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MIT WORLD PEACE UNIVERSITY | PUNE
TECHNOLOGY, RESEARCH, SOCIAL INNOVATION & PARTNERSHIPS

MIT-WPU

PRN: 1052210888

Mid Semester Examination

Oct 2023

CET3026B - Artificial Intelligence and Machine Learning Techniques

Schedule ID: 21582

Faculty/School	Faculty of Engineering and Technology	**Term**	Semester V
Program	TY BTech CSF	**Duration**	**1 Hours 30 Minutes**
Specialization		**Max. Marks**	**50**

Instructions to the Candidate:

1. Write the PRN on the top right-hand corner of the question paper.
2. Draw neat diagrams.
3. Assume suitable data, if necessary.
4. Solve any 5 questions.

Section 1 (5 X 10 Marks)
Answer any 5 questions

1	A) What is Artificial Intelligence, and how does it relate to the Turing Test? [5 Marks] B) What is Knowledge Representation? Compare Propositional logic and Predicate logic. [5 Marks]	**10 marks**	CO1, CO2	Understanding
2	A) What is an Agent? Explain any two agents along with their architecture. [5 Marks] B) Represent the following statements in predicate logic: a) Marcus was a man. b) Marcus was a Roman. c) All men are people. d) Caesar was a ruler. e) All Romans were either loyal to Caesar or hated him (or both). [5 Marks]	**10 marks**	CO1, CO2	Applying
3	A) Explain the significance of PEAS in AI. Give a detailed PEAS description for the Fraud Management System. [5 Marks] B) What is Inference? What are the different Inference rules of predicate logic? [5 Marks]	**10 marks**	CO1, CO2	Analysing

4	A) What are the various characteristics of an Agent Environment? Describe with an example. [5 Marks] B) Explain Semantic Network representation with advantages and disadvantages. [5 Marks]	**10 marks**	CO1, CO2	Remembering
5	A) Define Heuristics. Explain the significance of the heuristic function in the informed search with a suitable example. [5 Marks] B) Explain Forward Chaining and Backward Chaining with an example. [5 Marks]	**10 marks**	CO1, CO2	Applying
6	A) Discuss the A* and AO* algorithms and the various observations about the algorithm briefly. [5 Marks] B) What is Reasoning? Explain Monotonic and Non-Monotonic reasoning. [5 Marks]	**10 marks**	CO1, CO2	Understanding

END OF QUESTION PAPER