



Academic Performance Analysis

2023 – 24

EVEN SEMESTERS



INTERNAL QUALITY ASSURANCE CELL

M. L. V. TEXTILE & ENGINEERING COLLEGE, BHILWARA

Pur Road, Pratap Nagar, Bhilwara 311001 (INDIA)

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PREAMBLE: ACADEMIC PERFORMANCE

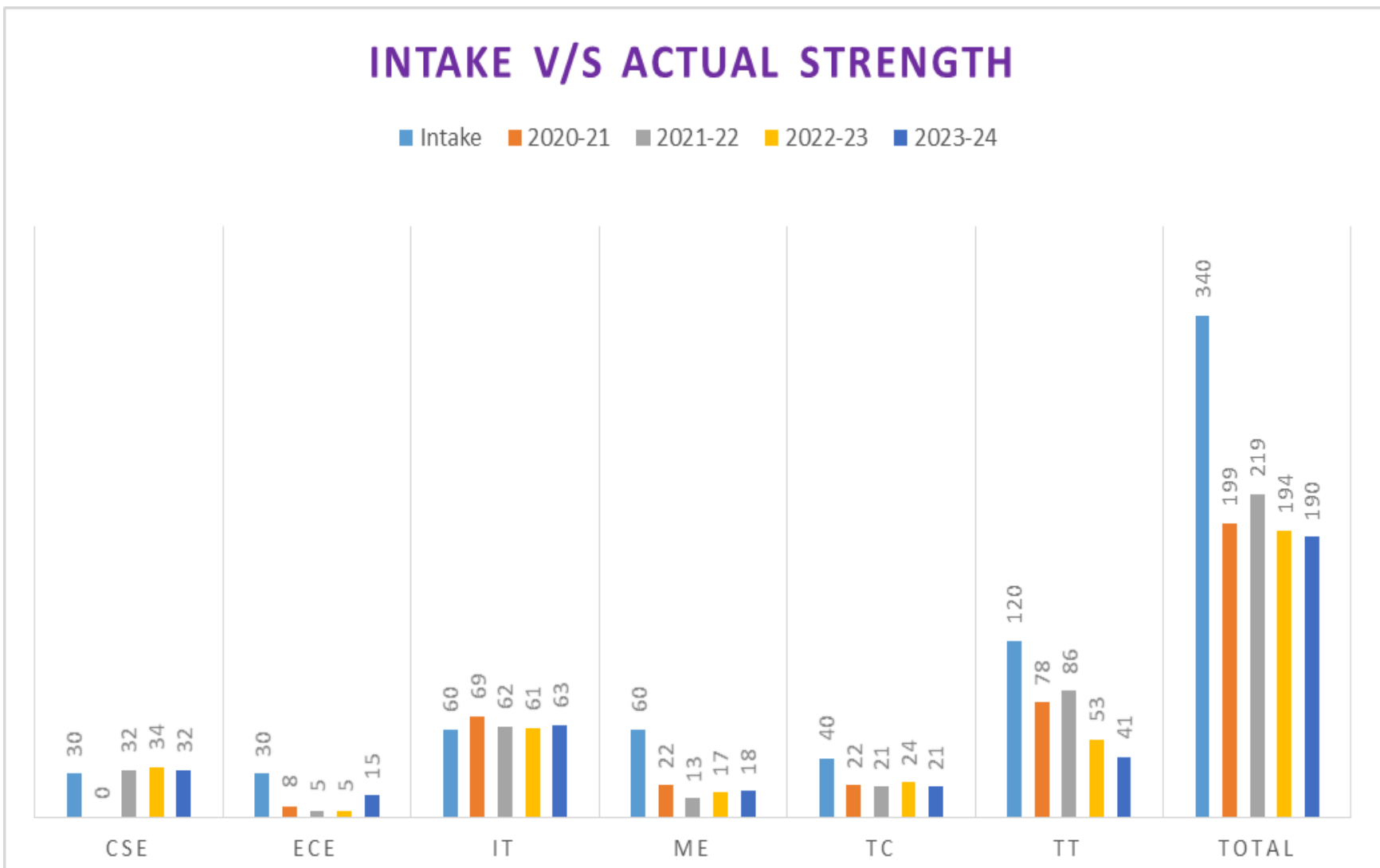
Academic achievement or **academic performance** refers to the extent to which a student, teacher, or institution has attained their short- or long-term educational goals. Milestones such as the completion of secondary school, diplomas, and bachelor's degrees represent significant markers of academic achievement.

There is a strong correlation between **classroom engagement** and **academic performance**. Improved student engagement in the classroom can lead to higher academic performance and increased graduation rates, particularly in engineering disciplines. Classroom engagement plays a crucial role in the overall learning process, as more engaged students tend to achieve better academic outcomes.

Understanding **student performance patterns** can help reduce backlogs by providing accurate guidance to students, encouraging sincere efforts, and supporting intervention strategies within the teaching-learning process. Such interventions are essential for enhancing student success in engineering.

Academic performance is often measured through result analysis conducted at the end of a semester when results are declared. This analysis provides valuable insights for both learners and teachers, especially when hard work does not yield the desired outcomes.

Adopting methods prescribed under the **Outcome-Based Education (OBE)** system can create equilibrium in the teaching-learning dynamic when approached in an efficient and transparent manner. Furthermore, it fosters best practices aligned with OBE through the **Choice-Based Credit System (CBCS)**, ultimately enhancing the overall effectiveness of education.



1. Students' Result Statistics

The students' statistics pertaining to undergraduate programs offered in M. L. V. Textile & Engineering College, Bhilwara (a constituent college of Rajasthan Technical University, Kota since November 1, 2021):

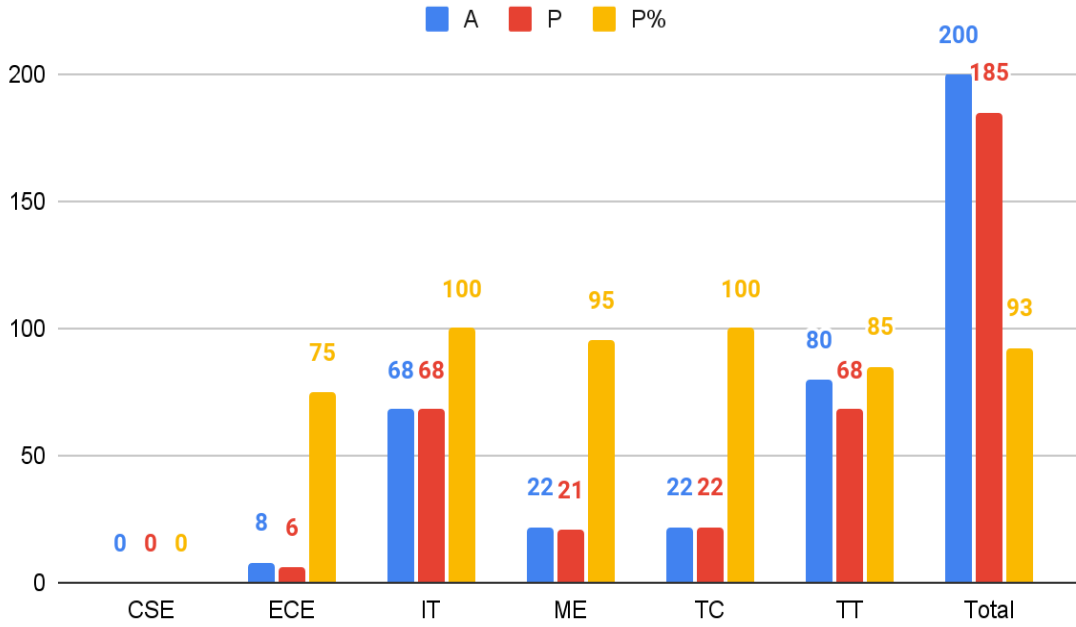
Table 1: Program wise details of students appeared versus students passed

S. No.	Branch	Intake	Appeared v/s Passed (2023-24)											
			8th Sem			6th Sem			4rd Sem			2nd Sem		
			A	P	P%	A	P	P%	A	P	P%	A	P	P%
1	CSE	30	--	--	--	31	29	94	32	25	78	78	22	73
2	ECE	30	8	6	75	4	3	75	5	3	60	15	7	47
3	IT	60	68	68	100	61	58	95	60	50	83	62	48	77
4	ME	60	22	21	95	13	12	92	17	11	65	17	7	41
5	TC	40	22	22	100	20	9	45	24	14	58	18	8	44
6	TT	120	80	68	85	86	71	83	52	46	88	40	21	53
Total		340.0	200	185	93	215	182	85	190	149	176	230	113	49

