



**ARKA JAIN University**  
Jharkhand



[17-02-2026]

**END SEM EXAMINATION**  
School of Health and Allied Sciences

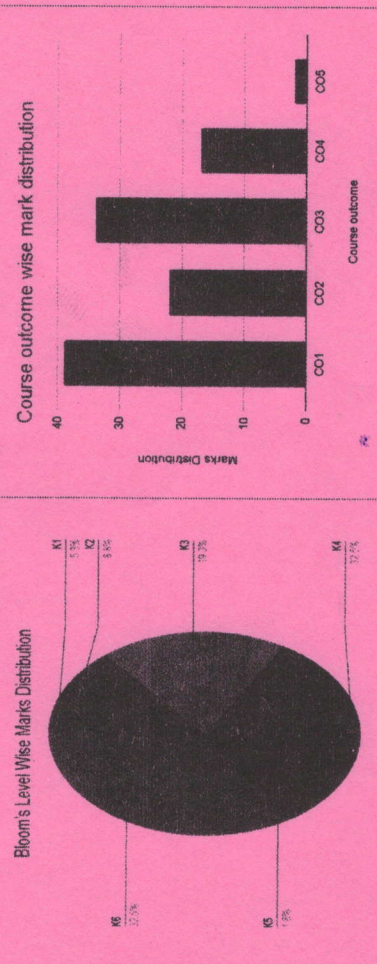
Program	Bachelor of Science in MLT / CVT / AOTT		
Subject Name	Human Anatomy & Physiology		
Semester	I	Session	Odd, 2025-26
		Year	Feb, 2026
Time: 3 Hour Max. Marks : 70	<ul style="list-style-type: none"> <li>Start writing from 2nd page onwards; <u>don't Write on the 1st Page Backside</u></li> <li>Answer all Questions of Section A (Compulsory)</li> <li>Answer Any Four out of Six of Section B</li> <li>Answer Any Two out of Four of Section C</li> <li>Possession of Mobile Phones or any kind of <u>Written Material, Arguments with the Invigilator or Discussing with Co-Student</u> will come under <u>Unfair Means</u> and will <u>Result in the Cancellation of the Papers.</u></li> </ul>		
Knowledge Level (KL)	K1 : Remembering	K3 : Applying	K5 : Evaluating
	K2 : Understanding	K4 : Analysing	K6 : Creating

**Section A (Each question Carry 01 Mark from Q1-i to xii) – 12 Marks**

Q. N	QUESTIONS	Marks	COs	KL
1				
i	Name the hormone secreted by the pancreas that lowers blood glucose levels.	01	CO5	K2
ii	Which cell organelle is known as the "powerhouse of the cell"?	01	CO3	K1
iii	What is homeostasis?	01	CO5	K2
iv	A patient has reduced oxygen transport due to low hemoglobin levels. Which component of blood is affected and why is this clinically significant?	01	CO4	K5
v	Which blood vessel carries blood away from the heart?	01	CO3	K1
vi	Which endocrine gland is called the "master gland"?	01	CO3	K1
vii	What type of bone is patella?	01	CO4	K4
viii	How many types of muscle are present in the human body?	01	CO2	K5
ix	Which connective tissue covers the spinal cord?	01	CO3	K1

Course Outcomes	CO1	Design a visual representation of the human body's systems and their functions.
	CO2	Analyze how body systems interact during physical activities.
	CO3	Recall major organs and their functions in key body systems.
	CO4	Apply anatomical and physiological knowledge to clinical cases.
	CO5	Explain how the body maintains homeostasis and the effects of disruptions.

