

Fateh Chand College For Women Hisar



Attainment of Programme outcomes and course outcomes 2.6.2

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1. PREAMBLE

Being the affiliated women college of Guru Jambheshwar University Science & Technology, Fateh Chand College for Women thrives to become a premier college with a vision of offering several need-based, value-conscious and job-oriented quality educations to the students that cater to the need of the society at large. To this effect, the Choice Based Credit System (CBCS) is followed in most of the Programmes with the flexibility to innovate and design the course contents of each programme in line with the mission of the college. In order to have higher education with quality assurance, outcome-based education (OBE) are developed for each programme with a focus towards teaching, learning and assessment where the course contents are developed in terms of learning outcomes or course outcomes (CO). This idea focus on Continuous quality improvement (CQI) of the students at the end of the course or program. Accordingly, programme outcomes (PO) are defined and assessed by the faculty by mapping them into CO and taking appropriate steps for continuous improvement of the students and to improve their personal development and make them employable.

1. Programme Outcomes (PO):

Programme Outcomes are narrower statements that describe what students are expected to know and be able to do upon graduation. These relate to the skills, knowledge and behaviour that students acquire in their study through the programmes.

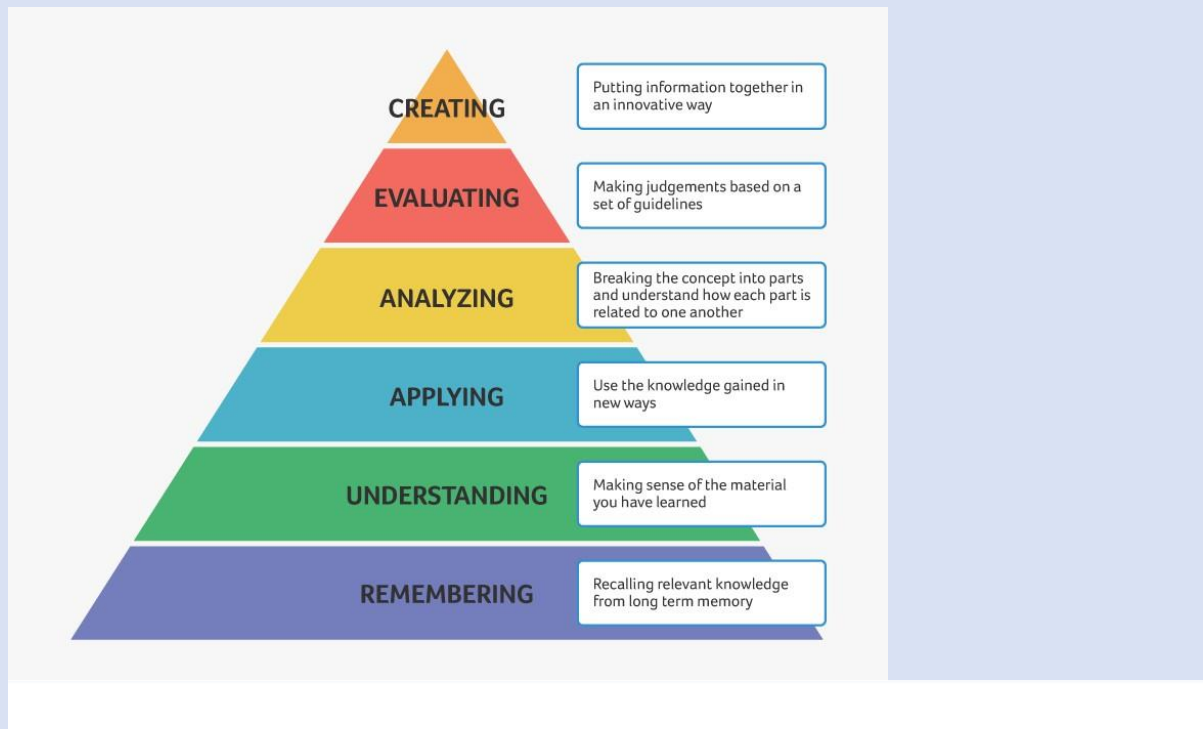
2. Course Outcomes (CO):

Course Outcomes are narrower statements that describe what students are expected to know and be able to do at the end of each course. These relate to the skills, knowledge, and behaviour that students acquire in their study through the course. Each course comprises five COs and the keywords used to define COs are based on Bloom's Taxonomy.

