

 ARKA JAIN University Jharkhand		 NAAC GRADE A ACCREDITED UNIVERSITY		END SEM EXAMINATION School of Health & Allied Sciences	
Program		B.Sc. Medical Laboratory Technology (Hons.)			
Subject Name		Basics of Medical Laboratory Technology-THEORY		Session	Even, 2024-2025
Semester		II		Year	August, 2025
Time: 3 Hour Max. Marks : 70		• Start writing from 2nd page onwards; <u>don't Write on the 1st Page Backside</u> • Answer all Questions of Section A (Compulsory) • Answer Any <u>Four</u> out of Six of Section B • Answer Any <u>Two</u> out of Four of Section C • Possession of <u>Mobile Phones</u> or any kind of <u>Written Material, Arguments with the Invigilator or Discussing with Co-Student</u> will comes under <u>Unfair Means</u> and will <u>Result</u> in the <u>Cancellation of the Papers.</u>			
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	
i	What is the full form of MLT?	01	CO1	KL1	
ii	Which body fluid is tested in urinalysis?	01	CO1	KL2	
iii	Who issues the GCLP guidelines?	01	CO1	KL3	
iv	What is the first phase in the laboratory testing process?	01	CO1	KL3	
v	What is one basic right of a patient in healthcare?	01	CO1	KL3	
vi	What is the standard color of the infectious waste disposal bin?	01	CO2	KL4	
vii	What is the full form of SOP in laboratory practice?	01	CO2	KL2	
viii	Name one biological hazard found in a clinical laboratory.	01	CO3	KL1	
ix	What is the main goal of patient-centred care?	01	CO4	KL4	
x	What is the recommended duration for handwashing in the lab?	01	CO4	KL3	

CO- Course Outcomes,		KL- Knowledge Level,	PO – Program Outcome
Course Outcomes	CO1	Demonstrate haematology equipment and describe blood composition.	
	CO2	Apply knowledge of blood and anticoagulants.	
	CO3	Illustrate hemopoiesis process.	
	CO4	Explain haemostasis and perform urine analysis.	
	CO5	Evaluate quality assurance and discuss blood collection techniques.	
GRAPHICAL REPRESENTATION			
Bloom's Level wise Marks Distribution		Course Outcome Wise Marks Distribution	

xi	Which department conducts bleeding time and clotting time tests?	01	CO5	KL5
xii	Name a chemical commonly used for sterilizing laboratory surfaces.	01	CO5	KL2
Section B (Answer any FOUR out of SIX) – 28 Marks (Each question Carry 07 Marks)				
Q. No.	QUESTIONS	Marks	COs	KL
2	What are the main types of healthcare systems?	07	CO1	KL2
3	What does “patient-centred care” mean? Explain with an example.	07	CO2	KL3
4	What is histopathology and why is it important?	07	CO4	KL4
5	Describe a safe and healthy lab work environment.	07	CO3	KL2
6	What can go wrong if GCLP is not followed?	07	CO5	KL5
7	What are the steps taken before testing a sample in the lab?	07	CO5	KL2
Section C (Answer any TWO out of FOUR) – 30 Marks (Each question Carry 15 Marks)				
Q. No.	QUESTIONS	Marks	COs	KL
8	Describe the impact of telemedicine and e-health in improving healthcare access.	15	CO2	KL2
9	Discuss how advanced automation and artificial intelligence are transforming lab practices.	15	CO3	KL3
10	How do future trends in lab science improve healthcare efficiency?	15	CO4	KL4
11	Describe the role of Internal Quality Assessment (IQA) in ensuring accuracy and reliability of test results in NABL-accredited laboratories.	15	CO5	KL5