**GRAPHICAL REPRESENTATION**



x	Which organ secretes bile?	01	CO3	K1
xi	How many pairs of spinal nerves are present?	01	CO1	K2
xii	Which plane divides the body into upper and lower parts?	01	CO1	K1

**Section B (Answer any FOUR out of SIX) – 28 Marks**  
(Each question Carry 07 Marks)

Q. No.	QUESTIONS	Marks	COs	KL
2	Describe the structure and hormones of pituitary and thyroid glands. Mention two functions of hormones.	07	CO3	K2
3	State two feedback mechanisms in endocrine regulation. Explain mechanism of hormone action.	07	CO2	K4
4	Explain the process of gaseous exchange in the lungs. Mention two factors affecting gas exchange.	07	CO1	K4
5	Explain neuromuscular junction with labelled diagram?	07	CO2	K3
6	What is joint? Classify synovial joint with examples and write about their movements.	07	CO2	K4
7	Write about the structure of stomach with suitable diagram	07	CO3	K6

**Section C (Answer any TWO out of FOUR) – 30 Marks**  
(Each question Carry 15 Marks)

Q. No.	QUESTIONS	Marks	COs	KL
8	What is double circulation and why it is important in human? Explain it with suitable diagram. Describe the layer of heart wall.	15	CO3	K3
9	Classify epithelial tissue with example. Write a short note on cuboidal epithelium.	15	CO4	K4
10	Define spinal cord. Explain the structure of the spinal cord with a diagram. Write about the functions of CSF.	15	CO1	K6
11	What is skeletal system? Write about the functions of the skeletal system. Explain the structure of a long bone with diagram. Write a short note on ricket.	15	CO1	K6



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[18-02-2026]  
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Program	Bachelor of Science in MLT / CVT / AOTT	
Subject Name	Biochemistry	Session Odd, 2025-26
Semester	I	Year Feb, 2026
Time: 3 Hour Max. Marks : 70	<ul style="list-style-type: none"> <li>Start writing from 2nd page onwards; <u>don't Write on the 1st Page Backside</u></li> <li>Answer all Questions of Section A (Compulsory)</li> <li>Answer Any Four out of Six of Section B</li> <li>Answer Any Two out of Four of Section C</li> <li>Possession of <u>Mobile Phones</u> or any kind of <u>Written Material</u>, <u>Arguments with the Invigilator</u> or <u>Discussing with Co-Student</u> will come under <u>Unfair Means</u> and will <u>Result</u> in the <u>Cancellation of the Papers.</u></li> </ul>	
Knowledge Level (KL)	K1 : Remembering	K5 : Evaluating
	K2 : Understanding	K6 : Creating

K3 : Applying  
K4 : Analysing

**Section A (Each question Carry 01 Mark from Q1-i to xii) - 12 Marks**

Q.N	QUESTIONS	Marks	COs	KL
i	What do you mean by the term epimerization?	01	CO4	K1
ii	The insoluble part of starch is known as _____.	01	CO4	K1
iii	Vitamin B3 is called Niacin. True or False.	01	CO4	K1
iv	Write down the full form of ACTH.	01	CO4	K1
v	Give examples of dietary sources rich in Vitamin E.	01	CO4	K1
vi	Name one pyrimidine base present in RNA.	01	CO4	K1
vii	Fundamental unit of protein is _____.	01	CO4	K1
viii	Define an enzyme.	01	CO2	K1
ix	What is enzyme inhibition?	01	CO2	K2
x	Name any one diagnostic enzyme used in myocardial infarction.	01	CO5	K3
xi	Name the end product of glycolysis under aerobic conditions.	01	CO3	K1
xii	Which organ is the main site of the urea cycle?	01	CO3	K1

**Section B (Answer any FOUR out of SIX) - 28 Marks**  
(Each question Carry 07 Marks)

Q. No.	QUESTIONS	Marks	COs	KL
2	Describe glycolysis with steps, energy yield, and significance.	07	CO3	K3
3	Explain the Krebs cycle.	07	CO3	K2
4	Write a short note on - a. Glycogenesis. b. Vitamins.	07	CO1	K2
5	Write down the properties and functions of carbohydrates.	07	CO4	K2
6	Elaborate classification of Protein.	07	CO4	K2
7	Describe the different types of enzyme inhibition.	07	CO2	K4

