



IMS ENGINEERING COLLEGE, GHAZIABAD

(Affiliated to Dr. A.P.J. Abdul Kalam Technical University, Lucknow, Uttar Pradesh & Approved by AICTE, New Delhi)

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SUPPORTING DOCUMENTS

AQAR: 2022-23

2.6.2

Attainment of Programme outcomes and course outcomes are evaluated by the institution.

Attachment: [Supporting Documents](#)

2.6.2 Attainment of programme outcomes and course outcomes are evaluated by the institution.

The faculty uses the course outcomes of the respective course available in the course evaluation scheme and otherwise prepared by respective faculty and are verified by HoDs. The knowledge and skills described by the course outcomes are mapped to specific problems on internal exams and university Examination. Two class tests are conducted per semester to evaluate, whether corresponding COs are achieved or not. According to the performance of the student in answering each question, mapping is carried out with the respective COs for assessing the attainment level of the specific CO of the subject. The final attainment of POs and PSOs were derived from two components:

- **Direct attainment:** Obtained by taking averages of all CO-PO attainment matrices defined for all courses, assignment/quiz and external university examination.
- **Indirect attainment:** Obtained from attainment values POs and PSOs of surveys including program exit survey, employer, alumni, and placement.

Final attainments were calculated by considering 80% of direct assessment & 20% of the indirect assessment.

Attainment Process of Course Outcomes, Program Outcomes and Program Specific Outcomes

1. Attainment of Course Outcomes

Direct and indirect assessment tools are used to evaluate Course Outcomes (COs). List of various tools are as shown in *Fig. 1*

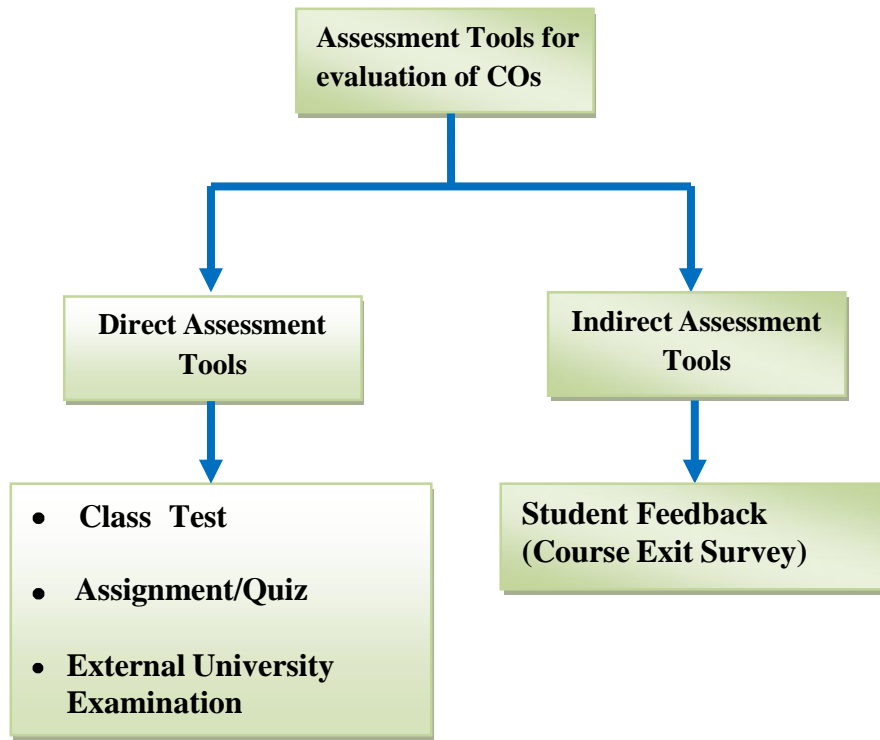


Figure 1: Assessment Tools for Evaluating Course Outcomes

➤ **Direct Assessment Process**

Direct assessment of CO attainments for theory courses is done via three components:

- (1) Class Test (CT),
- (2) Assignment/Quiz
- (3) External University Examination.

Laboratory Courses are assessed by

- (1) Continuous Internal Lab Assessment at the Department Level, this includes respective subject lab(s) as well as Project Assessment, Seminar Assessment & Industrial Training Assessment and
- (2) External Lab Examination as per the University Curriculum.

