. List of assessment processes (2)					
			B. The quality /relevance of assessment processes & tools used (8)					
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)					
3.3.	Attainment of Program Outcomes and Program Specific Outcomes	75			Overall Marks for 3.3	Overall Grade for 3.3		
3.3.1.	Describe assessment tools and processes used for assessing the attainment of each of the POs & PSOs	10	A. List of assessment tools & processes (5)					
			B. The quality/relevance of assessment tools/processes used (5)					
3.3.2.	Provide results of evaluation of each PO & PSO	65	A. Verification of documents, results and level of attainment of each PO/PSO (50)					
			B. Overall levels of attainment (15)					
Total of Criterion 3:		175	Overall Marks and Grade for Criterion 3:					

Criterion 4: Students' Performance (100)								
SI.No.	Sub Criteria	Max. Marks	Evaluation Guidelines	Marks Awarded		Overall		Observations of Evaluators (Provide Justifications/ Reasons)
				Marks	Total	Marks	Grade (Y,C,W,D)	
4.1.	Enrolment Ratio (20)	20	<p>A. $\geq 90\%$ students enrolled at the First Year Level on average basis during the previous three academic years starting from current academic year (20)</p> <p>B. $\geq 80\%$ students enrolled at the First Year Level on average basis during the previous three academic years starting from current academic year (18)</p> <p>C. $\geq 70\%$ students enrolled at the First Year Level on average basis during the previous three academic years starting from current academic year(16)</p> <p>D. $\geq 60\%$ students enrolled at the First Year Level on average basis during the the previous three academic years starting from current academic year(14)</p> <p>E. Otherwise '0'.</p>			Overall Marks for 4.1	Overall Grade for 4.1	
4.2.	Success Rate in the stipulated period of the program	20				Overall Marks for 4.2	Overall Grade for 4.2	
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	<p>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)</p> <p>Average SI = Mean of success index (SI) for past three batches</p> <p>Success rate without backlogs in any year of study = $15 \times$ Average SI</p>					Mention Numbers
4.2.2.	Success rate in stipulated period (actual duration of the program) [Total of with Backlog + without Backlog]	5	<p>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)</p> <p>Average SI = mean of success index (SI) for past three batches</p> <p>Success rate = $5 \times$ Average SI</p>					Mention Numbers
4.3.	Academic Performance in Second Year	10	<p>Academic Performance = Average API (Academic Performance Index)</p> <p>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)</p> <p>Successful students are those who are permitted to proceed to the third year</p>			Overall Marks for 4.3	Overall Grade for 4.3	Mention Numbers

4.4.	Placement, Higher studies and Entrepreneurship	30	Assessment Points = $30 \times \text{average placement}$, 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	Overall Grade for 4.4	Mention Numbers along with the calculations
4.5.	Professional Activities	20				Overall Marks for 4.5	Overall Grade for 4.5	
4.5.1.	Professional societies/chapters and organizing engineering events	5	A. Availability & activities of professional societies/chapters (3) B. Number, quality of engineering events (organized at institute, Level-Institute/State/National/International) (2)					
4.5.2.	Publication of technical magazines, newsletters, etc.	5	A. Quality & Relevance of the contents and Print Material (3) B. Participation of Students from the program (2)					
4.5.3.	Participation in inter-institute events by students of the program of study (at other institutions)	10	A. Events within the state (2) B. Events outside the state (3) C. Prizes/awards received in such events (5)					
Total of Criterion 4:		100	Overall Marks and Grade for Criterion 4:					