**Section C (Answer any TWO out of FOUR) - 30 Marks**  
(Each question Carry 15 Marks)

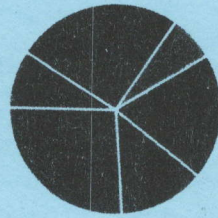
Q. No.	QUESTIONS	Marks	COs	KL
1	Discuss lipid and amino acid metabolism. Write the clinical significance of metabolic disorders.	15	CO5	K5
2	Differentiate between DNA and RNA. Draw the DNA model proposed by Watson and Crick.	15	CO1	K6
3	Explain in detail the general functions and classification of hormones.	15	CO2	K4
4	a. Draw and explain the cyclization of Glucose. b. Differentiate between epimer and anomer.	15	CO1	K6

CO- Course Outcomes, KL- Knowledge Level, PO - Program Outcome

Course Outcomes	CO1	CO2	CO3	CO4	CO5
Develop a biochemical pathway chart illustrating metabolic processes.					
Critique enzyme roles and the effects of enzyme inhibitors on metabolism.					
Analyze metabolic pathways involved in energy production.					
Memorize key enzymes and intermediates in major metabolic pathways.					
Apply metabolic principles to understand metabolic disorders.					

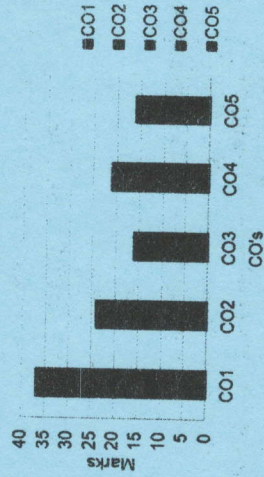
**GRAPHICAL REPRESENTATION**

Bloom's Level Wise Marks Distribution



■ K1 ■ K2 ■ K3 ■ K4 ■ K5 ■ K6

Course Outcome Wise Mark Distribution





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[26-02-2026]  
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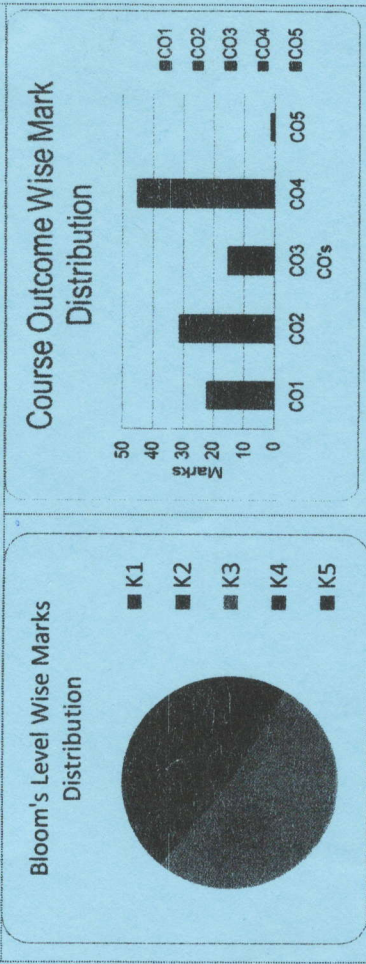
Program	Bachelor of Science in MLT / CVT / AOTT	
Subject Name	Introduction to Computing	
Semester	I	Session Odd, 2025-26 Year Feb, 2026
Time: 3 Hour Max. Marks : 70	<ul style="list-style-type: none"> <li>Start writing from 2nd page onwards; <u>don't Write on the 1st Page Backside</u></li> <li>Answer all Questions of Section A (Compulsory)</li> <li>Answer Any <u>Four</u> out of Six of Section B</li> <li>Answer Any <u>Two</u> out of Four of Section C</li> <li>Possession of <u>Mobile Phones</u> or any kind of <u>Written Material, Arguments with the Invigilator or Discussing with Co-Student</u> will come under <u>Unfair Means</u> and will result in the <u>Cancellation of the Papers.</u></li> </ul>	
Knowledge Level (KL)	K1 : Remembering	K5 : Evaluating
	K2 : Understanding	K6 : Creating