Categorization of Assessment Tools for CO Attainment has been mentioned in **Table 1**

Table 1: CO Attainment Components-Direct and In-direct

S. No	Assessment Component	Type of Assessment Tools for CO Attainment	Frequency
1.	Class Test (CT)	Theory-Direct	Twice in a semester
2.	Assignments	Theory-Direct	Based on No. of Units, usually five.
3.	External University Examination	Theory-Direct	Once in a semester
4.	Continuous assessment for Lab Courses	Lab-Direct	Once in a week for each batch, normally 10 labs are conducted in a semester.
5.	External Lab Examination-for Lab Courses	Lab-Direct	Once in a semester
6.	Project Assessment	Lab-Direct	Thrice in a semester, through Project Presentations by Project Monitoring Committee (PMC).
7.	Seminar Assessment	Lab-Direct	Once in a Semester by faculty coordinator
8.	Industrial Training Assessment	Lab-Direct	Once in a Semester by faculty coordinator
9.	Course-Exit Survey	In-direct	Once a semester for every subject, through Google forms at institute level.

Class Test (Theory Courses)

For theory courses, CTs are conducted twice a semester. The process involves:

1. Preparation of Question Paper in accordance with Institute's guidelines. The guideline is as follows:

Question Paper Preparing Process:

- Individual faculty who teaches the course sit together to formulate the CIA question paper. The moderation is done by the faculty members teaching the same course to prepare the common question paper.
 - Questions should be prepared in such manner that, the Average students should score at least 60% of the total Marks.
 - Some questions should be prepared such a way that the students must use their intellectual ability to solve the questions.
 - Question paper that has been finalized must be recorded in the course/class file.
2. All the questions are mapped to respective course outcomes keeping in mind the cognitive level in accordance with *bloom's taxonomy*.
 3. Verification of the question paper is done at the module level in Internal Audits followed by HOD approval.
 4. Evaluation of CT sheets is done as per the Result Analysis format. The institute's evaluation scheme is as follows:

Evaluation Scheme:

- The solution for the question paper should be prepared and discussed with students after the conduct of CT.
- The answer script should be evaluated within *ONE week* of conduct of CT and should be shown to the students and acknowledged.
- Attainment of Course Outcomes is calculated by considering number of students appeared in the examination.

5. Individual Faculty performs computation and provides the assessment data of their respective section and provides the results of CO attainments to subject coordinator, which is further submitted to module coordinator.
6. The Module coordinator consolidates the result for each subject section wise and the evaluated results are compiled after verification at module level in Internal Audits,.

Based on the % of students achieving more than or equal to the target percentage (60% score), the attainment level of a CO is decided. Buckets for measuring CO attainment are mentioned in the **Table 2**.

Table 2: CO Attainment Level Bucket

% of students scoring $\geq 60\%$ marks	Attainment Level
< 40%	0
≥ 40 and < 50%	1
$\geq 50\%$ and < 60%	2
$\geq 60\%$	3

Note: Students scoring *less than 60% marks* in a subject are identified as *weak students*. Extra classes are scheduled and corresponding actions are planned by the concerned faculty.

Assignments/ Quiz

Along with class tests (CTs) scheduled twice a semester, each faculty frequently evaluates the CO attainments at regular intervals using assignments/ quiz. Preparation and evaluation of assignment/ quiz is also done as per the similar guidelines as that for CTs. The quality of questions and the evaluation of CO attainments are verified by module coordinators during internal audits.

External University Examination

Results of external examination are provided by registrar's office as it is received from the university. For each course,

- Result analysis committee in the department analyzes the result to find the % of students scoring above and equal to the target percentage (60%).
- Attainment level for each course is computed as per the bucket decided for the attainment levels // refer to table (**Table 2**) mentioned above.
- The questions in university examination paper are not mapped to course outcomes, and the score received is a consolidated score of a student in the course. Therefore, all the COs are assumed to have the same attainment level.

Assessment of Laboratory Courses

For laboratory courses, continuous internal assessment is done in every lab class throughout the semester. Each experiment is mapped with a CO. Attainment levels are computed in similar guidelines as it is computed for a theory course. At the end of the semester when attainment levels are computed for all the experiments, based on the experiment-CO mapping an average attainment level is computed for each CO.

Individual faculty submits the attainment levels to subject coordinator for evaluation. The Subject Coordinator then consolidates the results obtained for a subject from respective faculties and records the final attainment Level for a particular course and submits to the module coordinator. Projects, Industrial Training and Seminar Courses directly contribute to CO Attainment.

➤ **Indirect Assessment Process**

Students provide their feedback for a course once (at the end of semester) in a semester filling up the *course exit survey form* online. Faculty extracts the feedback on Course Outcomes for their respective course, based on which the attainment levels are calculated using the same buckets as mentioned in **Table 2**.

Final CO attainment is computed by assigning **80% weight-age to attainments computed via direct tools and 20% weight-age to attainments computed via indirect tools (Course Exit Survey)**. **Direct assessment tools includes CTs (60%weightage), assignments/quiz (10% weightage) and external examination (30% weightage).**

Attainment of Program Outcomes and Program Specific Outcomes

Direct and indirect assessment tools are used to evaluate Program Outcomes and Program Specific Outcomes. List of various tools are as shown in *Fig. 2*.

