

Reg. No.:



Name:

University of Kerala

U9276

Second Semester FYUGP Degree Examination, April 2025

Multi-Disciplinary course

BIOCHEMISTRY

UK2MDCBCH102 - Application of Artificial intelligence in Biomedical science

Academic Level: 100-199

Time: 1 Hour 30 Minutes(90 Mins.)

Max. Marks: 42

Part A. 6 Marks.Time:6 Minutes.(Cognitive Level:Remember(RE)/Understand(UN)) Objective Type. 1 Mark Each.Answer all questions

Qn No.	Question	CL	CO
1	Recognize the imaging technique is most commonly used for diagnosing breast cancer.	RE	2
2	State the full form of MRI in medical imaging.	RE	4
3	Explain the branch of AI enables machines to understand and process human language?	UN	1
4	State the type of brain scan that is often analyzed by AI for Alzheimer's diagnosis.	UN	2
5	Explain MRI.	UN	4
6	Identify one commonly used AI-based tool for protein secondary structure prediction.	UN	3

Part B.8 Marks.Time:24 Minutes.(Cognitive Level:Understand(UN)/Apply(AP))Short Answer. 2 marks each.Answer all questions

Qn No.	Question	CL	CO
7	List the two major applications of AI in drug discovery.	UN	3
8	Name some medical imaging systems used in healthcare.	UN	4
9	Compare the advantages and challenges of deep learning models in lncRNA prediction over sequence alignment methods.	AP	3
10	Analyze and explain the role of AI in managing diabetes with glucose monitoring?	AP	2

Part C. 28 Marks.Time:60 Minutes (Cognitive Level:Apply(AP)/Analyse(AN)/Evaluate(EV)/Create(CR)) Long Answer.7 marks each.Answer all 4 Questions choosing among options * within each question

Qn No.	Question	CL	CO
11	A) Evaluate the different forms of Artificial Intelligence with suitable examples	AP	1, 3

Qn No.	Question	CL	CO
	OR B) Evaluate the functions of lnc RNAs in gene regulation and cell function.		
12	A) Discuss and analyse the significance of AI in biomedical science highlighting at least three major applications of AI in healthcare. OR B) Explain how artificial intelligence enhances MRI imaging and Analysis.	AN	1, 4
13	A) Evaluate the concepts of Artificial Intelligence (AI) and its applications in biomedical science. OR B) Evaluate the different forms of Artificial Intelligence with suitable examples.	EV	1, 1
14	A) Propose a comprehensive AI-driven workflow for early detection and risk stratification of breast and lung cancer in diverse populations. OR B) Propose an innovative system that leverages Artificial Narrow Intelligence (ANI), Artificial General Intelligence (AGI), or Artificial Super Intelligence (ASI).	CR	2, 1