Q.12	10	10	10	10
Q.13	10	10	10	10
Q.14	10	10	10	10
Q.15	10	10	10	10
Q.16	10	10	10	10
Q.17	10	10	10	10
Q.18	10	10	10	10
Q.19	10	10	10	10
Q.20	10	10	10	10
Q.21	10	10	10	10
Q.22	10	10	10	10
Q.23	10	10	10	10
Q.24	10	10	10	10
Q.25	10	10	10	10
Q.26	10	10	10	10
Q.27	10	10	10	10
Q.28	10	10	10	10
Q.29	10	10	10	10
Q.30	10	10	10	10
Q.31	10	10	10	10
Q.32	10	10	10	10
Q.33	10	10	10	10
Q.34	10	10	10	10
Q.35	10	10	10	10
Q.36	10	10	10	10
Q.37	10	10	10	10
Q.38	10	10	10	10
Q.39	10	10	10	10
Q.40	10	10	10	10
Q.41	10	10	10	10
Q.42	10	10	10	10
Q.43	10	10	10	10
Q.44	10	10	10	10
Q.45	10	10	10	10
Q.46	10	10	10	10
Q.47	10	10	10	10
Q.48	10	10	10	10
Q.49	10	10	10	10
Q.50	10	10	10	10
Q.51	10	10	10	10
Q.52	10	10	10	10
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Q.79	10	10	10	10
Q.80	10	10	10	10
Q.81	10	10	10	10
Q.82	10	10	10	10
Q.83	10	10	10	10
Q.84	10	10	10	10
Q.85	10	10	10	10
Q.86	10	10	10	10
Q.87	10	10	10	10
Q.88	10	10	10	10
Q.89	10	10	10	10
Q.90	10	10	10	10
Q.91	10	10	10	10
Q.92	10	10	10	10
Q.93	10	10	10	10
Q.94	10	10	10	10
Q.95	10	10	10	10
Q.96	10	10	10	10
Q.97	10	10	10	10
Q.98	10	10	10	10
Q.99	10	10	10	10
Q.100	10	10	10	10

JGI	ARKA JAIN University Jharkhand	NAAC GRADE A ACCREDITED UNIVERSITY	END SEM EXAMINATION School of Health & Allied Sciences
Program	B.Sc. Medical Laboratory Technology (Hons.)		
Subject Name	Routine Tests in Medical Laboratory	Session	Even, 2024-2025
Semester	II	Year	August, 2025
Time: 3 Hour Max. Marks : 70	- Start writing from 2nd page onwards; <u>don't Write on the 1st Page Backside</u> - Answer all Questions of Section A (Compulsory) - Answer Any Four out of Six of Section B - Answer Any Two out of Four of Section C - Possession of Mobile Phones or any kind of Written Material, Arguments with the Invigilator or Discussing with Co-Student will comes under <u>Unfair Means</u> and will <u>Result in the Cancellation of the Papers.</u>		
Knowledge Level (KL)	K1 : Remembering	K3 : Applying	K5 : Evaluating
	K2 : Understanding	K4 : Analysing	K6 : Creating

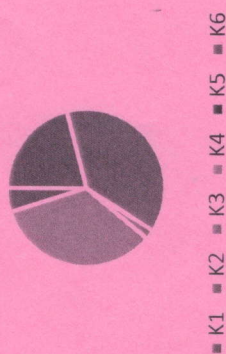
Section A (Each question Carry 01 Mark from Q1-i to xii) – 12 Marks				
Q. N	QUESTIONS	Marks	COs	KL
i	Which microscope uses electron beams for imaging?	01	CO1	KL2
ii	What part of the microscope holds the objective lenses?	01	CO1	KL3
iii	What is the principle behind a colorimeter?	01	CO2	KL2
iv	What term defines the rotation speed in a centrifuge?	01	CO2	KL4
v	Which component in a centrifuge holds the sample tubes?	01	CO2	KL3
vi	What anticoagulant is used for CBC analysis?	01	CO3	KL2
vii	Which blood component increases during infection?	01	CO3	KL4
viii	What is the standard temperature for a hot air oven?	01	CO3	KL4
ix	What filter is used in laminar flow cabinets?	01	CO4	KL2
x	Which sterilizer works at 121°C and 15 psi?	01	CO4	KL3

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

CO1	Remember key concepts, terminology, and basic laboratory techniques.
CO2	Understand the principles of laboratory tests and their role in patient care.
CO3	Apply standard laboratory procedures for specimen collection, processing, and analysis.
CO4	Analyze laboratory results, identifying errors or abnormalities, and interpreting them clinically.
CO5	Evaluate different laboratory methods for accuracy and relevance in diagnosis