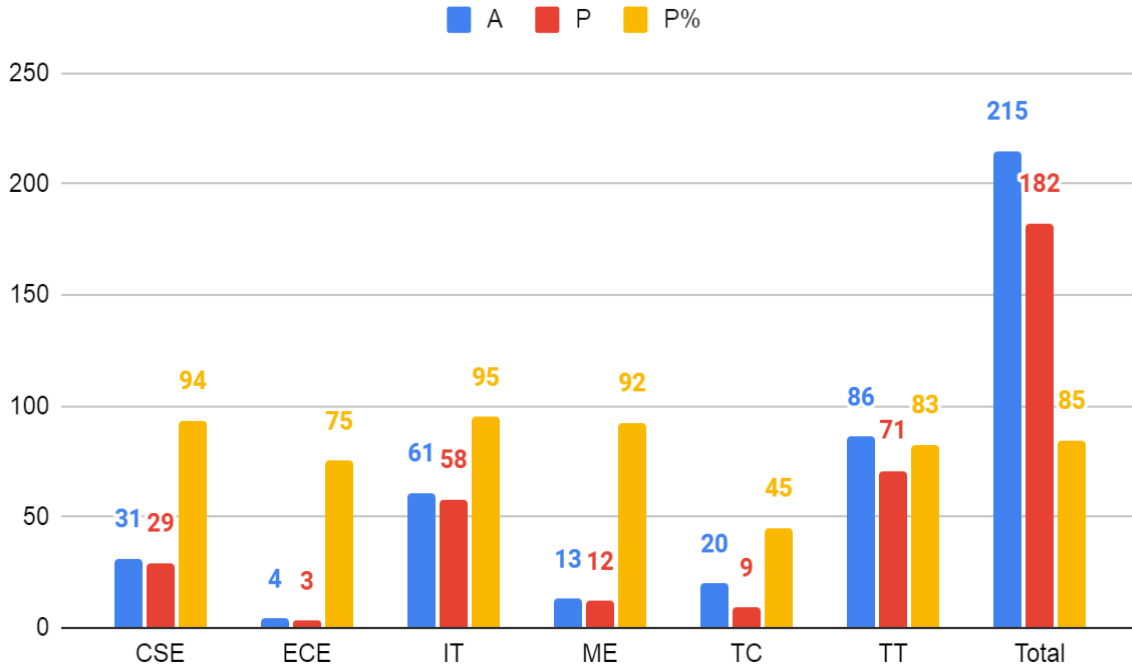
A – Appeared; Mx – Maximum SGPA; Mn – Minimum SGPA (Exclude '0')

The table "Appeared vs Passed (2023-24)" shows strong performance in the 8th Semester (93%) and 6th Semester (85%), with IT and TC achieving 100% in the 8th Semester. However, pass rates decline in lower semesters, with the 2nd Semester at 49%, particularly low for ME (41%) and TC (44%). Early semesters need attention to improve outcomes.

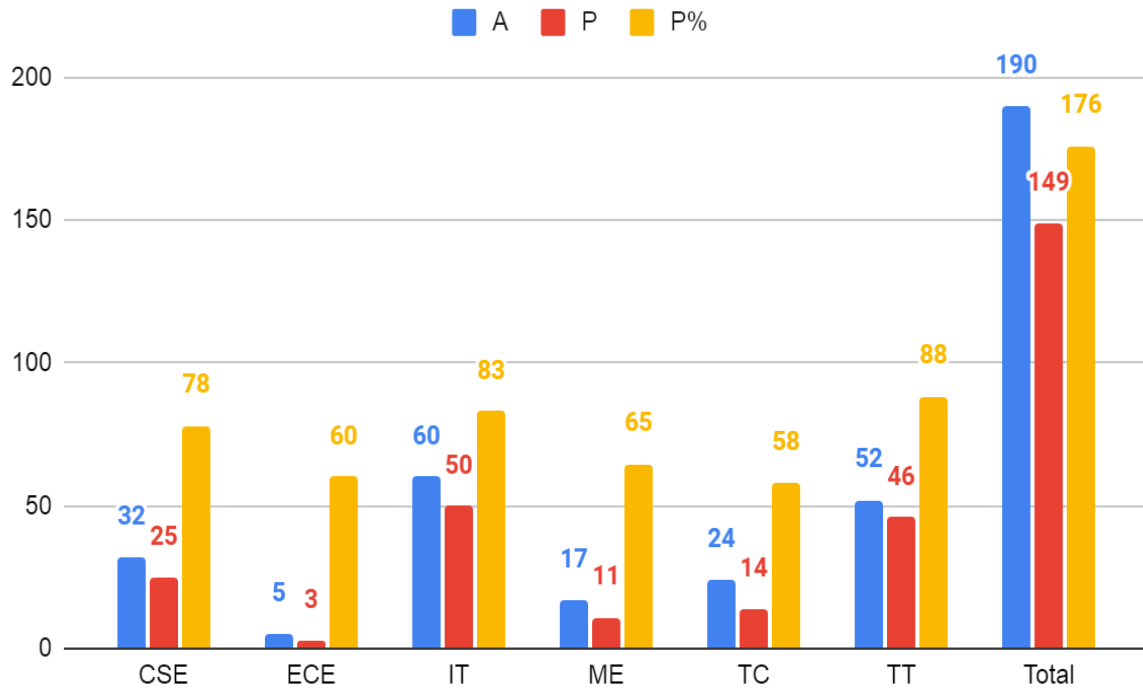
8th Semester



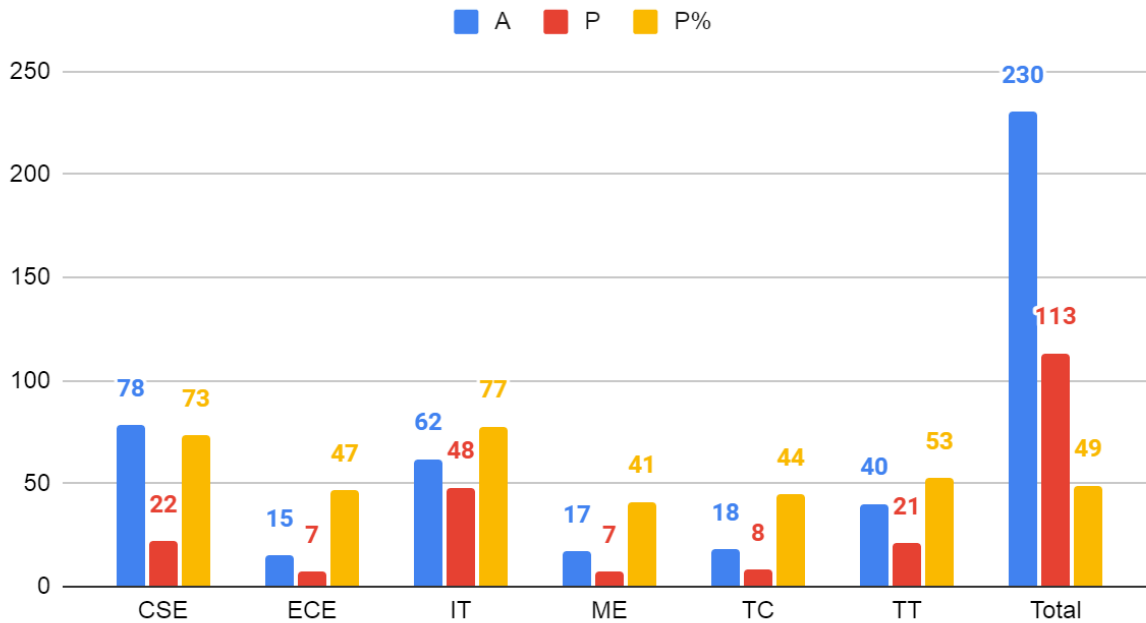
6th Semester



4th Semester



2nd Semester



2. PQI Calculation

Table 2a: Program wise details of maximum and minimum SGPA

S. No.	Branch	Intake	Maximum and Minimum* SGPA (2023-24)											
			8th Sem			6th Sem			4rd Sem			2nd Sem		
			A	Mx	Mn	A	Mx	Mn	A	Mx	Mn	A	Mx	Mn
1	CSE	30	--	--	--	31	9.57	6.88	32	9.15	6.55	30	9.8	5.97
2	ECE	30	8	9.65	7.42	4	8.94	7.23	5	7.68	7.19	15	9.57	6.6
3	IT	60	68	10	8.58	61	10	7.38	60	9.21	6.51	62	9.5	5.93
4	ME	60	22	9.71	6.77	13	9.68	7.61	17	8.41	6.15	17	7.88	6.12
5	TC	40	22	9.8	6.6	20	9.51	6.77	24	10	6.12	18	9.17	6.2
6	TT	120	80	9.77	7.15	86	10	6.04	52	10	6.68	40	9.32	6.44
Total		340	200	10	6.6	215	10	6.04	190	10	6.12	182	9.8	5.93

