

**Part B-Program Assessment Worksheet**  
**Program Level Criteria- To Be Assessed by Evaluator**

Name of the Institution :

Name of the Program :

**Criterion 1: Vision, Mission and Program Educational Objectives (60)**

SN	Sub Criteria	Max. Marks	Evaluation Guidelines (Marks)	Marks Awarded		Overall Marks	Observations of Evaluators (Provide Justifications/ Reasons)
				Marks	Total		
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)				
1.2	State the Program Educational Objectives (PEOs)	5	Program Educational Objectives (3 to 5) (5) Appropriateness				
1.3	Indicate where and how the Vision, Mission and PEOs are published and disseminated among stakeholders	10	A. Adequacy in respect of publication & dissemination (2)				
			B. Process of dissemination among stakeholders (2)				
			C. Extent of awareness of Vision, Mission & PEOs among the stakeholder (6)				
1.4	State the process for defining the Vision and Mission of the Department, and PEOs of the program	25	A. Description of process for defining the Vision, Mission of the Department (10)				
			B. Description of process for defining the PEOs of the program (15)				
1.5	Establish consistency of PEOs with Mission of the Department	15	A. Preparation of a matrix of mapping PEOs and elements of Mission statement (5)				
			B. Consistency/justification of co-relation parameters of the above matrix (10)				
<b>Total of Criterion 1:</b>		<b>60</b>		<b>Overall Marks for Criterion 1:</b>			

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<b>Criterion 2: Program Curriculum and Teaching – Learning Processes (120)</b>							
SN	Sub Criteria	Max. Marks	Evaluation Guidelines (Marks)	Marks Awarded		Overall Marks	Observations of Evaluators (Provide Justifications/ Reasons)
				Marks	Total		
<b>2.1</b>	<b>Program Curriculum</b>	<b>20</b>					
2.1.1	State the process used to identify extent of compliance of the University curriculum for attaining the Program Outcomes (POs) & Program Specific Outcomes (PSOs), mention the identified curricular gaps, if any	10	A. Process used to identify extent of compliance of University curriculum for attaining POs & PSOs (6)				
			B. List the curricular gaps for the attainment of defined POs & PSOs (4)				
2.1.2	State the delivery details of the content beyond the syllabus for POs and PSOs	10	A. Steps taken to get identified gaps included in the curriculum.(letter to university/BOS) (2)				
			B. Delivery details of content beyond syllabus (5)				
			C. Mapping of content beyond syllabus with the POs & PSOs (3)				
<b>2.2</b>	<b>Teaching-Learning Processes</b>	<b>100</b>					
2.2.1	Describe the Process followed to improve quality of Teaching Learning	25	A. Adherence to Academic Calendar (3)				
			B. Use of various instructional methods and pedagogical initiatives (3)				
			C. Methodologies to support weak students and encourage bright students (4)				
			D. Quality of classroom teaching (Observation in a Class) (3)				
			E. Conduct of experiments (Observation in Lab) (3)				
			F. Continuous Assessment in the laboratory (3)				

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		G. Student feedback on teaching learning process and actions taken (6)				
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SN	Sub Criteria	Max. Marks	Evaluation Guidelines (Marks)	Marks Awarded		Overall Marks	Observations of Evaluators (Provide Justifications/ Reasons)
				Marks	Total		
2.2.2	Quality of internal semester question papers, assignments and evaluation	20	A. Process for internal semester question paper setting, evaluation and effective process implementation (5)				
			B. Process to ensure questions from outcomes/learning levels perspective (5)				
			C. Evidence of COs coverage in class test / mid-term tests (5)				
			D. Quality of Assignment and its relevance to COs (5)				
2.2.3	Quality of student projects	25	A. Identification of projects and allocation methodology to Faculty (3)				
			B. Types and relevance of the projects and their contribution towards attainment of POs and PSOs(5)				
			C. Process for monitoring and evaluation (5)				
			D. Process to assess individual and team performance (5)				
			E. Quality of completed projects/working prototypes (5)				
			F. Evidences of papers published /Awards received by projects etc. (2)				
2.2.4	Initiatives related to industry interaction.	15	A. Industry supported laboratories (5)				
			B. Industry involvement in the program design and partial delivery of any regular courses for students (5)				
			C. Impact analysis of industry institute interaction and actions taken thereof (5)				
2.2.5	Initiatives related to industry internship/ summer training	15	A. Industrial training/tours for students (3)				
			B. Industrial /internship /summer training of more than two weeks and post training Assessment (4)				

