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

PRN:

End Semester Examination

May-June 2023

COS5009B - Artificial Intelligence

Schedule ID: 13185

Faculty/School	Faculty of Science	Term	Semester II
Program	FYM.Sc- CS	Duration	1 Hours 30 Minutes
Specialization	--	Max. Marks	40

Read the instructions provided for every question properly before attempting the answer.

Section 1 - [7 Questions, 8 Marks] (5 X 8 Marks)
Answer any 5 questions

1	a. Explain Best First Search with the help of an example. b. Explain Knowledge acquisition.	8 marks	CO1	Applying
2	a. Explain Goal Based agent with the help of an example. b. Explain Decision theory.	8 marks	CO1,CO2	Remembering

3	Convert the following statements into FOL.
	 ' All students are smart.
	    There exists a student.
	    There exists a smart student.
	    Every student loves some student.
	    Every student loves some other student.
	    There is a student who is loved by every other student.
	 Every student takes at least one course.
	 Every student who takes Analysis also takes Geometry.
	 Every student takes at least one course.
		8 marks	CO3,CO4	Applying

4	a. Explain Machine learning and various components of learning system. b. Explain Situation Calculus with the help if an example.	8 marks	CO1,CO2	Understanding
5	Explain Bayesian Belief network with the help of an example	8 marks	CO2,CO3	Applying

6	Given the following equation: SEND +MORE ----------- =MONEY The aim is to assign each letter a unique integer in the range 0-9 so that the sum is correct. This problem can be defined as Constraint Satisfaction Problem. Find solution for the problem.	**8 marks**	CO4,CO5	Evaluating
7	a. Explain the steps involved in the conversion of FOL to CNF with the help of an example. b. Give State Space representation of "Water Jug Problem", where there are two jugs of 4 litres and 3 Litres respectively, we want 2 Litres water in 4 Litres jug.	**8 marks**	CO4	Analysing

END OF QUESTION PAPER