1.3. BLOOM'S TAXONOMY:

Bloom's Taxonomy was created in 1956 by an educational psychologist Dr. Benjamin Bloom in order to promote higher forms of thinking in education, such as analyzing and evaluating concepts, processes, procedures, and principles, rather than just remembering facts. It is most often used when designing educational, training, and learning processes, which is shown in Figure 1.

Figure 1: Bloom's Taxonomy



These 6 levels are used to structure the learning outcomes, lessons, and assessments of the course. :

1. Remembering: Recall facts, terms and basic concepts of the subject / Course by memorizing, listening, bookmarking, bullet-pointing etc.

2. Understanding: Constructing meaning from oral, written, and graphic messages through interpreting, expressing, exemplifying, annotating, summarizing, demonstrating, discovering, comparing, classifying etc.

3. Applying: Usage of learned materials in developing model, executing, or implementing, applying methods, solve the problem, interpret, illustrate, show, sketch etc.

4. Analysing: Experiment, analyse, the model created through outline, calculate, differentiating, organizing, inspect, test, criticize, diagram and relate.

5. Evaluating: Making judgments based on criteria and standards through evaluate, judge, revise, justify, recommend and conclude.

6. Creating: Compose all elements to form a coherent or functional whole; reorganizing elements into a new pattern or structure through rearrange, manage, setup, construct, formulate and assemble.

1.4. CO – PO MAPPING OF COURSES:

After CO statements are developed by the course in charge, COs will be mapped with any possible POs based on the relationship that exists between them. A CO must be mapped to at least one PO. The PO's which are not related to any of the COs in a particular course may be left blank. All the courses together must cover all the POs. The mapping between COs and PO can be defined by three levels using the Letter Grades H, A, L which denote respectively High (H), Average (A), and Low (L) correlation and accordingly points are earmarked as 3,2,1 respectively.

2. MEASUREMENT OF ATTAINMENT OF DESIRED GOALS:

Course Outcome (CO) is measured through the performance of students by the various assessment tools adopted for that particular course. Each evaluation tool is mapped to a particular verb in Bloom's Taxonomy and further, each verb is mapped to a particular CO. Once the Course Outcome is measured, the PO can be measured using a CO-PO matrix. Measurement of PO attainment shall be done by direct and indirect methods. Direct assessments – internal assessment tools such as Minor Tests , Quizzes, Seminars and Assignment together and End Semester Examinations with specified weightages are used for CO-PO mapping and to find out the attainment level. Indirect assessments such as feedback from students, Alumni, employers and Teacher are used to improve the syllabus for better quality education to meet societal and industrial needs. The target level of attainment shall be fixed by the Course teacher and the teacher's council of respective departments.