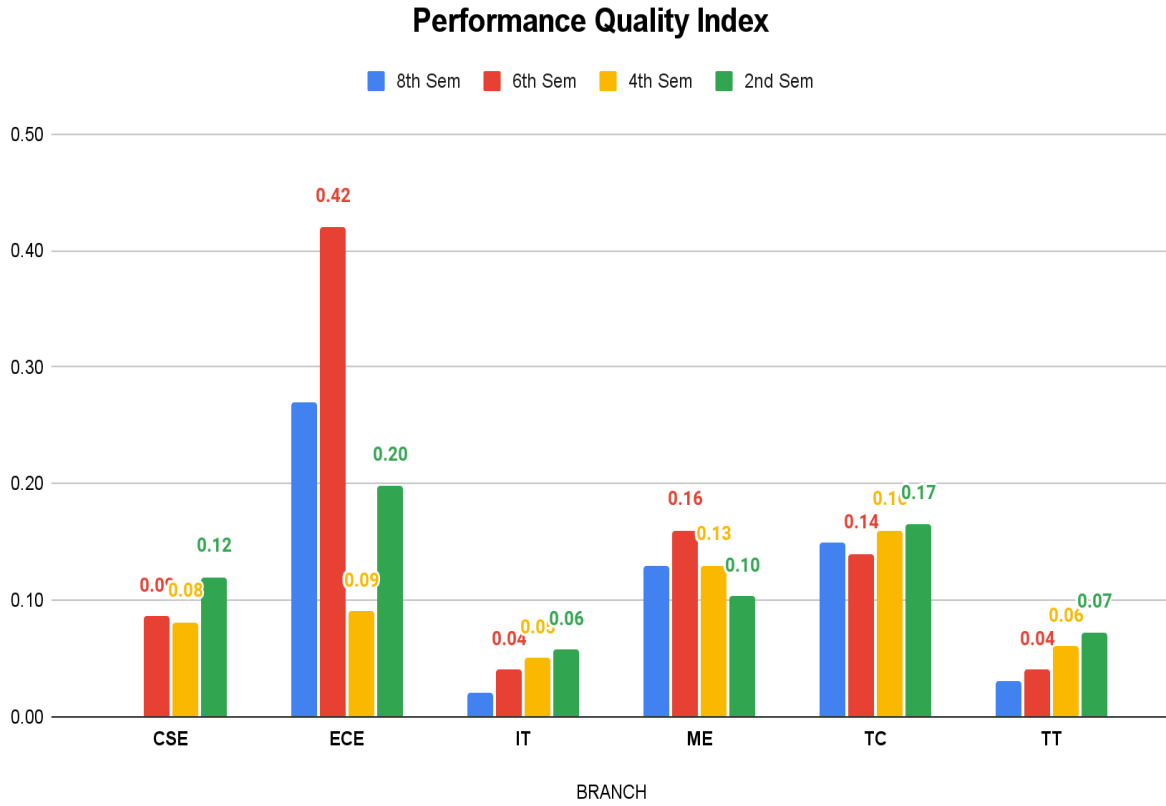
A – Appeared; Mx – Maximum SGPA; Mn – Minimum SGPA (*Exclude ‘0’)

Table 2b: Performance Quality Index

S. No.	Branch	Intake	Performance Quality Index (2023-24)											
			8th Sem			6th Sem			4th Sem			2nd Sem		
			A	R	QI	A	R	QI	A	R	QI	A	R	QI
1	CSE	30	--	--	--	31	2.69	0.09	32	2.60	0.08	30	3.83	0.12
2	ECE	30	8	2.23	0.27	4	1.71	0.42	5	0.49	0.09	15	2.97	0.20
3	IT	60	68	1.42	0.02	61	2.62	0.04	60	2.70	0.05	62	3.57	0.06
4	ME	60	22	2.94	0.13	13	2.07	0.16	17	2.26	0.13	17	1.76	0.10
5	TC	40	22	3.20	0.15	20	2.74	0.14	24	3.88	0.16	18	2.97	0.17
6	TT	120	80	2.62	0.03	86	3.96	0.04	52	3.32	0.06	40	2.88	0.07
Total		340	200	3.40	0.02	215	3.96	1.84	190	3.88	0.02	182	3.87	0.02

PQI with respect to the range of SGPA (Max. – Min.): A-Appeared; R-Range; QI-Quality Index

$$PQI = \frac{Max. SGPA - Min. SGPA}{\# Students}$$



3. Course wise average marks obtained by students

Table 3a: 8th Semester – Computer Science Engineering- IoT							
S. No.	Course Name	Average Marks in Class (R/o)					Pass %
		ETE		IA		Total	
		70.0	40.0	30.0	60.0	100.0	
NOT APPLICABLE							

Table 3b: 8th Semester – Electronics & Communication Engineering								
S. No.	Course Name	Average Marks in Class (R/o)					Pass %	
		ETE		IA		Total		
		70.0	40.0	30.0	60.0	100.0		
1	Energy management	38.0	--	24.0	--	62.0	100.0	
2	Digital Image Processing	42.0	--	27.0	--	69.0	100.0	
3	IoT Lab	--	34.0	--	53.0	87.0	100.0	
4	Skill Development Lab	--	33.0	--	52.0	85.0	100.0	
5	Project	--	35.0	--	52.0	87.0	100.0	
6	Social Outreach, Discipline and Extra-curricular Activities (SODECA)						93.0	100.0

Table 3c: 8th Semester – Information Technology								
S. No.	Course Name	Average Marks in Class (R/o)					Pass %	
		ETE		IA		Total		
		70.0	40.0	30.0	60.0	100.0		
1	Internet of Things (IOT)	50.0	--	25.0	--	75.0	100.0	
2	Energy Management	40.0	--	26.0	--	66.0	100.0	
3	Internet of Things Lab (IOT LAB)	--	35.0	--	55.0	90.0	100.0	
4	Software Testing and Validation Lab	--	34.0	--	52.0	86.0	100.0	
5	Project					96.0	100.0	
6	Social Outreach, Discipline and Extra-curricular Activities (SODECA)						96.0	100.0

Table 3d: 8th Semester – Mechanical Engineering							
S. No.	Course Name	Average Marks in Class (R/o)					Pass %
		ETE		IA		Total	
		70.0	40.0	30.0	60.0	100.0	
1	Supply and Operations Management	36.5	--	21.4	--	57.9	100.0
2	Disaster Management	35.5	--	22.5	--	58.0	95.5
3	Industrial Engineering Lab	--	22.7	--	45.1	67.8	100.0
4	Metrology Lab	--	26.8	--	45.5	72.3	100.0
5	Project	--	34.7	--	47.4	82.1	100.0
6	Social Outreach, Discipline and Extra-curricular Activities (SODECA)					76.1	100.0

Table 3e: 8th Semester – Textile Chemistry							
S. No.	Course Name	Average Marks in Class (R/o)					Pass %
		ETE		IA		Total	
		70.0	40.0	30.0	60.0	100.0	
1	Advancement in Textile Chemical Processing	35.1	--	21.5	--	56.6	100.0
2	Chemical Processing of Synthetics and Blends	45.2	--	13.8	--	59.0	100.0
3	Computer Color Matching Lab	--	24.5	--	41.0	65.5	100.0
4	Dyeing of Synthetics and Blends Lab	--	28.9	--	38.2	67.1	100.0
5	Project	--	28.9	--	43.3	72.2	100.0
6	Social Outreach, Discipline and Extra-curricular Activities (SODECA)					73.0	100.0

