

K. J. Somaiya Institute of Technology, Sion, Mumbai-22
(Autonomous College Affiliated to University of Mumbai)

Nov – Dec 2024_25		
(B. Tech) Program: Electronics & Telecommunication Engineering Scheme: II		
Regular Examination: LY Semester: VII		
Course Code: EXDLC7031 and Course Name: Artificial Intelligence		
Date of Exam: 21/11/2024	Duration: 2.5 Hours	Max. Marks: 60

Instructions: (1) All questions are compulsory. (2) Draw neat diagrams wherever applicable. (3) Assume suitable data, if necessary.				
Q. No.	Question	Max. Marks	CO	BT level
Q 1	Solve any two questions out of three: (05 marks each)	10		
a)	What is Breadth First Search? Explain with an example		2	U
b)	Discuss how AI can help in military applications		6	U
c)	Define belief network. Describe the steps for constructing belief network with an example.		5	U
Q 2	Solve any two questions out of three: (05 marks each)	10		
a)	Explain the application of AI in education		6	U
b)	Discuss the greedy best first search algorithm.		3	U
c)	What is uncertainty? Explain how the knowledge is represented in uncertain domain.		5	U
Q.3	Solve any two questions out of three. (10 marks each)	20		
a)	Explain A* algorithm with an example		3	Ap
b)	Explain Alpha-beta pruning algorithm. Apply alpha beta pruning on following example considering first node as MAX.		2	Ap

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c)	Explain forward chaining and Backward chaining in detail with example for each case.	4	Ap
Q.4	Solve any two questions out of three. (10 marks each)	20	
a)	What is planning? List types of planning and describe in detail the partial order planning. Explain with an example how is different from total order planning.	4	U
b)	i) What is meant by PEAS? Explain in detail ii) Explain state space representation	1	U
c)	Covert the following statement into first order logic(FOL) i) John likes all kind of food. ii) Apple and vegetables are food. iii) Anything anyone eats and not killed is food. iv) Anil eats peanuts and still alive. v) Harry eats everything that Anil eats.	4	Ap