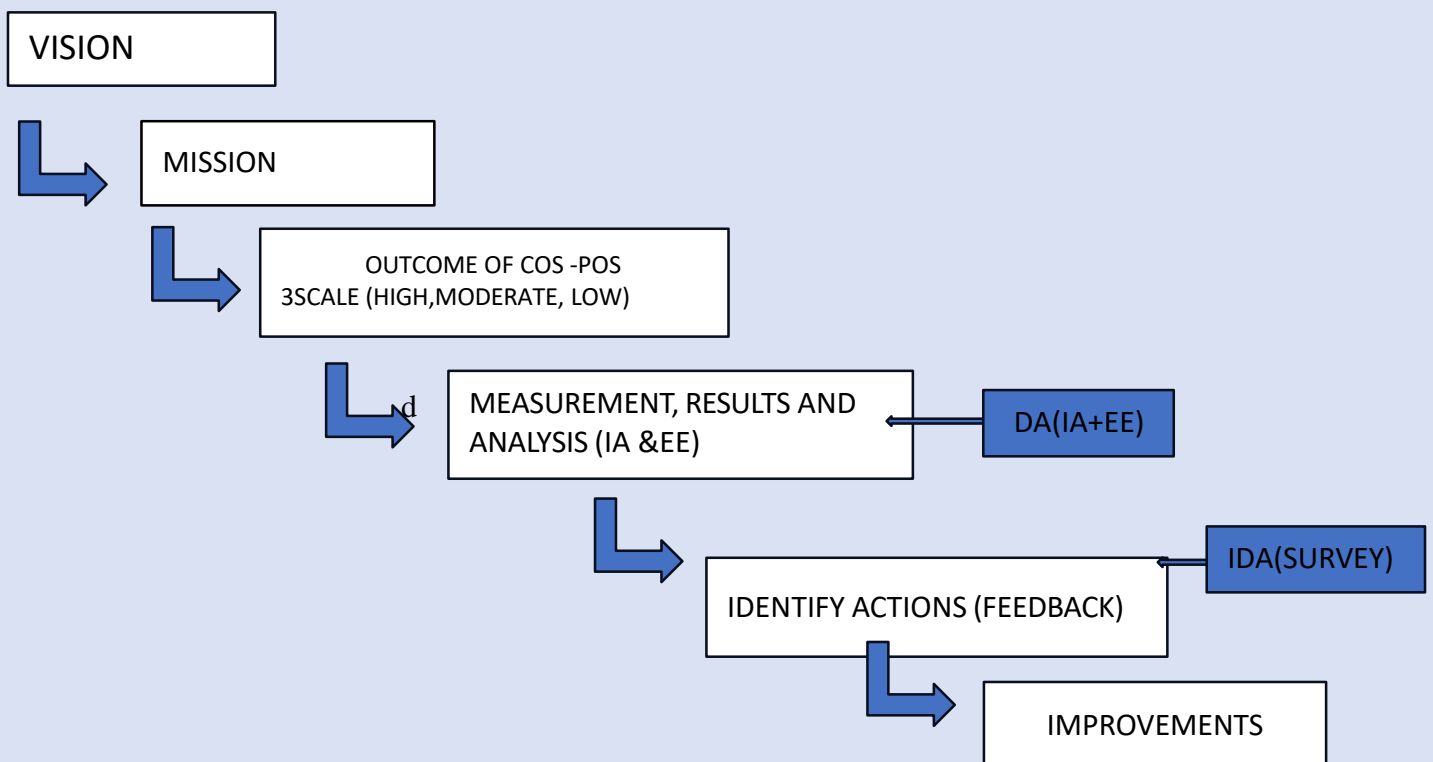
1. PROCESS INVOLVED IN CO DEFINING AND CO-PO MAPPING:

Assessment of Cos and POs is a core academic activity and highly essential to assess the learning ability of the student. Programme outcome assessment is a continuous process to support teaching, learning and evaluation. It is the main mechanism to monitor the effectiveness of the learning environment based on evidences that determine whether students have met the course outcomes and objectives. Curriculum development includes description of Course Outcomes and Mapping of COs with POs.

- There is a well-defined process for attainment of COs & POs in the college.
 - During the execution if any gaps were identified then necessary action will be enforced by the departmental with the support of IBoS& AC.
- These Departments will set the target both COs & POs prior to the commencement of the semester keeping in the view of earlierbatch attainments and Current batch pass percentage.

- Course coordinators have been given with free hand in the designing of Cos and mapping of COS with the assessment tools with rubrics will be defined by the course coordinator with the due approval of departments Incharges.
- The direct assessment of POs is defined as cumulative assessment of Cos.
- Indirect Assessment involves the qualitative method of obtaining the reflections of the stakeholders like Students, Alumni, Faculty and Employerson the achievement of the program outcomes, through feedback mechanism.
- CO-PO mapping will be done by respective subject experts during the preparation of lesson Plans . The CO-PO mapping will be verified and modified by respective senior faculty along with other faculties handling the same subject before the commencement of class work.