8th Semester – Textile Technology							
S. No.	Course Name	Average Marks in Class (R/o)					Pass %
		ETE		IA		Total	
		70.0	40.0	30.0	60.0	100.0	
1	Energy Management	30.0	--	19.0	--	49.0	86.0
2	Modern Methods of Yarn Production	44.0	--	15.0	--	59.0	96.0
3	Spinning Practical–VI	--	26.0	--	47.0	73.0	98.0
4	Weaving Practical-VI	--	27.0	--	40.0	67.0	96.0
5	Project	--	29.0	--	49.0	78.0	98.0
6	Social Outreach, Discipline and Extra-curricular Activities (SODECA)					73.0	100.0

Table 3g: 6th Semester – Computer Science Engineering- IoT							
S. No.	Course Name	Average Marks in Class (R/o)					Pass %
		ETE		IA		Total	
		70.0	40.0	30.0	60.0	100.0	
1	Digital Image Processing	40.0	--	25.0	--	65.0	96.8
2	Machine Learning	39.0	--	24.0	--	63.0	93.5
3	Information Security System	43.0	--	25.0	--	68.0	100.0
4	Computer Architecture & Organization	45.0	--	24.0	--	69.0	93.5
5	Artificial Intelligence	45.0	--	23.0	--	68.0	100.0
6	Cloud Computing	40.0	--	25.0	--	65.0	100.0
7	Privacy & Security in IOT	43.0		24.0	--	67.0	100.0
8	Digital Image Processing Lab	--	34.0	--	54.0	88.0	96.8
9	Machine Learning Lab	--	33.0	--	52.0	85.0	100.0
10	Python Lab For IOT	--	34.0	--	54.0	88.0	100.0
11	Mobile Application Development Lab	--	35.0	--	54.0	89.0	100.0
12	Social Outreach, Discipline and Extra-curricular Activities (SODECA)					92.0	100.0

Table 3h: 6th Semester – Electronics & Communication Engineering							
S. No.	Course Name	Average Marks in Class (R/o)					Pass %
		ETE		IA		Total	
		70.0	40.0	30.0	60.0	100.0	
1	Power Electronics	12.0	--	26.0	--	38.0	75.0
2	Computer Network	39.0	--	25.0	--	64.0	100.0
3	Fiber Optical Communication	33.0	--	24.0	--	57.0	100.0
4	Antenna & Wave Propagation	21.0	--	24.0	--	45.0	100.0
5	5G communication	46.0	--	27.0	--	73.0	100.0
6	Nano Electronics	30.0	--	27.0	--	57.0	75.0
7	Computer Network Lab	--	33.0	--	52.0	85.0	100.0
8	Antenna & Wave Propagation	--	33.0	--	52.0	85.0	100.0
9	Electronics design Lab	--	32.0	--	50.0	82.0	100.0
10	Power Electronics Lab	--	34.0	--	51.0	85.0	100.0
11	Social Outreach, Discipline and Extra-curricular Activities (SODECA)					92.0	100.0

Table 3i: 6th Semester – Information Technology							
S. No.	Course Name	Average Marks in Class (R/o)					Pass %
		ETE		IA		Total	
		70.0	40.0	30.0	60.0	100.0	
1	Digital Image Processing	34.0	--	25.0	--	59.0	100.0
2	Machine Learning	50.0	--	24.0	--	74.0	100.0
3	Information Security System	41.0	--	26.0	--	67.0	100.0
4	Computer Architecture and Organization	45.0	--	25.0	--	70.0	95.0
5	Artificial Intelligence	45.0	--	26.0	--	71.0	100.0
6	Distributed System	44.0	--	24.0	--	68.0	100.0
7	5G Communication	53.0		26.0		79.0	100.0
8	Digital Image Processing Lab	--	34.0	--	54.0	88.0	100.0
9	Machine Learning Lab	--	35.0	--	55.0	90.0	100.0
10	Python Lab	--	33.0	--	55.0	88.0	100.0
11	Mobile Application Development Lab	--	34.0	--	54.0	88.0	100.0
12	5G Communication Lab	--	31.0	--	52.0	83.0	100.0
13	Social Outreach, Discipline and Extra-curricular Activities (SODECA)					96.0	100.0

Table 3j: 6th Semester – Mechanical Engineering							
S. No.	Course Name	Average Marks in Class (R/o)					Pass %
		ETE		IA		Total	
		70.0	40.0	30.0	60.0	100.0	
1	Measurement and Metrology	56.1	--	22.7	--	78.8	100.0
2	Computer Integrated Manufacturing Systems	44.2	--	22.2	--	66.4	92.3
3	Mechanical Vibrations	35.7	--	21.7	--	57.4	92.3
4	Design of Machine Elements-II	49.2	--	22.4	--	71.6	92.3
5	Quality Management	33.7	--	22.2	--	55.9	92.3
6	Non-Conventional Machining Methods	41.5	--	20.7	--	62.2	92.3
7	Computer Integrated Manfg. Systems Lab	--	30.0	--	46.8	76.8	92.3
8	Vibration Lab	--	30.3	--	49.5	79.8	92.3
9	Machine Design Practice-II	--	30.5	--	43.9	74.4	92.3
10	Thermal Engineering Lab-I	--	28.4	--	44.5	72.9	92.3
11	Social Outreach, Discipline and Extra-curricular Activities (SODECA)					80.4	100.0

Table 3k: 6th Semester – Textile Chemistry							
S. No.	Course Name	Average Marks in Class (R/o)					Pass %
		ETE		IA		Total	
		70.0	40.0	30.0	60.0	100.0	
1	Technology of Dyeing	23.2	--	15.3	--	38.5	60.0
2	Chemistry of Surfactants	26.9	--	12.9	--	39.8	75.0
3	Technology of Textile Printing	26.4	--	9.5	--	35.8	55.0
4	Textile Testing – II	36.6	--	19.1	--	55.7	95.0
5	Man Made Fiber Production	34.2	--	17.1	--	51.3	90.0
6	Engineering of Textile Structures	38.5	--	20.7	--	59.2	95.0
7	Textile Printing Lab – I	--	24.1	--	36.4	60.5	100.0
8	Fabric Dyeing Lab	--	25.7	--	34.2	59.8	100.0
9	Textile Testing Practical – II	--	24.1	--	22.2	46.3	85.0
10	Social Outreach, Discipline and Extra-curricular Activities (SODECA)					77.0	100.0

Table 3l: 6th Semester – Textile Technology							
S. No.	Course Name	Average Marks in Class (R/o)					Pass %
		ETE		IA		Total	
		70	40	30	60	100	
1	Mechanics of Textile Machines	45.0	--	20.0	--	65.0	97.0
2	Yarn Manufacturing-IV	39.0	--	19.0	--	58.0	92.0
3	Fabric Manufacturing-IV	56.0	--	18.0	--	74.0	97.0
4	Textile Testing-II	41.0	--	22.0	--	63.0	94.0
5	Man Made Fiber Production	36.0	--	18.0	--	54.0	91.0
6	Engineering of Textile Structures	44.0	--	21.0	--	65.0	94.0
7	Spinning Practical-IV	--	27.0	--	44.0	71.0	98.0
8	Weaving Practical-IV	--	23.0	--	40.0	63.0	98.0
9	Textile Testing Practical-II	--	22.0	--	35.0	57.0	85.0
10	Social Outreach, Discipline and Extra-curricular Activities (SODECA)					77.0	100.0

Table 3m: 4th Semester – Computer Science Engineering- IoT							
S. No.	Course Name	Average Marks in Class (R/o)					Pass %
		ETE		IA		Total	
		70.0	40.0	30.0	60.0	100.0	
1	Managerial Economics & Fin. Accounting	38.0	--	25.0	--	63.0	100.0
2	Discrete Mathematics Structure	33.0	--	23.0	--	56.0	90.6
3	Microprocessor & Interfaces	24.0	--	22.0	--	46.0	81.3
4	Database Management System	40.0	--	24.0	--	64.0	100.0
5	Theory of Computation	40.0	--	24.0	--	64.0	100.0
6	Data Communication & Computer Network	39.0	--	25.0	--	64.0	100.0
7	Microprocessor & Interfaces Lab	--	35.0	--	55.0	90.0	100.0
8	Database Management System Lab	--	33.0	--	53.0	86.0	100.0
9	Network Programming Lab	--	33.0	--	53.0	86.0	100.0
10	Linux Shell Programming Lab	--	34.0	--	54.0	88.0	100.0
11	Java Lab	--	34.0	--	54.0	88.0	100.0
12	Social Outreach, Discipline and Extra-curricular Activities (SODECA)					91.0	100.0