GRAPHICAL REPRESENTATION

Bloom's Level wise Marks Distribution



Course Outcome Wise Marks Distribution



xi	What color indicates glucose positivity on a urine strip?	01	CO3	KL4
xii	What kind of centrifuge is used for DNA isolation?	01	CO5	KL5
Section B (Answer any FOUR out of SIX) – 28 Marks (Each question Carry 07 Marks)				
Q. No.	QUESTIONS	Marks	COs	KL
2	Draw a labelled diagram of a compound microscope and describe the function of each part.	07	CO1	KL2
3	A patient's blood sample shows an optical density (OD) of 0.68. A standard hemoglobin solution has an OD of 0.51 with a known concentration of 14.5 g/dL. Calculate the hemoglobin concentration of the patient's sample using the colorimetric method. Also, illustrate the stepwise procedure for hemoglobin estimation using a flowchart.	07	CO2	KL3
4	Briefly explain blood collection techniques, key phlebotomy precautions, and the WHO order of draw.	07	CO3	KL2
5	Describe the working principle and procedure of a colorimeter. Support your answer with a labelled diagram	07	CO4	KL4
6	Explain the principle and working of a urine analyzer. Mention any three key applications in clinical laboratory practice.	07	CO5	KL3
7	Describe the demonstration and maintenance steps of a laminar airflow cabinet.	07	CO5	KL5
Section C (Answer any TWO out of FOUR) – 30 Marks (Each question Carry 15 Marks)				
Q. No.	QUESTIONS	Marks	COs	KL
8	Describe the principle, types, working mechanism, and applications of a microtome. Mention its role in tissue sectioning.	15	CO1	KL3
9	Explain the principle, working, and clinical use of an automated blood analyzer with a labelled diagram. Mention its role in haematology.	15	CO2	KL2
10	Describe the histopathological instrumentation with focus on microtome – its working, use, and quality control.	15	CO3	KL2
11	Explain the principle, working, operation techniques, and maintenance of microbiological instruments:	15	CO5	KL4

	incubator, hot air oven, and autoclave. Mention their common uses			
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	ARKA JAIN University Jharkhand		END SEM EXAMINATION School of Health & Allied Sciences
Program	B.Sc. Medical Laboratory Technology (Hons.)		
Subject Name	Hematology-Theory	Session	Even, 2024-2025
Semester	II	Year	August, 2025
Time: 3 Hour Max. Marks : 70	• Start writing from 2nd page onwards; don't Write on the 1st Page Backside • Answer all Questions of Section A (Compulsory) • Answer Any Four out of Six of Section B • Answer Any Two out of Four of Section C • Possession of Mobile Phones or any kind of Written Material, Arguments with the Invigilator or Discussing with Co-Student will comes under <u>Unfair Means</u> and will <u>Result</u> in the <u>Cancellation of the Papers.</u>		
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 1	QUESTIONS	Marks	COs	KL
i	Name the pigment present in red blood cells.	01	CO1	KL1
ii	What is the pH of normal blood?	01	CO1	KL2
iii	Name the protein responsible for oxygen transport.	01	CO1	KL3
iv	Which vitamin is essential for RBC synthesis?	01	CO1	KL3
v	What is the normal hemoglobin range in adult males?	01	CO1	KL3
vi	What type of immunity do T-cells provide?	01	CO2	KL4
vii	Which plasma protein maintains osmotic balance?	01	CO2	KL2
viii	What protein level is checked in liver function tests?	01	CO3	KL1
ix	What tube is used for coagulation studies?	01	CO4	KL4
x	What type of stem cells form blood cells?	01	CO4	KL3