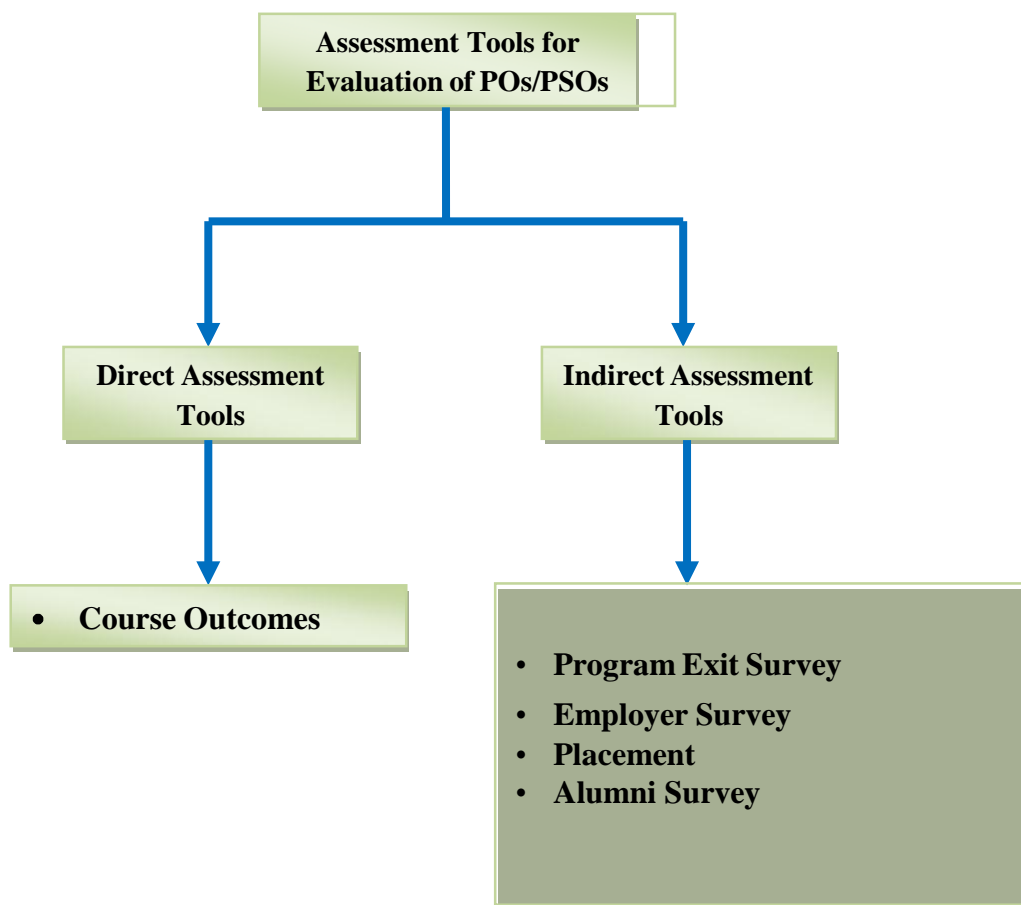


Figure 2: Assessment Tools for Evaluating Program Outcomes and Program Specific Outcomes

❖ **Direct Assessment**

Processes used for measuring the attainment of each of the Program Outcomes and Program Specific Outcomes:

- Attainment of Course Outcomes for each course is computed as described in section 1.
- From the COs attainment values and the CO-PO and CO-PSO mapping, the PO and PSO attainments are computed as the weighted average of all the attainments. For example:

Table 3: Template for PO-PSO attainment calculation using Direct Assessment tools.

CO	CO Attainment levels	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C101.1	A1	a1	a2	a3	a4	a5	a6	a7	a8	a9	a10	a11	a12	a13	a14
...	
C101.n	An	n1	n2	n3	n4	n5	n6	n7	n8	n9	n10	n11	n12	n13	n14

$$\text{Attainment of PO1} = (A1 * a1 + \dots + An * n1) / (a1 + \dots + n1)$$

Similarly, the attainment of all the POs and PSOs are computed. These are the course C101's contribution towards the attainment of POs and PSOs.

- Likewise, each course's contribution for POs and PSOs are computed. Then by using the attained values of PO's and PSO's for each and every course, the average attainment levels are computed. For example, let the PO and PSO attainment levels by each course of the program are as shown in the following table.

Table 4: Template for CO-PO Attainments for Direct Assessment

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C1	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14
...
Cn	N1	N2	N3	N4	N5	N6	N7	N8	N9	N10	N11	N12	N13	N14

Final PO1 attainment via direct assessment is computed as an average over all the attainments.

$$\text{Attainment level of PO1} = (A1 + A2 + A3 \dots + N1) / \text{Total No. of Courses Contributing to that PO.}$$

Similarly, the attainment levels are computed for each PO and PSO.