Table 3n: 4th Semester – Electronics & Communication Engineering							
S. No.	Course Name	Average Marks in Class (R/o)					Pass %
		ETE		IA		Total	
		70.0	40.0	30.0	60.0	100.0	
1	Managerial Economics & Fin. Accounting	31.0	--	28.0	--	59.0	100.0
2	Advance Engineering Mathematics II	25.0	--	24.0	--	49.0	80.0
3	Electronics Measurement & Instrumentation	25.0	--	27.0	--	52.0	100.0
4	Analog Circuits	32.0	--	24.0	--	56.0	100.0
5	Microcontrollers	29.0	--	26.0	--	55.0	100.0
6	Analog & Digital communication	27.0	--	24.0	--	51.0	80.0
7	Analog & Digital communication Lab	--	27.0	--	53.0	80.0	100.0
8	Analog Circuit Lab	--	36.0	--	56.0	92.0	100.0
9	Microcontrollers Lab	--	33.0	--	52.0	85.0	100.0
10	Electronics Measurement & Inst. Lab	--	39.0	--	50.0	89.0	100.0
11	Social Outreach, Discipline and Extra-curricular Activities (SODECA)					93.0	100.0

Table 3o: 4th Semester – Information Technology							
S. No.	Course Name	Average Marks in Class (R/o)					Pass %
		ETE		IA		Total	
		70.0	40.0	30.0	60.0	100.0	
1	Managerial Economics & Fin. Accounting	38.0	--	24.0	--	62.0	100.0
2	Discrete Mathematics Structure	29.0	--	28.0	--	57.0	87.0
3	Principle of Communication	35.0	--	25.0	--	60.0	98.0
4	Database Management System	34.0	--	24.0	--	58.0	97.0
5	Theory of Computation	31.0	--	27.0	--	58.0	92.0
6	Data Communication and Computer Network	35.0		26.0		61.0	97.0
7	Network Programming Lab	--	33.0	--	52.0	85.0	100.0
8	Database Management System Lab	--	33.0	--	52.0	85.0	100.0
9	Linux Shell Programming Lab	--	33.0	--	52.0	85.0	100.0
10	JAVA Lab		33.0		54.0	87.0	100.0
11	Web Technology Lab	--	35.0	--	54.0	89.0	100.0
12	Social Outreach, Discipline and Extra-curricular Activities (SODECA)					95.0	100.0

Table 3p: 4th Semester – Mechanical Engineering							
S. No.	Course Name	Average Marks in Class (R/o)					Pass %
		ETE		IA		Total	
		70.0	40.0	30.0	60.0	100.0	
1	Technical Communication	50.0	--	20.4	--	70.4	100.0
2	Data Analytics	37.8	--	24.5	--	62.3	100.0
3	Digital Electronics	17.8	--	26.0	--	43.8	100.0
4	Fluid Mechanics & Fluid Machines	27.1	--	25.4	--	52.5	88.2
5	Manufacturing Processes	33.9	--	23.4	--	57.3	88.2
6	Theory of Machines	25.4	--	22.1	--	47.5	76.5
7	Digital Electronics Lab	--	32.1	--	50.6	82.7	100.0
8	Fluid Mechanics Lab	--	22.8	--	34.5	57.3	100.0
9	Production Practice Lab	--	32.2	--	50.6	82.8	100.0
10	Theory of Machines Lab	--	24.9	--	47.6	72.5	100.0
11	Social Outreach, Discipline and Extra-curricular Activities (SODECA)					85.5	100.0

Table 3q: 4th Semester – Textile Chemistry							
S. No.	Course Name	Average Marks in Class (R/o)					Pass %
		ETE		IA		Total	
		70.0	40.0	30.0	60.0	100.0	
1	Theory of dyeing	33.7	--	17.4	--	51.1	79.2
2	Technical Communication	52.5	--	21.3	--	73.8	91.7
3	Chemistry of Dyes	32.5	--	13.9	--	46.4	58.3
4	Electronics & Microprocessor in Textile M/c	40.3	--	24.3	--	64.6	100.0
5	Principles of Textile Manufacturing – II	44.6	--	21.5	--	66.1	91.7
6	Polymer & Extrusion	41.0	--	21.0	--	62.0	87.5
7	Textile Chemical Analysis -I	34.5		18.3		52.8	79.2
8	Textile Chemical Analysis -I Lab	--	31.5	--	43.3	74.8	100.0
9	Principles of Textile Manufacturing–II Lab	--	26.2	--	39.0	65.2	95.8
10	Analytical Chemistry Lab	--	27.5	--	40.8	68.3	100.0
11	Social Outreach, Discipline and Extra-curricular Activities (SODECA)					74.0	100.0

Table 3r: 4th Semester – Textile Technology							
S. No.	Course Name	Average Marks in Class (R/o)					Pass %
		ETE		IA		Total	
		70.0	40.0	30.0	60.0	100.0	
1	Technical Communication	53.0	--	21.0	--	74.0	100.0
2	Fiber Science	47.0	--	25.0	--	72.0	100.0
3	Electronics & Microprocessor In Textile M/c	42.0	--	24.0	--	66.0	100.0
4	Yarn Manufacturing-II	41.0	--	19.0	--	60.0	96.0
5	Fabric Manufacturing-II	58.0	--	23.0	--	81.0	100.0
6	Fabric Structure	43.0	--	21.0	--	64.0	96.0
7	Textile Chemical Processing-II	38.0	--	22.0	--	60.0	96.0
8	Spinning Practical-II	--	24.0	--	47.0	71.0	100.0
9	Weaving Practical-II	--	27.0	--	44.0	71.0	100.0
10	Fabric Structure Lab	--	29.0	--	46.0	75.0	100.0
11	Textile Chemical Processing -II Lab	--	27.0	--	41.0	68.0	100.0
12	Social Outreach, Discipline and Extra-curricular Activities (SODECA)					74.0	100.0

Table 3s: 2nd Semester – Computer Science & Engineering- IoT							
S. No.	Course Name	Average Marks in Class (R/o)					Pass %
		ETE		IA		Total	
		70.0	40.0	30.0	60.0	100.0	
1	Communication Skill	41.0	--	24.0	--	65.0	100.0
2	Engineering Mathematics II	33.0	--	23.0	--	56.0	76.7
3	Engineering Chemistry	42.0	--	21.0	--	63.0	93.3
4	Basic Mechanical Engineering	39.0	--	24.0	--	63.0	100.0
5	Basic Civil Engineering	34.0	--	22.0	--	56.0	100.0
6	Language Lab	--	30.0	--	53.0	83.0	100.0
7	Engineering Chemistry Lab	--	30.0	--	49.0	79.0	100.0
8	Manufacturing Practices Workshop	--	32.0	--	51.0	83.0	100.0
9	Basic Civil Engineering Lab	--	26.0	--	50.0	76.0	100.0
10	Computer Aided Machine Drawing	--	26.0	--	42.0	68.0	100.0
11	Sports – II					75.0	100.0

Table 3t: 2nd Semester – Electronics & Communication Engineering							
S. No.	Course Name	Average Marks in Class (R/o)					Pass %
		ETE		IA		Total	
		70.0	40.0	30.0	60.0	100.0	
1	Human Values	52.0	--	15.0	--	67.0	100.0
2	Engineering Mathematics II	21.0	--	21.0	--	42.0	86.7
3	Engineering Physics	29.0	--	20.0	--	49.0	66.7
4	Programming For Problem Solving	21.0	--	23.0	--	44.0	80.0
5	Basic Electrical Engineering	22.0	--	22.0	--	44.0	93.3
6	Human Value Activities and Sports	--	26.0	--	30.0	56.0	80.0
7	Engineering Physics Lab	--	30.0	--	52.0	82.0	59.7
8	Computer Programming Lab	--	32.0	--	52.0	84.0	93.3
9	Basic Electrical Engineering Lab	--	28.0	--	50.0	78.0	93.3
10	Computer Aided Engineering Graphics	--	19.0	--	42.0	61.0	86.7
11	Sports – II					74.0	100.0