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			C. Impact analysis of industrial training (4)				
			D. Student feedback on initiative (4)				
<b>Total of Criterion 2:</b>		<b>120</b>	<b>Overall Marks for Criterion 2:</b>				
<b>Criterion 3: Course Outcomes and Program Outcomes (120)</b>							
SN	Sub Criteria	Max. Marks	Evaluation Guidelines (Marks)	Marks Awarded		Overall Marks	Observations of Evaluators (Provide Justifications/ Reasons)
				Marks	Total		
<b>3.1</b>	<b>Establish the correlation between the courses and the POs &amp; PSOs</b>	<b>20</b>					
3.1.1	Course Outcomes	5	Evidence of COs being defined for every course (5)				
3.1.2	CO-PO/PSOs matrices of courses selected in 3.1.1 (six matrices)	5	Explanation of table to be ascertained (5)				
3.1.3	Program level Course-PO/PSOs matrix of ALL courses including first year courses	10	Explanation of tables to be ascertained (10)				
<b>3.2</b>	<b>Attainment of Course Outcomes</b>	<b>50</b>					
3.2.1	Describe the assessment 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	40	Verification attainment levels as per the bench mark set for all courses (40)				
<b>3.3</b>	<b>Attainment of Program Outcomes and Program Specific Outcomes</b>	<b>50</b>					
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)				

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3.3.2	Provide results of evaluation of each PO & PSO	40	A. Verification of documents, results and level of attainment of each PO/PSO(24)							
			B. Overall levels of attainment (16)							
<b>Total of Criterion 3:</b>		<b>120</b>	<b>Overall Marks for Criterion 3:</b>							
<b>Criterion 4: Students' Performance (150)</b>										
SN	Sub Criteria	Max. Marks	Evaluation Guidelines (Marks)	Marks Awarded		Overall Marks	Observations of Evaluators (Provide Justifications/ Reasons)			
				Marks	Total					
4.1	<b>Enrolment Ratio</b>	20	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) 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) 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) D. $\geq 60\%$ students enrolled at the First Year Level on average basis during the previous three academic years starting from current academic year (14) E. $\geq 50\%$ students enrolled at the First Year Level on average basis during the previous three academic years starting from current academic year (12) F. Otherwise '0'					CAY	CAYm1	CAYm2
							Sanctioned intake			
							Students enrolled at first year level			
							Enrolment ratio			
							<b>Average enrolment ratio(ER)</b>			
Comments (if any): ❖										
4.2	<b>Success Rate in the stipulated period of the program</b>	40								
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	25	SI= (Number of students who graduated from the program without backlog)/(Number of students admitted in the first year of that batch and admitted in 2 <sup>nd</sup> year via lateral entry and separate division, if applicable)  Average SI = Mean of success index (SI) for					LYG	LYGm1	LYGm2
							Success Index (SI)			
							<b>Average</b>			

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			past three batches Success rate without backlogs in any year of study = $25 \times \text{Average SI}$					<b>Success Index (SI)</b>	
								Comments (if any): ❖	

SN	Sub Criteria	Max. Marks	Evaluation Guidelines (Marks)	Marks Awarded		Overall Marks	Observations of Evaluators (Provide Justifications/ Reasons)				
				Marks	Total			LYG	LYGm1	LYGm2	
4.2.2	Success rate in stipulated period (actual duration of the program) <b>(Total of with backlog +without backlog)</b>	15	SI= (Number of students who graduated from the program with backlog in the stipulated period of course duration)/(Number of students admitted in the first year of that batch and admitted in 2 <sup>nd</sup> year via lateral entry and separate division, if applicable)  Average SI = mean of success index (SI) for past three batches  Success rate = $15 \times \text{Average SI}$								
							Success Index (SI)				
							<b>Average Success Index (SI)</b>				
							Comments (if any): ❖				
4.3	<b>Academic Performance in Third Year</b>	15	Academic Performance = $1.5 * \text{Average API}$ (Academic Performance Index)  API = ((Mean of 3rd 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 (number of successful students / number of students appeared in the examination)  Successful students are those who are permitted to proceed to the final year.				<b>Average API</b> for past 3 years:  Comments (if any): ❖				