CO -PO Mapping Process



3. ASSESSMENT PROCESS IN PRACTICE:

Assessment is one or more processes carried out by the institution that identify, collect and prepare data to evaluate the achievement of course outcomes and programme outcomes. Its purpose is of ensuring that all students are equipped with the knowledge, competence and attributes of success. All students can learn and succeed with a suitable system of T-L-A and support.

1. Assessment Process for CO Attainment:

The role of CO-PO mapping will be assigned to the faculty. After the course (subject) allotment from the department, the senior faculty (subject expert) will be nominated as Programme coordinator of the corresponding course. The course coordinator (senior faculty) of the course along with other faculties (who handle the same subject) has to verify/modify appropriate COs for their corresponding Programme. It should be narrower and measurable statements. By using the Bloom's Taxonomy levels, CO's will be designed. CO statements should describe what the students are expected to know and able to do at the end of each course, which are related to the skills, knowledge and behaviour that students will acquire through the course. After writing the CO statements, CO will be mapped with PO. The role of the Programme coordinator is to review the CO statements and the CO-PO mapping which has been done in association by course in-charges. For the evaluation and assessment of CO's and PO's, rubrics are used.

2. Course Correlation Matrix (co-po correlation) :

Course correlation matrix shows the learning relationship (Level of Learning Achieved) between Course Outcomes and Program Outcomes of a course. This matrix strongly indicates whether the students are able to achieve the course objectives/outcomes. The matrix can be used for any course and is a good way to evaluate a course syllabus/content/structure. All the courses together must cover all the POs. For a course we map the COs to POs through the CO-PO matrix. The various correlation levels in the matrix are as shown below:

“1” – low Correlation,

“2” – Moderate Correlation,

“3” –High Correlation

Sample of CO-PO

PROGRAMME OUTCOME OF MCOM COURSE	
PO1-Business Knowledge: Apply knowledge of business and trade theories and practices to solve business problems.	
PO2-Critical Thinking and Problem Analysis: Foster Analytical and critical thinking abilities for databased decision-making.	
PO3-Leadership and Business Solutions: Ability to develop Value based Leadership ability that offers business solutions.	

PO4-Communication and Other Skills: Ability to understand, analyze and communicate global, economic, legal, and ethical aspects of business.

PO5- Team Dynamics and Teaching Skills: Ability to lead themselves and others in the achievement of organizational goals, contributing effectively to a team environment and teaching skills in higher education system.

Course Outcomes of (MC-101) MANAGEMENT PROCESS AND ORGANISATIONAL BEHAVIOR

CO1	Students will be able to recall the concepts of management process and organizational behaviour.
CO2	Students will be able to understand individual and group behaviour, and understand the implications of organizational behaviour on the process of management.
CO3	Students will be able to employ different motivational theories and evaluate motivational strategies used in a variety of organizational settings.
CO4	Students will be able to appraise the basic design elements of organizational structure and evaluate their impact on employees.
CO5	Students will be able to evaluate how organizational change and culture affect working relationships within organizations.
CO6	Students will be able to design strategies to manage individual, group and organizational behaviour

PO Attainment	Tools	Process
Direct CO Attainments	Internal Assessment Test <input type="checkbox"/> Assignments <input type="checkbox"/> Tutorials <input type="checkbox"/> Online Quiz <input type="checkbox"/> University Examination	1.Assignments / Tutorials / presentation, quizzes are given periodically for the entire course to attain the specific POs. 2.Internal Assessment Tests are conducted per semester to evaluate the student performance. 3.University Examination is conducted once in a semester as per GJU Schedule.
	Performance Viva Voce Record Presentation Group Discussion	1.Student Contribution in laboratory is evaluated based on the performance, Viva-Voce, Presentation and Record Work. 2.Model Practical examination is conducted for required course. 3.University Examination is conducted once in a semester as per GJU Schedule.