Table 3u: 2nd Semester – Information Technology								
S. No.	Course Name	Average Marks in Class (R/o)					Pass %	
		ETE		IA		Total		
		70.0	40.0	30.0	60.0	100.0		
1	Communication Skill	39.0	--	22.0	--	61.0	100.0	
2	Engineering Mathematics II	32.0	--	21.0	--	53.0	100.0	
3	Engineering Chemistry	39.0	--	20.0	--	59.0	85.5	
4	Basic Mechanical Engineering	44.0	--	20.0	--	64.0	88.7	
5	Basic Civil Engineering	35.0	--	19.0	--	54.0	100.0	
6	Language Lab	--	31.0	--	53.0	84.0	96.8	
7	Engineering Chemistry Lab	--	29.0	--	51.0	80.0	98.4	
8	Manufacturing Practices Workshop	--	30.0	--	49.0	79.0	100.0	
9	Basic Civil Engineering Lab	--	23.0	--	46.0	69.0	100.0	
10	Computer Aided Machine Drawing	--	19.0	--	38.0	57.0	100.0	
11	Sports – II						75.0	100.0

Table 3v: 2nd Semester – Mechanical Engineering								
S. No.	Course Name	Average Marks in Class (Rounded Off)					Pass %	
		ETE		IA		Total		
		70.0	40.0	30.0	60.0	100.0		
1	Human Values	43.0	--	16.0	--	59.0	100.0	
2	Engineering Mathematics II	22.0	--	20.0	--	42.0	100.0	
3	Engineering Physics	20.0	--	20.0	--	40.0	70.6	
4	Programming For Problem Solving	27.0	--	24.0	--	51.0	58.8	
5	Basic Electrical Engineering	14.0	--	24.0	--	38.0	100.0	
6	Human Value Activities and Sports	--	25.0	--	42.0	67.0	94.1	
7	Engineering Physics Lab	--	31.0	--	52.0	83.0	82.4	
8	Computer Programming Lab	--	34.0	--	52.0	86.0	100.0	
9	Basic Electrical Engineering Lab	--	31.0	--	48.0	79.0	100.0	
10	Computer Aided Engineering Graphics	--	20.0	--	43.0	63.0	100.0	
11	Sports – II						71.0	100.0

Table 3w: 2nd Semester – Textile Chemistry								
S. No.	Course Name	Average Marks in Class (R/o)					Pass %	
		ETE		IA		Total		
		70.0	40.0	30.0	60.0	100.0		
1	Human Values	50.0	--	18.0	--	68.0	100.0	
2	Engineering Mathematics II	22.0	--	21.0	--	43.0	100.0	
3	Engineering Physics	19.0	--	22.0	--	41.0	66.7	
4	Programming for Problem Solving	28.0	--	24.0	--	52.0	61.1	
5	Basic Electrical Engineering	23.0	--	24.0	--	47.0	100.0	
6	Human Value Activities and Sports	--	28.0	--	42.0	70.0	94.4	
7	Engineering Physics Lab	--	31.0	--	53.0	84.0	94.4	
8	Computer Programming Lab	--	33.0	--	51.0	84.0	100.0	
9	Basic Electrical Engineering Lab	--	27.0	--	48.0	75.0	100.0	
10	Computer Aided Engineering Graphics	--	21.0	--	44.0	65.0	100.0	
11	Sports – II						79.0	100.0

Table 3x: 2nd Semester – Textile Technology								
S. No.	Course Name	Average Marks in Class (R/o)					Pass %	
		ETE		IA		Total		
		70.0	40.0	30.0	60.0	100.0		
1	Human Values	45.0	--	16.0	--	61.0	95.0	
2	Engineering Mathematics II	22.0	--	22.0	--	44.0	92.5	
3	Engineering Physics	20.0	--	22.0	--	42.0	62.5	
4	Programming for Problem Solving	17.0	--	25.0	--	42.0	62.5	
5	Basic Electrical Engineering	17.0	--	24.0	--	41.0	100.0	
6	Human Value Activities and Sports	--	25.0	--	35.0	60.0	77.5	
7	Engineering Physics Lab	--	30.0	--	52.0	82.0	77.5	
8	Computer Programming Lab	--	33.0	--	53.0	86.0	100.0	
9	Basic Electrical Engineering Lab	--	26.0	--	48.0	74.0	97.5	
10	Computer Aided Engineering Graphics	--	23.0	--	52.0	75.0	95.0	
11	Sports – II						75.0	100.0

4. Branch Wise lists of top three scorers in even semesters

Table 4a: Computer Science and Engineering- IoT

Br	Sem	Place	Roll No.	Name	M/F	SGPA
CSE	8th	NOT APPLICABLE				
	6th	I	21EMBCY005	ANURAG RAI	M	8.94
		II	21EMBCY018	KRATIKA SOLANKI	F	7.83
		III	21EMBCY020	LIBANSHI JAIN	F	7.23
	4th	I	22EMBCY029	UDITA NOLKHA	F	9.15
		II	22EMBCY011	DEVIKA CHHIPA	F	8.96
		III	22EMBCY030	VAIBHAV PATHAK	M	8.94
	2nd	I	23EMBCY030	TEENA KUMAWAT	F	9.8
		II	23EMBCY009	DEEPAK PATIDAR	M	9.29
III		23EMBCY005	ANJALI PANGDIYA	F	9.26	

Table 4b: Electronics & Communication Engineering

Br	Sem	Place	Roll No.	Name	M/F	SGPA
ECE	8th	I	20EMBEC004	SHAMLI VERMA	F	9.65
		II	20EMBEC001	CHARVI SHRIVASTAVA	F	9.32
		III	20EMBEC002	MURLI DHAR PALOD	M	9.15
	6th	I	21EMBEC003	HARSH SANJAY JAIN	M	8.94
		II	21EMBEC006	SOUMENDRA SINGH CHUNDAWAT	M	7.83
		III	21EMBEC004	KESHAV BHARTI	M	7.23
	4th	I	22EMBEC003	SIYA VERMA	F	7.68
		II	22EMBEC004	YASHVARDHAN	M	7.45
		III	22EMBEC002	ROHIT KUMAWAT	M	7.19
	2nd	I	23EMBEC006	DEEPESH SHARMA	M	9.57
		II	23EMBEC012	SAKSHI CHOUHAN	F	7.83
		III	23EMBEC013	SHIVANSH VYAS	M	8.05

Table 4c: Information Technology

Br	Sem	Place	Roll No.	Name	M/F	SGPA
IT	8th	I	20EMBIT001	ABHILASHA SINHA	F	10
			20EMBIT023	JYOTI PANCHARIYA	F	10
			20EMBIT035	PRERNA CHHIPA	F	10
			20EMBIT040	RAGHVENDRA SINGH RATHORE	F	10
			20EMBIT042	RIMSHA	F	10
			20EMBIT057	SUHANI BHADADA	F	10
		II	20EMBIT006	AKSHITA SAXENA	F	9.81
			20EMBIT053	SHRISTI LODHA	F	9.81
			20EMBIT060	SURAJ JAT	M	9.81
	III	20EMBIT025	LAKSHITA SHRIMALI	F	9.71	
		20EMBIT038	PRIYANKA NIHALCHANDANI	F	9.71	
		20EMBIT070	YASH GUPTA	M	9.71	
	6th	I	21EMBIT025	GUNGUN JAIN	F	10
			21EMBIT024	GANESH RANA	M	9.83
			21EMBIT300	AKSHIT BHATNAGAR	M	9.79
4th	I	22EMBIT027	KRITI SOMANI	F	9.21	
		22EMBIT043	PRIYANKA PRAJAPAT	F	9.17	
		22EMBIT024	KHUSHI RAJPUT	F	9.11	
2nd	I	23EMBIT045	RAMA KANWAR	F	9.5	
		23EMBIT007	ANTIMA TIWARI	F	9.45	
		23EMBIT015	DIKSHANT KACHHWAHA	M	9.3	