**Section A (Each question Carry 01 Mark from Q1-i to xii) - 12 Marks**

Q. N	QUESTIONS	Marks	COs	KL
i	Define a computer.	01	CO4	K1
ii	What shortcut key is used to save a document in MS-Word?	01	CO5	K3
iii	Expand CPU.	01	CO4	K1
iv	Name any one input device.	01	CO4	K1
v	What is main memory?	01	CO4	K1
vi	Which memory is permanent - RAM or ROM?	01	CO4	K1
vii	Which software is used to create presentations?	01	CO4	K1
viii	Give one example of an Operating System.	01	CO4	K1
ix	Expand LAN.	01	CO4	K1
x	What is Internet?	01	CO2	K1

Course Outcomes	CO1	Design a simple software application or website.
	CO2	Assess the effectiveness of computing technologies in solving problems.
	CO3	Analyse the societal impact of technologies like AI and cloud computing.
	CO4	Recall essential hardware, software, and programming concepts.
	CO5	Apply computational thinking to solve problems with programming solutions.

**GRAPHICAL REPRESENTATION**



Q. No.	QUESTIONS	Marks	COs	KL
xi	Identify which part of CPU (ALU/Control Unit) performs arithmetic operations.	01	CO4	K4
xii	What is a browser?	01	CO2	K1
<b>Section B (Answer any FOUR out of SIX) – 28 Marks</b> (Each question Carry 07 Marks)				
2	Draw and explain the block diagram of a computer.	07	CO4	K3
3	Describe different input devices with examples.	07	CO4	K2
4	Explain the functions of CPU (ALU and Control Unit).	07	CO4	K2
5	Explain the steps to create, save, and print a document in MS-Word.	07	CO1	K3
6	Describe the features of Windows Operating System.	07	CO2	K2
7	Explain types of networks (LAN, MAN, WAN) with examples.	07	CO2	K2
<b>Section C (Answer any TWO out of FOUR) – 30 Marks</b> (Each question Carry 15 Marks)				
Q. No.	QUESTIONS	Marks	COs	KL
8	Describe various input and output devices in detail with diagrams.	15	CO4	K3
9	Explain MS-PowerPoint and the steps to create an effective presentation.	15	CO1	K3
10	Explain Internet and its applications. Discuss uses of computers in different fields.	15	CO2	K3
11	Analyse the societal impact of technologies like AI, Cloud Computing, and Internet in education, healthcare, and industry. Discuss both benefits and risks.	15	CO3	K5



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[19-02-2026]

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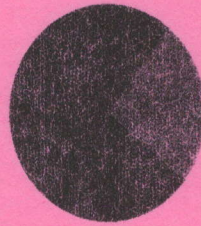
Program	Bachelor of Science in MLT / CVT / AOTT		
Subject Name	Accounting and Finance		
Semester	I	Session	Odd, 2025-26
Time: 3 Hour Max. Marks : 70	Year Feb, 2026		
Knowledge Level (KL)	<ul style="list-style-type: none"> <li>Start writing from 2nd page onwards; don't write on the 1st Page Backside</li> <li>Answer all Questions of Section A (Compulsory)</li> <li>Answer Any Four out of Six of Section B</li> <li>Answer Any Two out of Four of Section C</li> <li>Possession of <u>Mobile Phones</u> or any kind of <u>Written Material</u>, <u>Arguments with the Invigilator</u> or <u>Discussing with Co-Student</u> will come under <u>Unfair Means</u> and will <u>Result</u> in the <u>Cancellation of the Papers</u>.</li> </ul>		
	K1 : Remembering	K3 : Applying	K5 : Evaluating
	K2 : Understanding	K4 : Analysing	K6 : Creating

Section A (Each question Carry 01 Mark from Q1-i to xii) – 12 Marks			
Q.N	QUESTIONS	Marks	COs
1			KL
i	Define financial management.	01	CO4 K1
ii	What is meant by expenditure?	01	CO4 K1
iii	Define assets.	01	CO4 K1
iv	What is liability?	01	CO4 K1
v	State the meaning of profit.	01	CO4 K1
vi	What is banking?	01	CO2 K1
vii	Expand GST.	01	CO4 K1
viii	Define investment.	01	CO4 K1
ix	What is a current account?	01	CO4 K1
x	State one advantage of saving money.	01	CO5 K2

CO1	Create a financial plan for a hypothetical business using accounting principles.
CO2	Assess an organization's financial health through financial statements and ratios.
CO3	Analyse financial data to determine a company's performance.
CO4	Recall fundamental accounting concepts like balance sheets and income statements.
CO5	Apply accounting principles to record transactions and prepare statements.