❖ **Indirect Assessment**

Various Indirect Assessment tools for PO-PSO Attainment Computation are:

1. Program Exit Survey
2. Placement
3. Employer Survey
4. Alumni Survey

Assessment Process:

1. Indirect Assessment parameters formulated by the concerned committee representative and further approval is taken from the NBA Coordinator. The parameters are designed with the objective to attain Program Outcome & Program Specific Outcome.
2. Result of attainment is computed by respective committee in-charge keeping in mind the number of students participating in the indirect assessment computation.
3. An Attainment Value is assigned to the computation by observing the bucket defined in Table 2.

Program Exit Survey:

Program Exit Survey Process for computation of respective Program Outcomes and Program Specific Outcomes:

1. As per the Institute's Guidelines, Program Exit Survey is carried out as an indirect assessment parameter wherein, once in an Academic Year by the Departmental Feedback committee after completion of the B. Tech Program and their responses are recorded.
2. Based on the recorded responses on Program Exit Survey, the Program Outcomes and Program Specific Outcomes, attainment is calculated.
3. The resultant level is recorded by the feedback committee for each PO and PSO attainment value.

Process of Calculating Attainment from Placement

The attainment level of POs & PSOs is calculated from placement based on the number of students placed in the company. The attainment level is calculated using the same buckets that are used for

attainment of course outcomes.

Table 5: Sample Format for Placement Attainment

Program	No. of students appeared in placement (N)	No. of students placed (P)	%age of students placed (P/N * 100)	Attainment level (as per the buckets defined in Table 2)

Employer Survey

Employer feedback is taken by Career and Development cell from all the employers coming for placement (online/offline) of final year students and also from the employers where our students are already working. The questionnaire of employer survey is mapped with POs & PSOs and the attainment level is calculated using the same buckets that are used for attainment of course outcomes.

Alumni Survey

Alumni survey is conducted every year on department level. The questionnaire of employer survey is mapped with POs & PSOs and the attainment level is calculated using the same buckets that are used for attainment of course outcomes.

INSTRUCTION
Set Target Percentage For "Ct", "University Exam", "Assignment", "Feedback" in Fill details sheet
Write Maximum Marks For "University Exam", "Assignment", "Feedback" in Fill details sheet
Fill CT1, CT2, CT3 Data
Enter the "Name and Roll no" of the students in CT attainment sheet
Enter University Marks In "EE Attainment"
Fill Only Assignment Marks In " Fill Assignment Marks" Sheet
Fill Only Feedback Marks In "Fill Feedback Marks" Sheet
Fill CO-PO Mapping In "Attainment" Sheet

FILL THE FOLLOWING	
Institute:	IMS Engineering College, Ghaziabad
Department:	Electronics & Communication Engineering
Subject Name:	Electronics Devices
Subject Code:	KEC 301
Semester (Odd/Even):	Odd
Semester No:	III
Section:	EC1
Session:	2022-23
Faculty Name:	Mr. Jayanidhi Vashitha

Type	Target % of Marks	Maximum Marks
CT	50	30
University Exam	50	100
ASSIGNMENT	60	20
FEEDBACK	60	5

Average of last three year CT & External, In case of deviation mention in MOMs

Subject Name : EDC

Subject Code: KEC 301

NBA CODE	Direct attainment			Course exit survey	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
	CT Attainment	Assign Attainment	External Attainment	Feedback Attainment														
CO1	3.00	3.00	2.00	3.00	2.0	2.0	2.0	2.0	2.0					1.0	1.0	2.0	3.0	
CO2	3.00	3.00	2.00	3.00	2.0	3.0	2.0	2.0	2.0					1.0	1.0	1.0	3.0	
CO3	3.00	3.00	2.00	3.00	1.0	2.0	3.0	2.0	2.0					1.0	2.0	2.0	2.0	
CO4	2.00	3.00	2.00	3.00	3.0	3.0	3.0	3.0	3.0					1.0	3.0	2.0	2.0	
CO5	3.00	3.00	2.00	3.00	2.0	2.0	3.0	2.0	2.0					1.0	3.0	2.0	2.0	
TARGET					2.00	2.40	2.60	2.20	2.20					1.00	2.00	1.80	2.40	#DIV/0!
Direct Attainment(CT+EE+AT)					2.23	2.24	2.24	2.23	2.23					2.25	2.23	2.24	2.26	#DIV/0!
Indirect Attainment (Feedback)					3.00	3.00	3.00	3.00	3.00					3.00	3.00	3.00	3.00	#DIV/0!
PO attainment new method Attainment (Direct-80% + Indirect-20%)					2.38	2.39	2.39	2.39	2.39					2.40	2.38	2.40	2.41	#DIV/0!