Table 4d: Mechanical Engineering

Br	Sem	Place	Roll No.	Name	M/F	SGPA
ME	8th	I	20EMBME007	CHIRAG DAD	M	9.71
		II	20EMBME013	NISCHAY JAIN	M	9.32
		III	20EMBME006	BABU LAL KEER	M	9.26
	6th	I	21EMBME008	NANCY PATHWADIA	F	9.68
		II	21EMBME007	LAKSHAY AGARWAL	M	9.62
		III	21EMBME004	BHAWANI SHANKAR SAHU	M	9.26
	4th	I	23EMBME200	VIKAS KUMAR TIWARI	M	8.41
		II	22EMBME002	ALISHA KAZI	F	8.19
		III	22EMBME014	POONAM VAISHNAV	F	8.17
	2nd	I	23EMBME003	AMAN SINGH	M	7.88
		II	23EMBME010	KRISHNA KANWAR CHOUHAN	F	7.82
		III	23EMBME014	SHIVAM MEHRA	M	7.28

Table 4e: Textile Chemistry

Br	Sem	Place	Roll No.	Name	M/F	SGPA
TC	8th	I	20EMBTC011	RONAK RAJ GUPTA	M	9.8
		II	21EMBTC204	AVISHEK BEHERA	M	9.23
		III	21EMBTC202	ANMOL GARTIA	M	9.13
	6th	I	21EMBTC002	CHETAN NATH	M	9.51
		II	22EMBTC200	ANWESH SAHU	M	8.36
		III	22EMBTC211	ROHIT LAXMAN DHAPODKAR	M	8.3
	4th	I	23EMBTC201	DEVANSH MISHRA	M	10
		II	23EMBTC203	GUNAMANI MEHER	M	9.87
		III	23EMBTC208	SWATANTRA KUMAR MISHRA	M	9.79
	2nd	I	23EMBTC017	RAHUL JAT	M	9.17
		II	23EMBTC002	AJAY KUMAR TAMBOLI	M	8.09
		III	23EMBTC015	PANKAJ PRAJAPAT	M	7.63

Table 4f: Textile Technology

Br	Sem	Place	Roll No.	Name	M/F	SGPA
TT	8th	I	21EMBTT201	ABHISHEK SAINI	M	9.77
		II	21EMBTT210	DEBA PRASAD SAHOO	M	9.58
		III	20EMBTT047 21EMBTT217	VIJAY PANCHAL KUNJETI DEEKSHITH SIVA MANIKANTA	M M	9.52
	6th	I	22EMBTT234	SAMIKSHA TRIPATHI	F	10
		II	22EMBTT228	RAJ GUPTA	M	9.91
		III	22EMBTT223 22EMBTT244	PATRI HARSHITA SUJATA DUTTA	F	9.87
	4th	I	23EMBTT207	BRITTIPRIYA DAS	F	10
		II	23EMBTT216	NANDINI BASAK	F	9.96
		III	22EMBTT007	POOJA MEENA	F	9.91
	2nd	I	23EMBTT003	ABHISHEK VAISHNAV	M	9.32
		II	23EMBTT039	SUMIT SINGH RAWAT	M	8.73
		III	23EMBTT029	MADHAV BAGARHATTA	M	8.63

5. Courses of Concern

Table 5a: Computer Science Engineering- IoT				
8th Semester	6th Semester	4th Semester	2nd Semester	#
NOT APPLICABLE	Digital Image Processing	Managerial Economics & Financial Accounting	Communication Skill	13
	Machine Learning	Discrete Mathematics Structure	Engineering Mathematics-II	
	Cloud Computing	Microprocessor & Interfaces	Basic Mechanical Engineering	
		Database Management System	Basic Civil Engineering	
		Theory of Computation		
		Data Communication & Computer Network		

* Only for 6th, 4th and 2nd Semesters

Table 5b: Electronics & Communication Engineering				
8th Semester	6th Semester	4th Semester	2nd Semester	#
Energy Management	Power Electronics	Managerial Economics And Financial Accounting	Engineering mathematics	17
	Computer Network	Analog Circuits	Engineering Physics	
	Fiber Optics Communications	Microcontrollers	Programming For Problem Solving	
	Antennas and Wave Propagation	Electronics Measurement & Instrumentation	Basic Electrical Engineering	
	Nano Electronics	Analog & Digital communication	Computer Aided Engineering Graphics	
		Advance Engineering Mathematics-II		

Table 5c: Information Technology				
8th Semester	6th Semester	4th Semester	2nd Semester	#
Energy Management	Digital Image Processing	Managerial Economics & Financial Accounting	Communication Skill	15
	Information Security System	Discrete Mathematics Structure	Engineering Mathematics-II	
		Principle of Communication	Engineering Chemistry	
		Database Management System	Basic Civil Engineering	
		Theory of Computation	Basic Civil Engineering Lab	
		Data Communication and Computer Network	Computer Aided Machine Drawing	

Table 5d: Mechanical Engineering				
8th Semester	6th Semester	4th Semester	2nd Semester	#
Supply and operations management	Mechanical vibrations	Data Analytics	Engineering mathematics	17
Disaster management	Quality management	Digital Electronics	Engineering Physics	
Industrial engineering lab	Non-Conventional Machining Methods	Fluid Mechanics & Fluid Machines	Programming For Problem Solving	
		Manufacturing Processes	Basic Electrical Engineering	
		Theory Of Machines	Computer Aided Engineering Graphics	
		Fluid Mechanics Lab		

Table 5e: Textile Chemistry				
8th Semester	6th Semester	4th Semester	2nd Semester	#
Advancement in Textile Chemical Processing	Technology of Dyeing	Theory of dyeing	Human Values Activities & Sports	17
	Chemistry of Surfactants	Chemistry of Dyes	Engineering Mathematics-II	
	Technology of Textile printing	Electronics & Microprocessor in Textile Machines	Engineering Physics	
	Textile Testing – II	Polymer & Extrusion	Engineering Physics Lab	
	Man Made Fiber Production	Textile Chemical Analysis -I	Computer Aided Engineering Graphics	
	Engineering of Textile Structures			

Table 5f: Textile Technology				
8th Semester	6th Semester	4th Semester	2nd Semester	#
Energy Management	Man Made Fiber Production	Yarn Manufacturing-II	Human Values Activities & Sports	13
	Yarn Manufacturing-IV	Textile Chemical Processing-II	Engineering Mathematics-II	
	Textile Testing II		Engineering Physics	
	Weaving Practical-IV		Engineering Physics Lab	
	Textile Testing Practical-II		Computer Aided Engineering Graphics	

Note: On the basis of class's average marks below 60% in End Term Examination.

6. Overall Result @ College Level

Table 6a: Aggregate Result (Calculated from consolidated marks sheets)

S. No.	Branch	Intake	Appeared	# Students passed with & without Backlogs	Pass %	# Students with Honors Degree
1	CSE	30	NOT APPLICABLE			
2	ECE	30	8	6	75.00	1
3	IT	60	68	59	86.76	2
4	ME	60	22	17	77.27	1
5	TC	40	22	16	72.73	1
6	TT	120	78	51	65.38	0

