

Model Question Paper
ANURAG Engineering College
 (An Autonomous Institution)
 III B.Tech. II Semester Regular Examinations, June -2025
KNOWLEDGE REPRESENTATION AND REASONING
 CSE(AI&ML)

Time: 3 Hours

Max.Marks:60

Section – A (Short Answer type questions)		(10 Marks)		
Answer All Questions		Course Outcome	B.T Level	Marks
1.	What is a knowledge-based system?	CO1	L1	1M
2.	What is the main purpose of First-Order Logic (FOL) in KRR?	CO1	L1	1M
3.	In Peirce's categories, what does Thirdness represent?	CO2	L1	1M
4.	What distinguishes a schema from a script in abstract forms?	CO2	L1	1M
5.	What are the characteristic of knowledge representation?	CO3	L1	1M
6.	What are the components of frames?	CO3	L1	1M
7.	Define "times" in process modelling.	CO4	L1	1M
8.	Define "semantics of contexts."	CO4	L1	1M
9.	Define "uncertainty" in KRR.	CO5	L1	1M
10.	Write some importance of Sharing Ontologies.	CO5	L1	1M
Section – B (Essay Questions)				
Answer all questions, each question carries equal marks.		(5 X10M = 50M)		
11.	a) Discuss the different types of reasoning and their applications.	CO1	L2	5M
	b) Describe various methods of knowledge representation.	CO1	L2	5M
OR				
12.	a) Discuss the different varieties of logic used in AI.	CO1	L2	5M
	b) What are the different types of knowledge and explain their importance in AI.	CO1	L2	5M
13.	a) Describe the key ontological categories and explain their significance in organizing and classifying different types of entities.	CO2	L3	7M
	b) Briefly explain about Physical Entities.	CO2	L2	3M
OR				
14.	a) Write a brief note on defining abstractions.	CO2	L2	5M
	b) Discuss about Sets, Collections, Types and Categories.	CO2	L2	5M
15.	a) Explain the steps involved in designing a knowledge-based system using knowledge engineering principles.	CO3	L2	5M
	b) Explain the concept of frames in knowledge representation and their significance in AI.	CO3	L2	5M
OR				
16.	Write about object-oriented systems in knowledge representation, explain in detail with examples	CO3	L3	10M
17.	a) What is classification in processes? Explain with examples.	CO4	L3	7M
	b) What is the syntax of contexts?	CO4	L2	3M
OR				

18.	What is First-order reasoning in contexts? Explain the Key Features of First-Order Reasoning in Contexts:	CO4	L3	10M
OR				
19.	What is Nonmonotonic Logic? Explain the types and applications of Nonmonotonic Logic in Knowledge Representation and Reasoning (KRR).	CO5	L3	10M
OR				
20.	a) What is a conceptual schema? Provide an example	CO5	L2	5M
	b) Briefly explain the idea of accommodating multiple paradigms in knowledge representation.	CO5	L2	5M