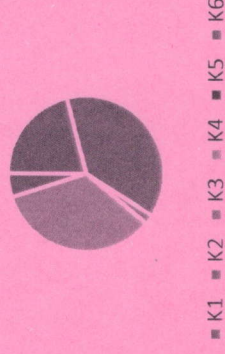
xi	What is the lifespan of a platelet?	01	CO5	KL5
xii	What does MHC stand for?	01	CO5	KL2
Section B (Answer any FOUR out of SIX) – 28 Marks (Each question Carry 07 Marks)				
Q. No.	QUESTIONS	Marks	COs	KL
2	Provide a brief overview of blood and its functions.	07	CO1	KL2
3	Explain the role of electrolytes in maintaining physiological homeostasis	07	CO2	KL3
4	What is hemoglobin degradation? Illustrate the process using a flowchart.	07	CO4	KL4
5	What is cell-mediated immunity? Explain briefly.	07	CO3	KL2
6	Explain the function of natural killer (NK) cells in cancer detection and elimination.	07	CO5	KL5
7	Define packed cell volume (PCV)	07	CO5*	KL2
Section C (Answer any TWO out of FOUR) – 30 Marks (Each question Carry 15 Marks)				
Q. No.	QUESTIONS	Marks	COs	KL
8	Explain the processes of erythropoiesis, leukopoiesis, and thrombopoiesis.	15	CO2	KL2
9	Explain the procedure of the cyanmethemoglobin method for haemoglobin estimation, including a flowchart	15	CO3	KL3
10	What is the correct order of draw in blood sample collection? Describe the procedure for venous and capillary blood collection.	15	CO4	KL4
11	Describe the clinical manifestations observed in a complete blood count (CBC).	15	CO5	KL5

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

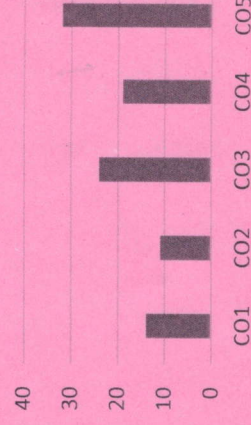
Course Outcomes	CO1	Demonstrate haematology equipment and describe blood composition.
	CO2	Apply knowledge of blood and anticoagulants.
	CO3	Illustrate hemopoiesis process.
	CO4	Explain haemostasis and perform urine analysis.
	CO5	Evaluate quality assurance and discuss blood collection * techniques.

GRAPHICAL REPRESENTATION

Bloom's Level wise Marks Distribution



Course Outcome Wise Marks Distribution



 ARKA JAIN University Jharkhand				END SEM EXAMINATION School of Health & Allied Sciences	
Program	B.Sc. MLT / A&OTT (Hons.)				
Subject Name	Critical Thinking		Session	Even, 2024-2025	
Semester	II		Year	August, 2025	
Time: 1.5 Hour Max. Marks : 35	• Start writing from 2nd page onwards; <u>don't Write on the 1st Page Backside</u> • Answer all Questions of Section A (Compulsory) • Answer Any <u>Five</u> out of Six of Section B • Answer Any <u>Two</u> out of Four of Section C • 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 <u>Result</u> in the <u>Cancellation of the Papers.</u>				
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 v) – 05 Marks				
Q. N1	QUESTIONS	Marks	COs	KL
i	Define critical thinking?	01	CO4	K1
ii	List the one system commonly used in critical thinking.	01	CO4	K1
iii	Define Argument?	01	CO1	K1
iv	Give full form of RCA?	01	CO4	K1
v	Name tools used for strategic planning?	01	CO4	K2
Section B (Answer any FIVE out of SIX) – 10 Marks (Each question Carry 02 Marks)				
Q. No.	QUESTIONS	Marks	COs	KL
2	List different ways how critical thinking improves patient outcomes?	02	CO5	K1
3	Categorize different types of logical reasoning used in healthcare and explain how they improve patient care?	02	CO5	K4

4	Describe the key characteristics of arguments?	02	CO1	K2
5	Construct 2 examples of strong arguments from a healthcare perspective?	02	CO3	K3
6	Explain the concept of a strawman and support it with an example?	02	CO2	K2
7	Describe the false dilemma fallacy and support it with an example?	02	CO4	K2
Section C (Answer any TWO out of FOUR) – 20 Marks (Each question Carry 10 Marks)				
Q. No.	QUESTIONS	Marks	COs	KL
8	Describe critical thinking and explain the characteristics of a critical thinker?	10	CO1	K2
9	Identify what is a conclusion, and analyze the characteristics of a strong conclusion with an example?	10	CO2	K4
10	Explain how Fishbone Analysis and Pareto Analysis can be applied in healthcare to investigate disease causes?	10	CO3	K4
11	Explain the concept of process mapping and outline steps to streamline patient admissions processes in a hospital?	10	CO5	K3