Course Outcome Attainment:

	Direct Attainment	Indirect Attainment	Direct + Indirect	Overall Course Attainment Level
	CT 60%)+(AT10%)+(EE30%		(80% +20%)	
CO1	2.70	3	2.76	2.66
CO2	2.70	3	2.76	
CO3	2.70	3	2.76	
CO4	2.10	3	2.28	
CO5	2.70	3	2.76	

Average	2.58	3.00	2.66
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S.No.	Roll.No.	Name	PART A(ATTEMPT ALL)					PART B (ATTEMPT ANY THREE)				PART C (ATTEMPT ANY ONE)				TOTAL MARKS (50)	CO1 attempt	CO1 Marks obt.	CO2 attempt	CO2 Marks obt.	Attainment
			(1x5=5)					(3x5=15)				(2x5=10)									
			1A	1B	1C	1D	1E	2(a)	2(b)	2 (c)	2(d)	3(a)	3(b)	4 (c)	4(d)						
CO1	CO1	CO1	CO1	CO2	CO1	CO1	CO2	CO2	CO1	CO2	CO1	CO2									
1	2101430310001	DEEPANSHU PUNJ	1					4					3			8	6	5.0	5	3.0	11
2	2101430310003	HARSH GAUR														0	0	0.0	0	0.0	0
3	2101430310004	KARTIKAYA RANA														0	0	0.0	0	0.0	0
4	2101430310005	MADHVENDRA VERMA	1	1		1	1	4	5	4		5	5			27	18	17.0	11	10.0	29
5	2101430310006	MOHAMMAD GULREZ ZAIDI														0	0	0.0	0	0.0	0
6	2101430310007	MOSEEN KHAN	1			1	1	3	4	4		4	4			22	17	13.0	11	9.0	28
7	2101430310008	NANCY RAGHAV	1		1	1	1	4	3	4		4	4			23	18	14.0	11	9.0	29
8	2101430310010	SANKALP	1	1	1			3					4			10	8	6.0	5	4.0	13
9	2101430310011	SHALEEN RAI														0	0	0.0	0	0.0	0
10	2101430310012	SHAURYA AGARWAL														0	0	0.0	0	0.0	0
11	2101430310013	SHIKHAR GUPTA	1	1	1	1	1	3	3	2		5	4			22	19	15.0	11	7.0	30
12	2101430310014	SHOYAB														0	0	0.0	0	0.0	0
13	2101430310017	TUSHAR SINGH														0	0	0.0	0	0.0	0
14	2101430310018	UTSAV KUMAR SINGH														0	0	0.0	0	0.0	0
15	2101430310019	VANSH GOEL														0	0	0.0	0	0.0	0

S.No.	Roll.No.	Name	PART A(ATTEMPT ALL)					PART B (ATTEMPT ANY THREE)				PART C (ATTEMPT ANY ONE)				TOTAL MARKS (50)	CO2 attempt	CO2 Marks obt.	CO3 attempt	CO3 Marks obt.	CO5 attempt	CO5 Marks obt.	Attainment		
			(1x5=5)					(5x3=15)				(2x5=10)													
			1A	1B	1C	1D	1E	2(a)	2(b)	2 (c)	2(d)	3(a)	3(b)	4 (c)	4(d)										
			CO2	CO2	CO3	CO3	CO5	CO2	CO3	CO3	CO5	CO2	CO3	CO3	CO3										
1	2101430310001	DEEPANSHU PUNJ														0	0.0	0	0.0	0.0	0.0	0.0	0.0		
2	2101430310003	HARSH GAUR	1		1	1		3						2	2			10	11	6.0	7	4.0	0.0	0.0	18.0
3	2101430310004	KARTIKAYA RANA	1	1					4					1	3			10	7	3.0	10	7.0	0.0	0.0	17.0
4	2101430310005	MADHVENDRA VERMA	1	1	1	1	1	5	4	5				5	5			29	12	12.0	17	16.0	1.0	1.0	30.0
5	2101430310006	MOHAMMAD GULREZ ZAIDI	1	1			1	3	3					2	2			13	12	7.0	10	5.0	1.0	1.0	23.0
6	2101430310007	MOSEEN KHAN																0	0	0.0	0	0.0	0.0	0.0	0.0
7	2101430310008	NANCY RAGHAV	1	1	1	1	1	5	5					5	5			25	12	12.0	12	12.0	1.0	1.0	25.0
8	2101430310010	SANKALP																0	0	0.0	0	0.0	0.0	0.0	0.0
9	2101430310011	SHALEEN RAI																0	0	0.0	0	0.0	0.0	0.0	0.0
10	2101430310012	SHAURYA AGARWAL																0	0	0.0	0	0.0	0.0	0.0	0.0
11	2101430310013	SHIKHAR GUPTA	1		1	1			5	4				2	1			15	6	3.0	17	12.0	0.0	0.0	23.0
12	2101430310014	SHOYAB																0	0	0.0	0	0.0	0.0	0.0	0.0
13	2101430310017	TUSHAR SINGH																0	0	0.0	0	0.0	0.0	0.0	0.0
14	2101430310018	UTSAV KUMAR SINGH																0	0	0.0	0	0.0	0.0	0.0	0.0
15	2101430310019	VANSH GOEL																0	0	0.0	0	0.0	0.0	0.0	0.0