4.4	<b>Academic Performance in Second Year</b>	<b>15</b>	<p>Academic Performance Level = 1.5 * Average API (Academic Performance Index)</p> <p>API = ((Mean of 2<sup>nd</sup> 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/students appeared in the examination)</p>				<p><b>Average API</b> for past 3 years:</p> <p>Comments (if any):</p> <p>❖</p>
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SN	Sub Criteria	Max. Marks	Evaluation Guidelines (Marks)	Marks Awarded		Overall Marks	Observations of Evaluators (Provide Justifications/ Reasons)				
				Marks	Total			CAYm1	CAYm2	CAYm3	
4.5	<b>Placement, Higher studies and Entrepreneurship</b>	<b>40</b>	<p>Assessment Points = 40×average of three years of <math>[(x + y + z)/N]</math> where,</p> <p>x=Number of students placed in companies or Government sector through on/off campus recruitment</p> <p>y=Number of students admitted to higher studies with valid qualifying scores (GATE or equivalent State or National level tests, GRE, GMAT etc.)</p> <p>z=No.of students turned entrepreneur in engineering/technology.</p> <p>N=Total number of final year students</p>					CAYm1	CAYm2	CAYm3	<p><b>Average Placement Index for past 3 years</b></p> <p>Comments (if any):</p> <p>❖</p>
4.6	<b>Professional Activities</b>	<b>20</b>									
4.6.1	Professional societies/chapters and organizing engineering events	5	A. Availability & activities of professional societies/chapters (3)								

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			B. Number, quality of engineering events (organized at Institute level- Institute/ State/National/International) (2)				
4.6.2	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)				
4.6.3	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)				
<b>Total of Criterion 4:</b>		<b>150</b>	<b>Overall Marks for Criterion 4:</b>				

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

SN	Sub Criteria	Max. Marks	Evaluation Guidelines (Marks)	Marks Awarded		Overall Marks	Observations of Evaluators (Provide Justifications/Reasons)		
				Marks	Total			CAY	CAYm1
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 given as below ❖ ≤15 --20 marks ❖ ≤17 --18 marks ❖ ≤19 --16 marks ❖ ≤21 --14 marks ❖ ≤23 --12 marks ❖ ≤25 --10 marks ❖ >25 --0 mark						
							Total No.of students (2,3,4 years) in all UG programs in Department.		
							Total No.of students (1,2 years) in PG programs in Dept.		

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			<p><b>Note:</b> All the faculty whether regular or contractual (except part-time or hourly based), will be considered. The contractual faculty appointed with any terminology whatsoever, who have taught for 2 consecutive semesters with or without break between the 2 semesters in 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"> <li>1. Shall have the AICTE prescribed qualifications and experience.</li> <li>2. Shall be appointed on full time basis and worked for consecutive two semesters with or without break between the 2 semesters during the particular academic year under consideration.</li> <li>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.</li> </ol>				<table border="1"> <tr> <td>S=Number of Students in the Department = UG1 + UG2 +... +UGn + PG1 + ...PGn</td> <td></td> <td></td> <td></td> </tr> <tr> <td>F=Total no.of faculty members in the Department(excluding first year faculty)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>SFR</td> <td></td> <td></td> <td></td> </tr> <tr> <td><b>Average SFR for past 3 years</b></td> <td colspan="3"></td> </tr> </table> <p>*<b>Note:</b> No.of students = Sanctioned intake + actual admitted lateral entry students (<b>Refer criteria 5.1</b> in the SAR).</p> <p>Comments (if any): ❖</p>	S=Number of Students in the Department = UG1 + UG2 +... +UGn + PG1 + ...PGn				F=Total no.of faculty members in the Department(excluding first year faculty)				SFR				<b>Average SFR for past 3 years</b>			
S=Number of Students in the Department = UG1 + UG2 +... +UGn + PG1 + ...PGn																							
F=Total no.of faculty members in the Department(excluding first year faculty)																							
SFR																							
<b>Average SFR for past 3 years</b>																							
SN	Sub Criteria	Max. Marks	Evaluation Guidelines (Marks)	Marks Awarded		Overall Marks	Observations of Evaluators (Provide Justifications/Reasons)																
				Marks	Total																		