CO- Course Outcomes,	KL- Knowledge Level,	PO – Program Outcome
CO1	create reasoned arguments to address complex healthcare or scientific problems.	
CO2	Evaluate the strength and weaknesses of different viewpoints or solution	
CO3	Analyze situations from multiple perspectives to reach a well- informed conclusion.	
CO4	Recall principles of logical reasoning and cognitive biases.	
CO5	Apply critical Thinking skills to make informed decisions in clinical or academic settings.	
COURSE OUTCOMES		
GRAPHICAL REPRESENTATION		
Bloom's level wise mark distribution		
The pie chart illustrates the distribution of marks across four Bloom's levels: k1 (38.6%), k2 (21.1%), k3 (29.8%), and k4 (10.5%). The bar chart shows the course outcome wise marks distribution: C1 (10), C2 (10), C3 (10), C4 (10), and C5 (10).		

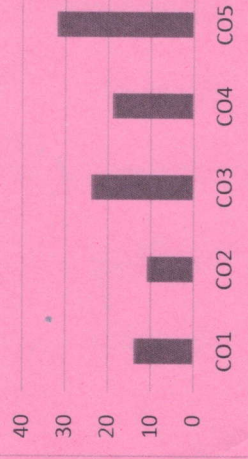
CO- Course Outcomes,		KL- Knowledge Level,	PO – Program Outcome
Course Outcomes	CO1	Create a microbiological chart to classify pathogens and their effects.	
	CO2	Evaluate microbial infections and their treatments based on laboratory findings.	
	CO3	Analyse the growth and behaviour of microorganisms in various environments.	
	CO4	Recall basic concepts of microbiology, including bacterial structures and functions.	
	CO5	Apply microbiological knowledge to diagnose infections and diseases.	

GRAPHICAL REPRESENTATION

Bloom's Level wise Marks Distribution



Course Outcome Wise Marks Distribution



Program	B.Sc. MLT / A&OTT (Hons.)		
Subject Name	General Microbiology	Session	Even, 2024-2025
Semester	II	Year	August, 2025
- Start writing from 2nd page onwards; don't Write on the 1st Page Backside - Answer all Questions of Section A (Compulsory) - Answer Any Four out of Six of Section B - Answer Any Two out of Four of Section C - Possession of Mobile Phones or any kind of <u>Written Material, Arguments with the Invigilator or Discussing with Co-Student</u> will comes under <u>Unfair Means</u> and will <u>Result</u> in the <u>Cancellation of the Papers.</u>			
Knowledge Level (KL)	K1 : Remembering		K5 : Evaluating
	K2 : Understanding		K6 : Creating

Time: 3 Hour
Max. Marks : 70

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

Q. N	QUESTIONS	Marks	COs	KL
i	What is the site of protein synthesis in cells?	01	CO4	KL2
ii	What type of virus uses reverse transcription?	01	CO1	KL1
iii	Which microbial group includes Amoeba?	01	CO1	KL1
iv	What enzyme joins Okazaki fragments?	01	CO4	KL3
v	What do you call bacteria that require oxygen?	01	CO2	KL1
vi	What is the process of bacteria forming spores for survival?	01	CO1	KL2
vii	What term describes microorganisms that cause disease?	01	CO1	KL3
viii	What is the extra-chromosomal DNA in bacteria?	01	CO3	KL5
ix	Which microbiological tool is used to grow microbes in the lab?	01	CO3	KL4
x	What is the primary stain used in Gram staining?	01	CO5	KL2