S.No.	Roll.No.	Name	PART A(ATTEMPT ALL)					PART B (ATTEMPT ANY THREE)				PART C (ATTEMPT ANY ONE)				TOTAL MARKS (100)	CO4 attempt	CO4 Marks obt.	CO5 attempt	CO5M arks obt.	Attainment
			(1x5=5)					(5X3=15)				(2X5=10)									
			1F CO4	1G CO4	1H CO5	1I CO5	1J CO5	2(A) CO4	2(B) CO4	2 (C) CO5	C2(D) CO5	3(A) CO4	3(B) CO4	4(A) CO5	4(B) CO5						
1	2101430310001	DEEPANSHU PUNJ	1	1				5	3			4	1			15.00	22	15.0	0	0.0	22.00
2	2101430310003	HARSH GAUR						2								2.00	5	2.0	0	0.0	5.00
3	2101430310004	KARTIKAYA RANA			1											1.00	0	0.0	1	1.0	1.00
4	2101430310005	MADHVENDRA VERMA	1	1	1	1		5	5	4		5	5			28.00	22	22.0	7	6.0	29.00
5	2101430310006	MOHAMMAD GULREZ ZAIDI	1		1	1		5	3			1				12.00	16	10.0	2	2.0	18.00
6	2101430310007	MOSEEN KHAN			1	1		4	3			5	5			19.00	20	17.0	2	2.0	22.00
7	2101430310008	NANCY RAGHAV	1	1			1	4	4	5		1	4			21.00	22	15.0	6	6.0	28.00
8	2101430310010	SANKALP			1	1		3	2			1	3			11.00	20	9.0	2	2.0	22.00
9	2101430310011	SHALEEN RAI	1		1		1		3	4			1			11.00	11	5.0	7	6.0	18.00
10	2101430310012	SHAURYA AGARWAL				1										1.00	0	0.0	1	1.0	1.00
11	2101430310013	SHIKHAR GUPTA	1	1	1	1	1	4	5	5		5	4			28.00	22	20.0	8	8.0	30.00
12	2101430310014	SHOYAB				1		1	2							4.00	10	3.0	1	1.0	11.00
13	2101430310017	TUSHAR SINGH		1	1		1		2	2			1			8.00	11	4.0	7	4.0	18.00
14	2101430310018	UTSAV KUMAR SINGH	1		1	1	1		2	2		1				9.00	11	4.0	8	5.0	19.00
15	2101430310019	VANSH GOEL		1	1	1		3	4			3	2			15.00	21	13.0	2	2.0	23.00

S. No.	University roll No.	Student Name	CT1 (30)				CT2(30)						CT3(30)			
			CO1		CO2		CO2		CO3		CO5		CO4		CO5	
			M. MARKS	M.OBTAINED	M. MARKS	M.OBTAINED	M. MARKS	M.OBTAINED	M. MARKS	M.OBTAINED	M. MARKS	M.OBTAINED	M. MARKS	M.OBTAINED	M. MARKS	M.OBTAINED
1	2101430310001	DEEPANSHU PUNJ	6	5.0	5	3.0	0	0.0	0	0.0	0.0	0.0	22	15.0	0	0.0
2	2101430310003	HARSH GAUR	0	0.0	0	0.0	11	6.0	7	4.0	0.0	0.0	5	2.0	0	0.0
3	2101430310004	KARTIKAYA RANA	0	0.0	0	0.0	7	3.0	10	7.0	0.0	0.0	0	0.0	1	1.0
4	2101430310005	MADHVENDRA VERMA	18	17.0	11	10.0	12	12.0	17	16.0	1.0	1.0	22	22.0	7	6.0
5	2101430310006	MOHAMMAD GULREZ ZAIDI	0	0.0	0	0.0	12	7.0	10	5.0	1.0	1.0	16	10.0	2	2.0
6	2101430310007	MOSEEN KHAN	17	13.0	11	9.0	0	0.0	0	0.0	0.0	0.0	20	17.0	2	2.0
7	2101430310008	NANCY RAGHAV	18	14.0	11	9.0	12	12.0	12	12.0	1.0	1.0	22	15.0	6	6.0
8	2101430310010	SANKALP	8	6.0	5	4.0	0	0.0	0	0.0	0.0	0.0	20	9.0	2	2.0
9	2101430310011	SHALEEN RAI	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	11	5.0	7	6.0
10	2101430310012	SHAURYA AGARWAL	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0	0.0	1	1.0
11	2101430310013	SHIKHAR GUPTA	19	15.0	11	7.0	6	3.0	17	12.0	0.0	0.0	22	20.0	8	8.0
12	2101430310014	SHOYAB	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	10	3.0	1	1.0
13	2101430310017	TUSHAR SINGH	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	11	4.0	7	4.0
14	2101430310018	UTSAV KUMAR SINGH	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	11	4.0	8	5.0
15	2101430310019	VANSH GOEL	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	21	13.0	2	2.0