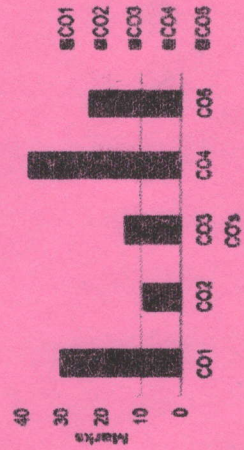
**GRAPHICAL REPRESENTATION**

**Bloom's Level Wise Marks Distribution**



■ K1 ■ K2 ■ K3 ■ K4 ■ K5 ■ K6

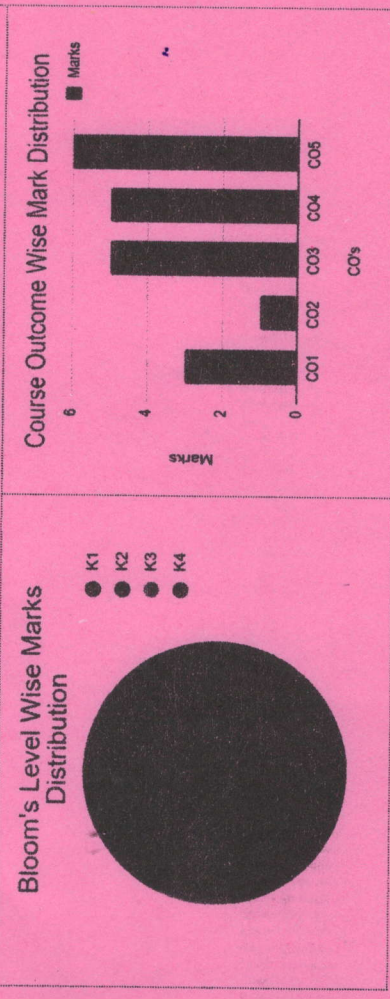
**Course Outcome Wise Mark Distribution**



Q. No.	QUESTIONS	Marks	COs	KL
xi	What is insurance?	01	CO2	K1
xii	Give one example of variable expense.	01	CO4	K2
<b>Section B (Answer any FOUR out of SIX) - 28 Marks</b> (Each question Carry 07 Marks)				
Q. No.	QUESTIONS	Marks	COs	KL
2	Explain the need and objectives of personal financial planning.	07	CO4	K2
3	Prepare a monthly household budget for an income of ₹15,000 showing different expenses.	07	CO5	K3
4	Describe the components of an income statement with example.	07	CO3	K2
5	Explain any four types of bank accounts.	07	CO2	K3
6	Discuss methods to control unnecessary expenses.	07	CO4	K3
7	Differentiate between fixed expenses and variable expenses.	07	CO3	K3
<b>Section C (Answer any TWO out of FOUR) - 30 Marks</b> (Each question Carry 15 Marks)				
Q. No.	QUESTIONS	Marks	COs	KL
8	Explain the meaning of savings and investment. Describe any five advantages of saving money for the future with examples.	15	CO4	K2
9	Define Time Value of Money (TVM). If ₹15,000 is invested for 4 years at 12% annual compound interest, calculate the Future Value.	15	CO5	K4
10	Prepare a personal financial plan for a healthcare professional showing monthly income, expenditure, savings, and investment strategies.	15	CO1	K6
11	Prepare a monthly cash-flow statement for a small medical clinic and determine whether the clinic has a surplus or deficit.	15	CO3	K4

CO- Course Outcomes,	KL- Knowledge Level, PO - Program Outcome
CO1	Develop a quality improvement plan for a healthcare facility.
CO2	Evaluate the effectiveness of patient safety protocols in reducing errors.
CO3	Analyze medical errors and propose preventive measures.
CO4	Recall key patient safety concepts like adverse events and reporting.
CO5	Apply quality management principles to assess healthcare outcomes.