xi	What is the method of sterilization using dry heat?	01	CO5	KL3
xii	Which bacteria appear pink after Gram staining?	01	CO2	KL1
Section B (Answer any FOUR out of SIX) – 28 Marks (Each question Carry 07 Marks)				
Q. No.	QUESTIONS	Marks	COs	KL
2	What are the structural components of flagella, and how do they facilitate microbial motility?	07	CO1	KL2
3	How does the Baltimore classification system organize viruses based on their genetic material and replication methods?	07	CO3	KL4
4	a) What is algae? Describe its major types based on pigmentation and structure. (3 Marks) b) Differentiate between oogamy and polygamy, providing definitions, examples, and biological significance.(4Marks)	07	CO2	KL2
5	A. Discuss the major applications of microbiology in healthcare, including its role in disease diagnosis, treatment, and prevention. (4Marks) B. Define fungi, and explain any two key characteristics along with two common examples. (3 Marks)	07	CO3	KL3
6	Describe the steps of microbial pathogenesis and explain host-pathogen interactions	07	CO4	KL5
7	Compare generalised and specialised transduction in bacteria.	07	CO5	KL4
Section C (Answer any TWO out of FOUR) – 30 Marks (Each question Carry 15 Marks)				
Q. No.	QUESTIONS	Marks	COs	KL
8	Provide a brief overview of viruses, including their types, structure, modes of reproduction, and general characteristics.	15	CO1	KL2
9	Write a short note on bacteria, highlighting their structure, types, and significance in human health and the environment.	15	CO3	KL4
10	A. Describe the structure of DNA with the help of a well-labelled diagram. (7 Marks)	15	CO4	KL3

11	B. Explain the process of DNA replication, highlighting the role of key enzymes and the concept of semi-conservative replication. (8 Marks) Discuss the various factors that influence the lag phase and log (exponential) phase during bacterial growth.	15	CO5	KL5
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 ARKA JAIN University Jharkhand NAAC GRADE ACCREDITED UNIVERSITY  END SEM EXAMINATION School of Health & Allied Sciences					
Program	B.Sc. MLT / A&OTT (Hons.)				
Subject Name	Healthcare Informatics and Data Analytics				
Semester	II	Session	Even, 2024-2025	Year	August, 2025
Time: 3 Hour Max. Marks : 70	- Start writing from 2nd page onwards; <u>don't Write on the 1st Page Backside</u> - Answer all Questions of Section A (Compulsory) - Answer Any Four out of Six of Section B - Answer Any Two out of Four of Section C - Possession of Mobile Phones or any kind of Written Material, Arguments with the Invigilator or Discussing with Co-Student will comes under <u>Unfair Means</u> and will <u>Result</u> in the <u>Cancellation of the Papers</u>.				
	Knowledge Level (KL)	K1 : Remembering K2 : Understanding	K3 : Applying K4 : Analysing	K5 : Evaluating K6 : Creating	

Section A (Each question Carry 01 Mark from Q1-i to xii) – 12 Marks				
Q.N	QUESTIONS	Marks	COs	KL
1				
i	Give an example from everyday life where informatics plays an important role?	01	CO4	K1
ii	Name one component of the informatics system?	01	CO4	K1
iii	Full form of EHR?	01	CO1	K1
iv	Name one telemedicine app?	01	CO4	K1
v	What wearable device monitors?	01	CO4	K2
vi	Name tool used for Data analysis?	01	CO5	K1
vii	Which graph is used to show frequency of any data?	01	CO2	K2
viii	Which graph is used to show trends in any dataset?	01	CO2	K2
ix	Name one Google cloud platform?	01	CO4	K1
x	Define Metropolitan Area Network?	01	CO4	K2

xi	Write down the formula of Mean?	01	CO3	K1
xii	Name one key feature of SNOMED CT?	01	CO4	K2
Section B (Answer any FOUR out of SIX) – 28 Marks (Each question Carry 07 Marks)				
Q. No.	QUESTIONS	Marks	COs	KL
2	Differentiate between Predictive Analytics and Prescriptive Analytics?	07	CO4	K3
3	Explain Telemedicine and its benefits and challenges?	07	CO4	K3
4	Write down the future prospect of AI in healthcare?	07	CO1	K2
5	Explain Heat map along with its applications and example?	07	CO5	K3
6	Explain Types of network and its examples?	07	CO3	K2
7	Differentiate between Bar graph and Histogram?	07	CO4	K4
Section C (Answer any TWO out of FOUR) – 30 Marks (Each question Carry 15 Marks)				
Q. No.	QUESTIONS	Marks	COs	KL
8	What is data analysis? Explain different data analytic Techniques with an example?	15	CO5	K2
9	Explain data accuracy? Give strategies and challenges in ensuring data accuracy?	15	CO1	K5
10	What do you understand about software applications? Explain its functions and applications.	15	CO3	K2
11	What is healthcare data? Explain different types of healthcare data.	15	CO1	K4