S. No.	University roll No.	Student Name	CT1				CT2						CT3			
			CO1>=	50	CO2>=	50	CO2>=	50	CO3>=	50	CO5>=	50	CO4>=	50	CO5>=	50
			%age	attainment	%age	attainment	%age	attainment	%age	attainment	%age	attainment	%age	attainment	%age	attainment
1	2101430310001	DEEPANSHU PUNJ	83.33	Y	60.00	Y	NA	NA	NA	NA	NA	NA	68.18	Y	NA	NA
2	2101430310003	HARSH GAUR	NA	NA	NA	NA	54.55	Y	57.14	Y	NA	NA	40.00	N	NA	NA
3	2101430310004	KARTIKAYA RANA	NA	NA	NA	NA	42.86	N	70.00	Y	NA	NA	NA	NA	100.00	Y
4	2101430310005	MADHVENDRA VERMA	94.44	Y	90.91	Y	100.00	Y	94.12	Y	100	Y	100.00	Y	85.71	Y
5	2101430310006	MOHAMMAD GULREZ ZAIDI	NA	NA	NA	NA	58.33	Y	50.00	Y	100	Y	62.50	Y	100.00	Y
6	2101430310007	MOSEEN KHAN	76.47	Y	81.82	Y	NA	NA	NA	NA	NA	NA	85.00	Y	100.00	Y
7	2101430310008	NANCY RAGHAV	77.78	Y	81.82	Y	100.00	Y	100.00	Y	100	Y	68.18	Y	100.00	Y
8	2101430310010	SANKALP	75.00	Y	80.00	Y	NA	NA	NA	NA	NA	NA	45.00	N	100.00	Y
9	2101430310011	SHALEEN RAI	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	45.45	N	85.71	Y
10	2101430310012	SHAURYA AGARWAL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100.00	Y
11	2101430310013	SHIKHAR GUPTA	78.95	Y	63.64	Y	50.00	Y	70.59	Y	NA	NA	90.91	Y	100.00	Y
12	2101430310014	SHOYAB	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30.00	N	100.00	Y
13	2101430310017	TUSHAR SINGH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36.36	N	57.14	Y
14	2101430310018	UTSAV KUMAR SINGH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36.36	N	62.50	Y
15	2101430310019	VANSH GOEL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	61.90	Y	100.00	Y
Absent/ Detained		Y (Attained)		6.00		6.00		5.00		6.00		3.00		7.00		13.00
		N (Not Attained)		0.00		0.00		1.00		0.00		0.00		6.00		0.00
		NA		9.00		9.00		9.00		9.00		12.00		2.00		2.00
		Percentage of students achieved set target level		100.00		100.00		83.33		100.00		100.00		53.85		100.00
		CO Attainment Level		3		3		3		3		3		2		3

CO1

CO2

CO2

CO3

CO5

CO4

CO5

Fill the average attainment level of each CO

CO's	Average attainment level
CO1	3
CO2	3
CO3	3
CO4	2
CO5	3

Subject
Code

Electronics Devices
KEC 301

S. No.	University roll No.	Student Name	University Result	
				50
			MM	50
			100	
1	2101430310001	DEEPANSHU PUNJ	52	Y
2	2101430310003	HARSH GAUR	45	N
3	2101430310004	KARTIKAYA RANA	30	N
4	2101430310005	MADHVENDRA VERMA	72	Y
5	2101430310006	MOHAMMAD GULREZ ZAIDI	36	N
6	2101430310007	MOSEEN KHAN	68	Y
7	2101430310008	NANCY RAGHAV	60	Y
8	2101430310010	SANKALP	47	N
9	2101430310011	SHALEEN RAI	46	N
10	2101430310012	SHAURYA AGARWAL	40	N
11	2101430310013	SHIKHAR GUPTA	56	Y
12	2101430310014	SHOYAB	61	Y
13	2101430310017	TUSHAR SINGH	59	Y
14	2101430310018	UTSAV KUMAR SINGH	60	Y
15	2101430310019	VANSH GOEL	40	N
			TOTAL Y (8
			TOTAL N (Not Attained)	7
			Percentage of students achieved set target level	53.33
			Attainment Level	2
			CO attainment	2.00