5.2	Faculty Cadre Proportion	25	Cadre Proportion Marks: $\left[ \frac{AF1}{RF1} + \frac{AF2 \times 0.6}{RF2} + \frac{AF3 \times 0.4}{RF3} \right] \times 12.5$ <ul style="list-style-type: none"> <li>• If AF1 = AF2 = 0, then zero mark</li> <li>• Maximum marks to be limited if it exceeds 25(Refer calculation in SAR)</li> </ul>					CAY	CAYm1	CAYm2
							No. of Professors			
							No. of Associate Professors			
							No. of Assistant Professors			
							Comments (if any): ❖			
5.3	Faculty Qualification	25	$FQ = 2.5 \times \left[ \frac{10X + 4Y}{F} \right]$ 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)					CAY	CAYm1	CAYm2
							No. of Ph.D:			
							No. of M.Tech:			
							Faculty Qualification (FQ)			
							<b>Average FQ for past 3 years</b>			
							Comments (if any): ❖			

SN	Sub Criteria	Max. Marks	Evaluation Guidelines (Marks)	Marks Awarded		Overall Marks	Observations of Evaluators (Provide Justifications/Reasons)
				Marks	Total		

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5.4	Faculty Retention	25	<p>A. <math>\geq 90\%</math> of required Faculties retained during the period of assessment keeping CAYm2 as base year (25)</p> <p>B. <math>\geq 75\%</math> of required Faculties retained during the period of assessment keeping CAYm2 as base year (20)</p> <p>C. <math>\geq 60\%</math> of required Faculties retained during the period of assessment keeping CAYm2 as base year (15)</p> <p>D. <math>\geq 50\%</math> of required Faculties retained during the period of assessment keeping CAYm2 as base year (10)</p> <p>E. Otherwise (0)</p>					CAY	CAYm1	
								No.of Faculty Retained		
								Total No.of Required Faculty in CAYm2		
								Percentage of faculty retained		
								<b>Average parentage of faculty retained for past 2 years</b>		
								Comments (if any): ❖		
5.5	Innovations by the Faculty in Teaching and Learning	20	<p>A. The work must be made available on Institute Website (4)</p> <p>B. The work must be available for peer review and critique (4)</p> <p>C. The work must be reproducible and developed further by other scholars (2)</p> <p>D. Statement of clear goals, use of appropriate methods, significance of results, effective presentation and reflective critique (10)</p>							
5.6	Faculty as participants in Faculty development /training activities / STTPs	15	<p>For each year: Assessment=<math>3 \times \text{Sum} / 0.5RF</math></p> <p>Average assessment over three years starting from CAYm1(Marks limited to 15)</p>					CAYm1	CAYm2	CAYm3
								Assessment points are:		
								<b>Average assessment points for past 3 years</b>		
								Comments (if any): ❖		

SN	Sub Criteria	Max. Marks	Evaluation Guidelines (Marks)	Marks Awarded		Overall Marks	Observations of Evaluators (Provide Justifications/Reasons)			
				Marks	Total					
<b>5.7</b>	<b>Research and Development</b>	<b>30</b>								
5.7.1	Academic Research	10	A. Number of quality publications in refereed/SCI Journals, citations, Books/Book Chapters etc. (6) B. Ph.D guided /Ph.D awarded during the assessment period while working in the Institute (4)							
5.7.2	Sponsored Research	5	Funded research from outside; Cumulative CAYm1, CAYm2, CAYm3: Amount >20 Lakhs- 5 Marks Amount >=16 Lakhs and <=20 Lakhs - 4 Marks Amount >= 12 Lakhs and < 16 Lakhs - 3 Marks Amount >= 8 Lakhs and < 12 Lakhs - 2 Marks Amount >= 4 Lakhs and < 8 Lakhs - 1 Mark Amount < 4 Lakhs- 0 Mark							
								<b>CAYm1</b>	<b>CAYm2</b>	<b>CAYm3</b>
							No.of projects			
							Amount (Rs.In Lakhs)			
							<b>Total amount for past 3 years(Rs.In Lakhs)</b>			
							Comments (if any): ❖			
5.7.3	Development Activities	10	A. Product development B. Research laboratories C. Instructional materials D. Working models/ charts/monograms etc.							
5.7.4	Consultancy (From Industry)	5	Consultancy; Cumulative CAYm1, CAYm2, CAYm3: Amount >10 Lakhs- 5 Marks Amount >=8 Lakhs and <=10 Lakhs -4 Marks Amount >=6 Lakhs and < 8 Lakhs -3 Marks Amount >=4 Lakhs and <6 Lakhs -2 Marks Amount >=2 Lakhs and <4 Lakhs -1 Mark Amount <2 Lakhs - 0 Mark							
								<b>CAYm1</b>	<b>CAYm2</b>	<b>CAYm3</b>
							No.of projects			
							Amount (Rs.In Lakhs)			
							<b>Total amount for past 3 years (Rs.In Lakhs)</b>			
							Comments (if any): ❖			