	Project Reviews	1. Students are divided into batches. Each batch consists of three to four students. 2. guidance were given by the course Incharge to the students to identify the area of project. 3. reviews are conducted periodically to monitor and evaluate the progress of the project. 4. Viva-Voce is conducted at the end of the semester
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Direct Attainment

Course Outcome is evaluated based on the performance of students in internal assessments and in university examination of a course. The benchmark is set on the percentage of marks secured by the students for respective course.

The levels are also applicable for Internal Exam, and University Examination. Internal Assessment is based on Internal Examination and Assignment. 80% weightage is given for direct assessment. Course attainment is calculated in percentage as per the levels given below

Attainment level 3 if more than 80% of students achieved the target

Attainment level 2 if more than 70% of students achieved the target

Attainment level 1 if more than 60% of students achieved the target

Direct assessment 1: Refers to evaluation through internal assessments which majorly include Continuous Internal Assessments (CIA1/CIA2) in terms of Internal Assessment Tests, Lab Assignments, Home Assignments, Class/Assignment Tests, Presentations, quizzes, etc.

Direct assessment 2: refers to evaluation through End Semester Examination (ESE)

Indirect assessment: refers to the exit feedback survey taken by students/faculty/employers.

The exit feedback survey must be taken up before the end of the semester. The exit survey may be based on a marking scheme (1-3) for each CO.

For example if the internal assessment is of 40% and external assessment is of 60% then the attainment calculation will be as follows

Attainment level calculation = DA (80%) + IDA (20%)

DA=DA1 (40%) + DA2 (60%)

DA= Direct Assessment

DA1= Internal Assessment (Assignment , attendance, viva-voce , presentation, unit test)

DA2= End semester Examination

IDA= Feedback Survey (Students, Teachers, Alumni, Employers)

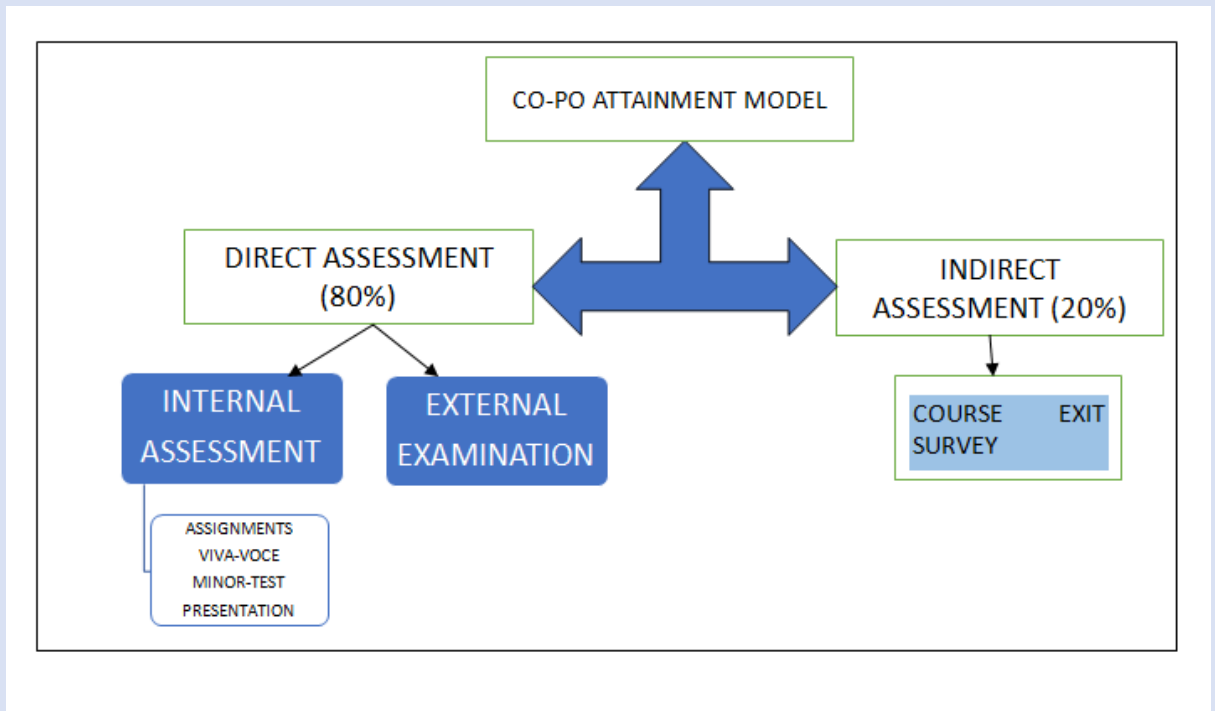
Sample of CO-PO MAPPING MATRIX FOR COURSE CODE: MCOM101