S.NO	UNIVERSITY ROLL NO	STUDENT NAME	CO1		CO2		CO3		CO4		CO5	
			Assignment	60	Assignment	60	Assignment	60	Assignment	60	Assignment	60
			MM	12	MM	12	MM	12	MM	12	MM	12
			20		20		20		20		20	
1	2101430310001	DEEPANSHU PUNJ	15	Y	20	Y	18	Y	15	Y	14	Y
2	2101430310003	HARSH GAUR	14	Y	17	Y	15	Y	16	Y	20	Y
3	2101430310004	KARTIKAYA RANA	16	Y	18	Y	19	Y	17	Y	20	Y
4	2101430310005	MADHVENDRA VERMA	16	Y	19	Y	19	Y	17	Y	14	Y
5	2101430310006	MOHAMMAD GULREZ ZAIDI	19	Y	13	Y	20	Y	19	Y	14	Y
6	2101430310007	MOSEEN KHAN	19	Y	15	Y	13	Y	19	Y	19	Y
7	2101430310008	NANCY RAGHAV	17	Y	19	Y	18	Y	13	Y	15	Y
8	2101430310010	SANKALP	19	Y	15	Y	14	Y	19	Y	16	Y
9	2101430310011	SHALEEN RAI	20	Y	18	Y	14	Y	16	Y	13	Y
10	2101430310012	SHAURYA AGARWAL	16	Y	19	Y	0	NA	17	Y	5	N
11	2101430310013	SHIKHAR GUPTA	14	Y	19	Y	16	Y	16	Y	18	Y
12	2101430310014	SHOYAB	18	Y	13	Y	18	Y	19	Y	13	Y
13	2101430310017	TUSHAR SINGH	18	Y	14	Y	15	Y	19	Y	16	Y
14	2101430310018	UTSAV KUMAR SINGH	14	Y	19	Y	20	Y	19	Y	20	Y
15	2101430310019	VANSH GOEL	15	Y	13	Y	14	Y	20	Y	18	Y
Y (Attained)				15		15		14		15		14
N (Not Attained)				0		0		0		0		1
NA				0		0		1		0		0
No of students				15		15		15		15		15
Percentage of students achieved set target level				100.00		100.00		93.33		100.00		93.33
CO Attainment Level				3		3		3		3		3

Fill the average attainment level of each CO

CO's	Average attainment level
CO1	3
CO2	3
CO3	3
CO4	3
CO5	3

S.NO	UNIVERSITY ROLL NO	STUDENT NAME/Email id	CO1		CO2		CO3		CO4		CO5	
			CO1	60	CO2	60	CO3	60	CO4	60	CO5	60
			MM	3	MM	3	MM	3	MM	3	MM	3
			5		5		5		5		5	
1	2101430310001	DEEPANSHU PUNJ	2	N	4	Y	2	N	5	Y	2	N
2	2101430310003	HARSH GAUR	5	Y	2	N	2	N	2	N	5	Y
3	2101430310004	KARTIKAYA RANA	4	Y	5	Y	2	N	5	Y	5	Y
4	2101430310005	MADHVENDRA VERMA	5	Y	5	Y	4	Y	3	Y	4	Y
5	2101430310006	MOHAMMAD GULREZ ZAIDI	2	N	2	N	3	Y	2	N	5	Y
6	2101430310007	MOSEEN KHAN	3	Y	5	Y	3	Y	3	Y	2	N
7	2101430310008	NANCY RAGHAV	4	Y	3	Y	5	Y	2	N	4	Y
8	2101430310010	SANKALP	5	Y	4	Y	3	Y	3	Y	2	N
9	2101430310011	SHALEEN RAI	4	Y	3	Y	3	Y	5	Y	5	Y
10	2101430310012	SHAURYA AGARWAL	5	Y	5	Y	3	Y	4	Y	5	Y
11	2101430310013	SHIKHAR GUPTA	4	Y	2	N	2	N	2	N	4	Y
12	2101430310014	SHOYAB	4	Y	4	Y	2	N	4	Y	2	N
13	2101430310017	TUSHAR SINGH	4	Y	5	Y	4	Y	5	Y	3	Y
14	2101430310018	UTSAV KUMAR SINGH	2	N	4	Y	2	N	2	N	5	Y
15	2101430310019	VANSH GOEL	2	N	3	Y	2	N	5	Y	3	Y
Y (Attained)				11		12		8		10		11
N (Not Attained)				4		3		7		5		4
Total students				10		10		10		10		10
Percentage of students achieved set target level				150.00		150.00		150.00		150.00		150.00
CO Attainment Level				3		3		3		3		3

Fill the average attainment level of each CO

CO's	Average attainment level
CO1	3
CO2	3
CO3	3
CO4	3
CO5	3