A.Y. 2024-25 TY B.Tech Department of Computer Science & Engineering (Data Science)				
ODD SEMSTER (SEM- V)				
Subject: Intelligent Systems		Subject Code: 22PCCS5020T		
Term Test – II				
Unit-3 (06 Hrs)				
15 Marks				

Question Bank for Unit-3 (06 Hrs)

Que No.	Questions (Statement)	Marks	CO	Blooms Level
1	Describe propositional logic with example.	5	CO3	L2
2	Explain following fuzzy set operations with example. • Cartesian product • Max-min composition	5	CO3	L2, L3
3	Differentiate between Propositional Logic and First Order Logic.	5	CO2	L2, L4
4	Differentiate forward chaining with backward in terms of strategy used, efficiency, applications in real world, challenges in implementation, limitations and advantages.	5	CO2	L2, L4
5	Convert following sentences to First Order Logic. •Every man respects his parent. •Every gardener likes sun. •All purple mushrooms are poisonous. •Not all students like both Mathematics and Science. •Some girls are intelligent.	10	CO3	L3
6	Knowledgebase contains following rules and facts: If [X croaks and eats flies] Then [X is a frog] If [X chirps and sings] Then [X is a canary] If [X is a frog] Then [X is colored green] If [X is a canary] Then [X is colored yellow] [Fritz croaks and eats flies] Convert this knowledge into FOL. Further, find the color of a pet named Fritz. [Fritz is colored Y]? Apply forward chaining.	10	CO3	L3

7	Use resolution (Proof by Contradiction) in FOL to prove Sunil likes Peanuts. Facts and rules are given below: Sunil Likes all kind of food. Apples and Vegetables are food. Anything anyone eats and not killed is food. Anil eats peanuts and still alive. Soham eats everything that Anil eats.	10	CO3	L3
8	Design a Fuzzy controller for domestic shower with tap position as input and water temperature as output. Consider tap position in degree (0 -90-180) and water temperature in degree celcius(0-50-100). Find water temperature when tap rotation is 60 degree.Use mamdani approach.	10	CO3	L6

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