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SN	Sub Criteria	Max. Marks	Evaluation Guidelines (Marks)	Marks Awarded		Overall Marks	Observations of Evaluators (Provide Justifications/Reasons)					
				Marks	Total							
5.8	<b>Faculty Performance Appraisal and Development System (FPADS)</b>	<b>30</b>	A. A well-defined performance appraisal and development system instituted for all the assessment years (10)									
			B. Its implementation and effectiveness (20)									
5.9	<b>Visiting/Adjunct/Emeritus Faculty etc.</b>	<b>10</b>	Provision of Visiting /Adjunct/Emeritus faculty etc.(1)							<b>CAY/m1</b>	<b>CAYm1/m2</b>	<b>CAYm2/m3</b>
			Minimum 50 hours per year interaction per year to obtain three marks :3x3=9							No.of hours		
<b>Total of Criterion 5:</b>		<b>200</b>	<b>Overall Marks for Criterion 5:</b>				Comments (if any): ❖					

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<b>Criterion 6: Facilities and Technical Support (80)</b>							
<b>SN</b>	<b>Sub Criteria</b>	<b>Max. Marks</b>	<b>Evaluation Guidelines (Marks)</b>	<b>Marks Awarded</b>		<b>Overall Marks</b>	<b>Observations of Evaluators (Provide Justifications/Reasons)</b>
				<b>Marks</b>	<b>Total</b>		
<b>6.1</b>	<b>Adequate and well-equipped laboratories, and technical manpower</b>	<b>30</b>	A. Adequate well-equipped laboratories to run all the program-specific curriculum (20)				
			B. Availability of adequate technical supporting staff (5)				
			C. Availability of qualified technical supporting staff (5)				
<b>6.2</b>	<b>Additional Facilities created for improving the quality of learning experience in Laboratories</b>	<b>25</b>	A. Availability and relevance of additional facilities (10)				
			B. Facilities utilization and effectiveness (10)				
			C. Relevance of PO and PSO (5)				
<b>6.3</b>	<b>Laboratories: Maintenance and overall ambience</b>	<b>10</b>	Maintenance and overall ambience (10)				
<b>6.4</b>	<b>Project laboratory</b>	<b>5</b>	Facilities & Utilization (5)				
<b>6.5</b>	<b>Safety measures in laboratories</b>	<b>10</b>	Safety measures in laboratories (10)				

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<b>Total of Criterion 6:</b>		<b>80</b>	<b>Overall Marks for Criterion 6:</b>				
<b>Criterion 7: Continuous Improvement (50)</b>							
SN	Sub Criteria	Max. Marks	Evaluation Guidelines (Marks)	Marks Awarded		Overall Marks	Observations of Evaluators (Provide Justifications/Reasons)
				Marks	Total		
7.1	<b>Actions taken based on the results of evaluation of each of the POs and PSOs</b>	20	A. Documentation of POs and PSOs attainment levels (5)				
			B. Identification of gaps/short falls (5)				
			C. Plan of action to bridge the gap and its Implementation (10)				
7.2	<b>Academic Audit and actions taken during the period of Assessment</b>	10	Assessment shall be based on conduct and actions taken in relation to continuous improvement (10)				
7.3	<b>Improvement in Placement, Higher Studies and Entrepreneurship</b>	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)				
7.4	<b>Improvement in the quality of students admitted to the program</b>	10	Assessment is based on improvement in terms of ranks/score in qualifying state level/national level entrances tests, percentage Physics, Chemistry and Mathematics				

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			marks in 12th Standard and percentage marks of the lateral entry students				
<b>Total of Criterion 7:</b>		<b>50</b>	<b>Overall Marks for Criterion 7:</b>				