**GRAPHICAL REPRESENTATION**



[25-02-2026]  
**END SEM EXAMINATION**  
 School of Allied Health and Science



Program	Bachelor of Science- MLT / CVT / AOTT		
Subject Name	Introduction to Quality and Patient Safety- Theory	Session	Odd, 2025-26
Semester	I	Year	Feb, 2026
Time: 3 Hour Max. Marks: 70	<ul style="list-style-type: none"> <li>Start writing from 2nd page onwards; don't write on the 1st Page Backside</li> <li>Answer all Questions of Section A (Compulsory)</li> <li>Answer Any Four out of Six of Section B</li> <li>Answer Any Two out of Four of Section C</li> <li>Possession of Mobile Phones or any kind of <u>Written Material, Arguments with the Invigilator or Discussing with Co-Student</u> will come under <u>Unfair Means</u> and will <u>Result</u> in the <u>Cancellation of the Papers.</u></li> </ul>		
Knowledge Level (KL)	K1 : Remembering	K3 : Applying	K5 : Evaluating
	K2 : Understanding	K4 : Analysing	K6 : Creating

Q.N	QUESTIONS	Marks	KL	
			COs	COs
1				
i	Define quality of care in healthcare.	01	CO4	K1
ii	What is meant by patient safety?	01	CO5	K1
iii	Name two color code used in biomedical waste segregation.	01	CO4	K1
iv	What does NABH stand for?	01	CO3	K1
v	What is drug and pharmaceutical waste?	01	CO4	K2
vi	State two objectives of quality improvement.	01	CO4	K1
vii	Define vital signs. Name any four vital signs.	01	CO1	K1
viii	Define Hospital-acquired infection.	01	CO3	K1
ix	Expand CPR.	01	CO5	K1
x	What is PPE?	01	CO5	K1

xi	What is rescue breathing? When is it used.	01	CO4	K2
xii	What is a healthcare-associated infection (HAI)?	01	CO3	K1
<b>Section B (Answer any FOUR out of SIX) – 28 Marks</b> (Each question Carry 07 Marks)				
Q. No.	QUESTIONS	Marks	COs	KL
2	Explain quality improvement tools used in healthcare facilities.	07	CO1	K2
3	Describe the fundamentals of disaster management in healthcare.	07	CO6	K2
4	Explain the process of biomedical waste segregation and disposal with color coding.	07	CO5	K2
5	Explain how antibiotic resistance develops and spreads in healthcare settings.	07	CO3	K3
6	Describe the steps involved in primary assessment during emergency care.	07	CO6	K2
7	Discuss components of an effective infection control program in hospitals.	07	CO2	K3
<b>Section C (Answer any TWO out of FOUR) – 30 Marks</b> (Each question Carry 15 Marks)				
Q. No.	QUESTIONS	Marks	COs	KL
8	Analyze medical errors in healthcare and propose preventive measures to improve patient safety.	15	CO3	K4
9	Describe the biomedical waste management system in a hospital. Explain the steps involved in segregation, color coding, treatment, and disposal, and mention how this system helps in preventing infection.	15	CO5	K3
10	Explain the concept of quality improvement in healthcare. Describe the commonly used quality improvement tools and explain how they help in improving patient safety in a healthcare facility.	15	CO1	K3
11	Explain disaster management in healthcare settings. Discuss preparedness, resource management, and key response functions during a disaster.	15	CO5	K4



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[24-02-2026]