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

Course Outcomes	CO1	Develop a plan for utilizing healthcare data to improve patient outcomes.
	CO2	Evaluate healthcare data to access system performance and identify areas for improvement.
	CO3	Analyze data patterns to support decision-making in healthcare settings.
	CO4	Recall basic concepts of healthcare informatics and data analytics tools.
	CO5	Apply data analysis techniques to optimize the healthcare process.
GRAPHICAL REPRESENTATION		
Bloom's level wise mark distribution		course outcome wise Marks Distribution



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END SEM EXAMINATION
School of Health & Allied
Sciences

Program	B.Sc. A&OTT / MLT (Hons.)		
Subject Name	Environmental Sciences		
Semester	II	Session	Even, 2024-2025
Time: 3 Hour Max. Marks : 70	Year August, 2025		
	● Start writing from 2nd page onwards; <u>don't Write on the 1st Page Backside</u>		
	● Answer all Questions of Section A (Compulsory)		
	● Answer Any <u>Four</u> out of Six of Section B		
	● Answer Any <u>Two</u> out of Four of Section C		
Knowledge Level (KL)	● Possession of <u>Mobile Phones</u> or any kind of <u>Written Material</u> , <u>Arguments with the Invigilator or Discussing with Co-Student</u> will comes under <u>Unfair Means</u> and will <u>Result</u> in the <u>Cancellation of the Papers</u> .		
	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
i	What are the classifications of Environment?	01	CO1	K1
ii	What are human-made surroundings called?	01	CO2	K1
iii	When did the Chipko Movement begin?	01	CO2	K1
iv	Name the Indian desert ecosystem.	01	CO4	K1
v	Name one endangered animal in India.	01	CO2	K1
vi	On which river is the Sardar Sarovar Dam built?	01	CO2	K1
vii	Which board publishes AQI data?	01	CO3	K1
viii	What is a linear sequence of organisms eating each other?	01	CO2	K2
ix	What are areas rich in biodiversity under threat called?	01	CO4	K2
x	Which forest animal would you expect to find in Periyar wildlife sanctuary?	01	CO5	K3

xi	Identify a state in India where coral reefs are found?	01	CO2	K3
xii	Which species thrives in the Deccan Plateau ecosystem?	01	CO4	K4
Section B (Answer any FOUR out of SIX) – 28 Marks (Each question Carry 07 Marks)				
Q. No.	QUESTIONS	Marks	COs	KL
2	Give the purpose of mining. What are the possible environmental consequences of mining?	07	CO2	K4
3	Write down a case study to understand practical application of resettlement and rehabilitation.	07	CO1	K3
4	Differentiate between renewable and non-renewable resources.	07	CO4	K2
5	Write the difference between marine pollution and water pollution.	07	CO3	K2
6	Explain the grassland ecosystem and its characteristics. Write down types of grasslands in India.	07	CO2	K2
7	Explain different types of ecosystem along with their examples	07	CO5	K2
Section C (Answer any TWO out of FOUR) – 30 Marks (Each question Carry 15 Marks)				
Q. No.	QUESTIONS	Marks	COs	KL
8	What are global biodiversity hotspots? Name four global hotspots present in India along with its significance, threats and conservation efforts.	15	CO1	K4
9	Explain causes, effects and implications of Ganga river pollution and Bhopal Gas Tragedy.	15	CO2	K4
10	What are environmental laws and elaborate on the Environmental Protection Act and Water Protection Act?	15	CO3	K2
11	Explain the EIA process along with its stages.	15	CO5	K2

CO- Course Outcomes,		KL- Knowledge Level,	PO – Program Outcome
Course Outcomes	CO1	Design sustainable solutions for environmental issues related to healthcare.	
	CO2	Evaluate the environmental impact of healthcare practices and propose alternative	
	CO3	Analyze the relationship between human health and environmental factors.	
	CO4	Recall basic environmental science concept ,such as ecosystem and pollution	
	CO5	Apply environmental science principles to promote sustainability in healthcare settings.	
GRAPHICAL REPRESENTATION			
Bloom's Level wise Marks Distribution			