CO	PO1	PO2	PO3	PO4	PO5
CO1	3	3	3	2	2
CO2	3	2	3	3	3
CO3	3	3	3	2	2
CO4	3	2	3	3	3
CO5	3	3	3	3	2
CO6	3	2	3	2	3
AVERAGE	3	2.5	3	2.5	2.5

Indirect Assessment

A Course Exit Survey is conducted for each course. Based on each course outcome survey questions were prepared and feedback is collected from the students. 20% weightage is given for indirect assessment.

OVERALL ATTAINMENT= 80% of Direct assessment + 20 % of Indirect Assessment



MA English-1st Sem		STUDY OF A GENRE FICTION (PART-1)							
University Roll No.	Name	Sample	EX	Total	DA	IDA	Tgt 80%	Tgt 20%	Attainment Level
233062400001	RENUKA	16	39	55	3	2	2.4	0.4	2.8
233062400002	PRIYA	14	32	46	3	3	2.4	0.6	3
233062400003	DEEPIKA	15	31	46	3	2	2.4	0.4	2.8
233062400004	SAPNA	12	33	45	3	3	2.4	0.6	3
233062400005	SWEETY	13	28	41	3	2	2.4	0.4	2.8
233062400006	REKHA RANI	15	36	51	3	3	2.4	0.6	3
233062400007	RASHI	2	28	30	1	2	0.8	0.4	1.2
233062400008	JYOTI NAIN	9	13	22	1	3	0.8	0.6	1.4
233062400009	SONAM	13	21	34	2	2	1.6	0.4	2
233062400010	AANCHAL	11	30	41	3	3	2.4	0.6	3
233062400011	VISHAKA TEVTIYA	14	36	50	3	3	2.4	0.6	3
233062400012	ANITA	12	29	41	3	3	2.4	0.6	3
233062400013	HIMANI	12	41	53	3	3	2.4	0.6	3
233062400014	EKTA	15	32	47	3	3	2.4	0.6	3
233062400015	PRIYA	13	35	48	3	2	2.4	0.4	2.8
233062400016	PRIYANKA	14	32	46	3	3	2.4	0.6	3
233062400017	NISHTHA	14	35	49	3	3	2.4	0.6	3
233062400018	AMITA	13	34	47	3	3	2.4	0.6	3
233062400019	Preeti	15	24	39	2	2	1.6	0.4	2
233062400020	MONIKA	13	30	43	3	3	2.4	0.6	3
233062400021	ISHIKA	13	27	40	2	2	1.6	0.4	2
233062400022	MINAKSHI	10	24	34	2	3	1.6	0.6	2.2
233062400023	Preeti devi	10	35	45	3	2	2.4	0.4	2.8
233062400024	REETU	13	42	55	3	3	2.4	0.6	3
233062400025	NISHU	12	33	45	3	2	2.4	0.4	2.8
233062400026	DIMPAL	12	24	36	2	3	1.6	0.6	2.2
233062400027	PRIYANKA	11	37	48	3	3	2.4	0.6	3
233062400028	KIRAN BALA	15	30	45	3	3	2.4	0.6	3
233062400029	POOJA	14	34	48	3	2	2.4	0.4	2.8
233062400030	DELISHA PUNIA	13	21	34	2	3	1.6	0.6	2.2
233062400031	MADHU	9	26	35	2	2	1.6	0.4	2
233062400032	MANJEET	14	28	42	3	3	2.4	0.6	3
233062400033	Mahima	15	31	46	3	2	2.4	0.4	2.8
233062400035	KIRTI	2	27	29	1	2	0.8	0.4	1.2
233062400036	MUKESH	12	38	50	3	3	2.4	0.6	3
233062400037	AMANDEEP	13	22	35	2	2	1.6	0.4	2