Criterion 5: Faculty Information and Contributions (200)								
SI.No.	Sub Criteria	Max. Marks	Evaluation Guidelines	Marks Awarded		Overall		Observations of Evaluators (Provide Justifications/ Reasons)
				Marks	Total	Marks	Grade (Y,C,W,D)	
5.1.	Student-Faculty Ratio (SFR)	20	<p>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:</p> <p><= 15 - 20 Marks <= 17 - 18 Marks <= 19 - 16 Marks <= 21 - 14 Marks <= 23 - 12 Marks <= 25 - 10 Marks > 25 - 0 Marks</p> <p>Note: 2. 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:</p> <ol style="list-style-type: none"> 1. Shall have the AICTE prescribed qualifications and experience. 2. Shall be appointed on full time basis and worked for consecutive two semesters during the particular academic year under consideration. 3. 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	
5.2.	Faculty Cadre Proportion	20	<p>Cadre Proportion Marks =</p> $\left[\left(\frac{AF1}{RF1} \right) + \left(\frac{AF2}{RF2} \times 0.6 \right) + \left(\frac{AF3}{RF3} \times 0.4 \times 10 \right) \right]$ <ul style="list-style-type: none"> • 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	<p>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)</p>			Overall Marks for 5.3	Overall Grade for 5.3	Mention numbers
5.4	Faculty Retention	10	<p>A. ≥ 90% of required Faculties retained during the period of assessment keeping CAYm2 as base year (10)</p> <p>B. ≥ 75% of required Faculties retained during the period of assessment keeping CAYm2 as base year (8)</p> <p>C. ≥ 60% of required Faculties retained during the period of assessment keeping CAYm2 as base year (6)</p>			Overall Marks for 5.4	Overall Grade for 5.4	

D. $\geq 50\%$ of required Faculties retained during the period of assessment keeping CAYm2 as base year (4)				
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E. Otherwise (0)				
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5.5.	Faculty competencies in correlation to Program Specific Criteria	10	A. Specialization B. Research Publications C. Course Developments D. Other relevant points			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 = $3 \times \text{Sum}/0.5\text{RF}$ 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) 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	Mention numbers for Sub -Criteria 5.8.2 (Sponsored research) and 5.8.4(Consultancy)
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 <= 10Lakh – 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					
5.9.	Faculty Performance Appraisal and Development System (FPADS)	10	A. A well defined performance appraisal and development system instituted for all the assessment years (5) B. Its implementation and effectiveness (5)			Overall Marks for 5.9	Overall Grade for 5.9	
5.10.	Visiting/Adjunct/Emeritus Faculty etc.	10	Provision of Visiting /Adjunct/Emeritus faculty etc.(1) Minimum 50 hours per year interaction per year to obtain three marks : $3 \times 3 = 9$			Overall Marks for 5.10	Overall Grade for 5.10	Mention Numbers
Total of Criterion 5:		200	Overall Marks and Grade for Criterion 5:					

Criterion 6: Facilities and Technical Support (80)								
Sl.No.	Sub Criteria	Max. Marks	Evaluation Guidelines	Marks Awarded		Overall		Observations of Evaluators (Provide Justifications/ Reasons)
				Marks	Total	Marks	Grade (Y,C,W,D)	
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 for 6.1	Overall Grade for 6.1	
			B. Availability of adequate and qualified technical supporting staff (15)					
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/facilities	20	Facilities & Utilization (20)			Overall Marks for 6.4	Overall Grade for 6.4	
Total of Criterion 6:		80	Overall Marks and Grade for Criterion 6:					

Criterion 7: Continuous Improvement (75)								
Sl.No.	Sub Criteria	Max. Marks	Evaluation Guidelines	Marks Awarded		Overall		Observations of Evaluators (Provide Justifications/ Reasons)
				Marks	Total	Marks	Grade (Y,C,W,D)	
7.1.	Actions taken based on the results of evaluation of each of the COs, POs and PSOs	30	A. Documentation of POs and PSOs attainment levels (15) B. Identification of gaps/shortfalls (5) C. Plan of action to bridge the gap and its Implementation (10)			Overall Marks for 7.1	Overall Grade for 7.1	
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	
7.3.	Improvement in Placement, Higher Studies and Entrepreneurship	10	A. Improvement in Placements numbers, quality, core hiring industry and pay packages (5) B. Improvement in Higher Studies admissions (3) C. Improvement in number of Entrepreneurs (2)			Overall Marks for 7.3	Overall Grade for 7.3	
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 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 Criterion 7					