Aggregate Result

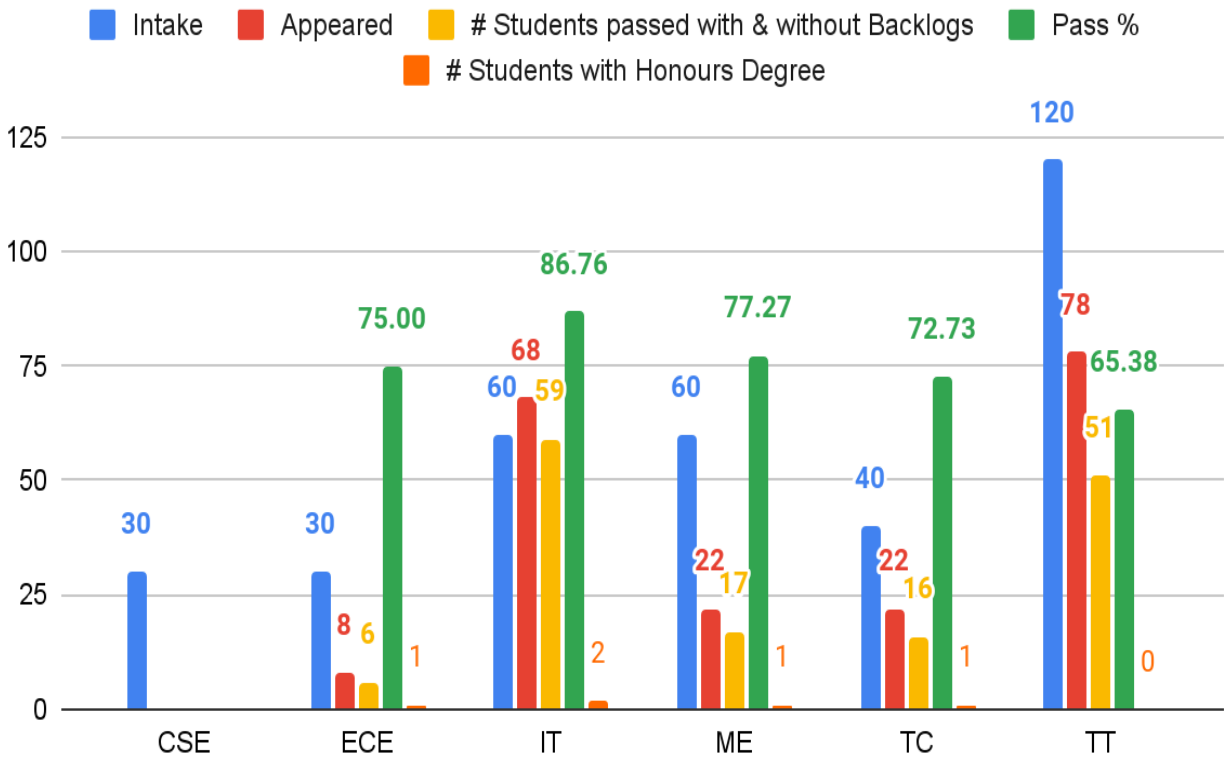


Table 6b: Details of students who obtained Honors Degree

S. No.	Branch	Intake	Appeared	Roll No.	Name of Student	CGPA
1	CSE	30	NOT APPLICABLE			
2	ECE	30	8	20EMBEC005	VANSH PARIHAR	8.03
3	IT	60	68	20EMBIT001 20EMBIT025	ABHILASHA SINHA LAKSHITA SHRIMALI	9.66 9.42
4	ME	60	22	20EMBME013	NISCHAY JAIN	8.71
5	TC	40	22	20EMBTC011	RONAK RAJ GUPTA	9.79
6	TT	120	78	NA	NA	NA

Table 6c: Program wise first three toppers (OVERALL) @ Department Level

Program	Position	Name	M/F	CGPA
CSE	NOT APPLICABLE			
ECE	I	YASHPAL SINGH	M	8.79
	II	CHARVI SHRIVASTAVA	F	8.70
	III	SHAMLI VERMA	F	8.63
IT	I	SHRISTI LODHA	F	9.77
	II	ABHILASHA SINHA	F	9.66 (H)
	III	PRIYAL JAIN	F	9.65
ME	I	BABU LAL KEER	M	8.72
	II	NISHCHAY JAIN	M	8.71 (H)
	III	SUMIT DUBEY	M	8.68
TC	I	RONAK RAJ GUPTA	M	9.79 (H)
	II	NAVEEN TEJWANI	M	9.48
	III	SUMATI KOTHARI	M	9.38
TT	I	ADITYA KUSHWAHA	M	9.55
		DEBA PRASAD SAHU	M	
	II	PREKSHA CHPLOT	F	9.52
	III	KUNJETI DEEKSHIT SIVA MANIKANTA	M	9.46

Table 6d: Details of top 10 scorers in overall result

(TOPPER @ COLLEGE LEVEL)

S. No.	Roll No.	Name of Student	M/F	CGPA
1	20EMBTC011	RONAK RAJ GUPTA	M	9.79
2	20EMBIT053	SHRISTI LODHA	F	9.77
3	20EMBIT001	ABHILASHA SINHA	F	9.66
4	20EMBIT037	PRIYAL JAIN	F	9.65
5	20EMBIT057	SUHANI BHADADA	F	9.62
6	20EMBIT042	RIMSHA	F	9.59
7	20EMBIT035	PRERNA CHHIPA	F	9.56
8	20EMBTT004	ADITYA KUSHWAHA	M	9.55
9	21EMBTT210	DEBA PRASAD SAHOO	M	9.55
10	20EMBTT035	PREKSHA CHAPLOT	F	9.52



7. SWOC Analysis

Strengths:

1. **High Performance in Senior Semesters:** The 8th and 6th semesters show commendable pass percentages (93% and 85%, respectively). This indicates strong academic performance in advanced levels of study.
2. **Consistent Excellence in Certain Programs:** IT and TC branches achieved a 100% pass rate in the 8th semester, showcasing effective teaching and learning strategies in these disciplines.
3. **Engagement in Extra-curricular Activities:** Consistently high scores in Social Outreach, Discipline, and Extra-curricular Activities (SODECA) reflect a well-rounded educational approach.
4. **Top Scorers Recognized:** Detailed recognition of top performers across semesters and branches promotes a culture of academic excellence.

Weaknesses:

1. **Low Pass Rates in Early Semesters:** The 2nd semester has the lowest pass rate (49%), particularly in ME (41%) and TC (44%). This points to foundational issues in the initial semesters.
2. **Subjects with Low Averages:** Courses like "Engineering Mathematics" and "Basic Electrical Engineering" appear as consistent challenges across multiple branches and semesters.
3. **Variance in Performance:** Significant disparity in SGPA ranges between branches and semesters suggests uneven academic support or resource allocation.
4. **Lack of Honors Degree Recipients in TT:** Despite having a large intake, the Textile Technology (TT) branch reported no honors degree recipients.

Opportunities:

1. **Targeted Intervention:** Addressing the challenges in low-performing subjects and semesters offers an opportunity to improve overall results and student retention.
2. **Enhancement of Foundational Courses:** Strengthening early-semester subjects, especially in mathematics and basic engineering, can build a robust academic base.
3. **Leverage Extracurricular Success:** Integrating lessons from extracurricular achievements into academic performance strategies could enhance engagement and results.
4. **Outcome-Based Education (OBE):** Adoption of OBE methods could create a more transparent and effective teaching-learning environment.

Challenges:

1. **High Attrition Risk in Early Semesters:** Persistently low performance in initial semesters may lead to student dropouts, affecting overall retention rates.
2. **Resource Allocation:** Ensuring equitable resources and teaching support for all branches and semesters remains a significant challenge.
3. **Maintaining Consistency:** Sustaining high performance in senior semesters while improving early-semester outcomes requires balanced efforts.
4. **Competition among Programs:** As IT and TC show exceptional results, ensuring similar performance in other branches like ME and TT could be challenging.

8. Key Takeaway: Performance Quality Index (PQI)

Definition and Importance:

- PQI is calculated as the difference between the maximum and minimum SGPA divided by the total number of students. It reflects the consistency of academic performance within a batch.
- A lower PQI indicates a smaller range of SGPA among students, which means the batch performs more uniformly, and the outliers (both high and low performers) are minimal.

Optimal PQI Value:

- For better academic performance and reduced disparity, **PQI values should ideally be below 0.05**. This benchmark ensures that students in the batch are closer in terms of academic achievement, reflecting effective teaching-learning strategies.

Current Scenario:

- Some semesters and branches exceed the 0.05 PQI benchmark. For instance, in Mechanical Engineering, PQI values in certain semesters are around 0.10–0.13, indicating a wide variation in performance.
- Programs like IT and TT show better PQI in some semesters, reflecting comparatively consistent performance.

Strategies to Improve PQI:

- **Focused Remedial Programs:** Conduct remedial classes for low-performing students to bring their performance closer to the batch average.
- **Enhanced Peer Learning:** Encourage peer-learning initiatives where high-performing students mentor their peers.
- **Targeted Faculty Support:** Allocate more teaching resources to subjects or branches with higher PQI values.
- **Regular Assessments:** Increase the frequency of formative assessments to track student progress and address gaps early.
- **Inter-departmental courses need attention from the HoDs, as the students' performance in the End Term Examination (ETE) is significantly below the minimum 60% average marks. On the other hand, they are achieving more than 90% average marks in Internal Assessments (IA). A similar trend is observed in a few other 'concerned courses' listed in Table #5.**

Benefits of Lower PQI:

- Enhanced student satisfaction and confidence as they feel supported to perform at par with peers.
- Improved institutional reputation due to consistently high-quality outputs across all branches and semesters.
- Reduced academic stress and dropouts, fostering a more inclusive learning environment.