Toal Students: 36

Appeared : 36

Passed: 35

No. of Students achieved high attainment Level: 28

No. of Students achieved Moderate attainment Level: 05

No. of Students achieved Low attainment Level: 03

Average attainment Level of Course outcome: 2.60

MA Sanskrit-1st Sem		Bharatiyadarshanam (1)							
Roll No.	Name	IN	EX	Total	DA	IDA	Tgt 80%	Tgt 20%	Attainment Level
233062440001	ANKITA DEVI	20	63	83	3	2	2.4	0.4	2.8
233062440002	MANISHA	14	65	79	3	3	2.4	0.6	3
233062440003	Sonam	20	73	93	3	2	2.4	0.4	2.8
233062440004	MONIKA	12	40	52	1	3	0.8	0.6	1.4
233062440005	SUSHILA	14	70	84	3	3	2.4	0.6	3
233062440006	REENU	20	67	87	3	3	2.4	0.6	3
233062440007	NEELAM	14	43	57	1	2	0.8	0.4	1.2
233062440008	ISHU	20	67	87	3	3	2.4	0.6	3
233062440009	POOJA	20	61	81	3	2	2.4	0.4	2.8
233062440010	MINAKSHI	18	46	64	2	3	1.6	0.6	2.2
233062440011	POOJA	19	45	64	2	3	1.6	0.6	2.2
233062440012	POONAM DEVI	19	59	78	3	3	2.4	0.6	3
233062440013	ANJALI	20	51	71	3	2	2.4	0.4	2.8
233062440014	SHEETAL	20	68	88	3	3	2.4	0.6	3
233062440015	KIRTI	19	56	75	3	2	2.4	0.4	2.8
233062440016	SUMAN	20	72	92	3	3	2.4	0.6	3
233062440017	CHINU	20	71	91	3	3	2.4	0.6	3
233062440018	POOJA	18	68	86	3	3	2.4	0.6	3
233062440019	MAYA DEVI	20	47	67	2	2	1.6	0.4	2
233062440020	GARIMA	10	40	50	1	3	0.8	0.6	1.4
233062440021	REKHA	12	42	54	1	2	0.8	0.4	1.2
233062440022	Ankita	12	45	57	1	3	0.8	0.6	1.4
233062440023	POOJA DEVI	20	59	79	3	3	2.4	0.6	3
233062440024	RADHA	11	42	53	1	3	0.8	0.6	1.4
233062440025	PREETI	14	40	54	1	2	0.8	0.4	1.2
233062440026	DIMPLE	20	69	89	3	3	2.4	0.6	3
233062440027	SUNITA	13	40	53	1	2	0.8	0.4	1.2
233062440028	MAMTA RANI	20	70	90	3	3	2.4	0.6	3
233062440029	PREETI	20	66	86	3	2	2.4	0.4	2.8

Toal Students: 29

Appeared : 29

Passed: 29

No. of Students achieved high attainment Level: 20

No. of Students achieved Moderate attainment Level: 01

No. of Students achieved Low attainment Level: 08

Average attainment Level of Course outcome: 2.4