**END SEM EXAMINATION**  
School of Health and Allied  
Science

Program	Bachelor of Science in AOTT / CVT / MLT	
Subject Name	Communication Skills	
Semester	I	Year
		Odd, 2025-26
Time: 3 Hour Max. Marks : 70	<ul style="list-style-type: none"> <li>Start writing from 2nd page onwards; <b>don't Write on the 1st Page Backside</b></li> <li>Answer all Questions of Section A (Compulsory)</li> <li>Answer Any Four out of Six of Section B</li> <li>Answer Any Two out of Four of Section C</li> <li>Possession of Mobile Phones or any kind of Written Material, Arguments with the Invigilator or Discussing with Co-Student will come under <b>Unfair Means</b> and will <b>Result</b> in the <b>Cancellation of the Papers.</b></li> </ul>	
Knowledge Level (KL)	K1 : Remembering	K5 : Evaluating
	K2 : Understanding	K6 : Creating

Section A (Each question Carry 01 Mark from Q1-i to xii) - 12 Marks			
Q.N	QUESTIONS	Marks	COs
1			KL
i	In how many seconds is a first impression usually formed?	01	CO4 K1
ii	What does eye contact indicate in communication?	01	CO2 K3
iii	How many vowel sounds are there in the English language.	01	CO3 K1
iv	What is posture?	01	CO2 K2
v	Write down two barriers of effective communication.	01	CO5 K2
vi	What is hearing?	01	CO4 K6
vii	Give one example of visual communication.	01	CO3 K4
viii	How many syllables are there in the word communication?	01	CO3 K3
ix	What type of question starts with why or how?	01	CO2 K2
x	Name one aspect of personal grooming.	01	CO5 K1

CO- Course Outcomes, **KL- Knowledge Level, PO – Program Outcome**

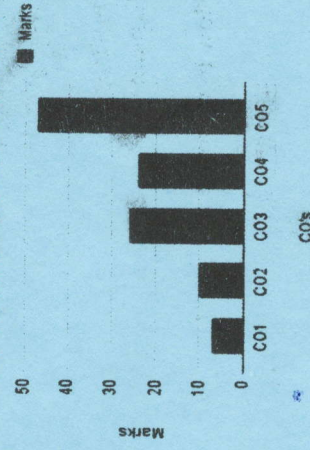
Course Outcomes	CO1	Compose professional emails, presentations, and reports.
	CO2	Evaluate the effectiveness of communication techniques in achieving goals.
	CO3	Analyze verbal and non-verbal communication styles.
	CO4	Recall core communication principles such as active listening and clarity.
	CO5	Apply communication strategies to improve collaboration and customer relations.

**GRAPHICAL REPRESENTATION**

**Bloom's Level Wise Marks**



**Course Outcome Wise Mark Distribution**



Q. No.	QUESTIONS	Marks	COs	KL
xi	What is the first step in handling a difficult conversation?	01	CO5	K5
xii	Mention one example of written communication.	01	CO3	K6
<b>Section B (Answer any FOUR out of SIX) – 28 Marks</b> (Each question Carry 07 Marks)				
Q. No.	QUESTIONS	Marks	COs	KL
2	Define first impressions. Explain the importance of first impression in the healthcare sector?	07	CO5	K4
3	What is communication? Discuss about the different types of communication.	07	CO2	K1
4	Define reading skills. Describe the steps involved in reading a patient's report.	07	CO3	K4
5	Define questioning skills. Write about the purpose of questioning skills.	07	CO5	K5
6	Explain the reasons behind poor listening skills.	07	CO4	K4
7	How to write a professional email.	07	CO1	K6
<b>Section C (Answer any TWO out of FOUR) – 30 Marks</b> (Each question Carry 15 Marks)				
Q. No.	QUESTIONS	Marks	COs	KL
8	Define conflict. In the medical field how effective communication can resolve the conflict. Explain how to deliver bad news to patients or their loved ones. (2+5+8)	15	CO5	K3
9	What are vowel sounds? Classify vowel sounds with examples? How are vowel sounds created? Write about the importance of vowel sounds? (2+3+5+5)	15	CO3	K6
10	Write about the grooming guidelines for men and women. Why personal hygiene and grooming important for healthcare professionals? Describe how grooming affects first impressions? (5+5+5)	15	CO5	K2
11	What is active listening? Write about the difference between hearing, listening and active listening. Explain how active listening is beneficial for both patient and healthcare provider in the medical field. (2+5+8)	15	CO4	K1