

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

Nov – Dec 2024		
(B. Tech / M. Tech.) Program: Artificial Intelligence & Data Science Scheme <b>VB</b>		
Regular Examination: TY Semester: V		
Course Code: AIC501 and Course Name: Artificial Intelligence		
Date of Exam: 22/11/2024	Duration: 02.5 Hours	Max. Marks: 60

(1) All questions are compulsory.

(2) Draw neat diagrams wherever applicable.

(3) Assume suitable data, if necessary.

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Q. No.	Question	Max. Marks	CO	BT level											
Q 1	Solve any <b>two</b> questions out of three: (05 marks each)	10													
a)	Write Truth table of Disjunction and explain it in detail.		CO4	Un											
b)	What are utility based agents?		CO2	Un											
c)	Discuss about AI applications in Fraud Detection and Prevention in banking.		CO6	Un											
Q 2	Solve any <b>two</b> questions out of three. (05 marks each)	10													
a)	Explain Depth First Search technique with an example.		CO3	Un											
b)	What is planning and reasoning in AI?		CO5	Un											
c)	Discuss about PEAS?		CO1	Un											
Q.3	Solve any <b>two</b> questions out of three. (10 marks each)	20													
a)	Explain with a diagram the goal based reflex agent.		CO2	Un											
b)	Apply Heuristic function for the example of block word problem.		CO3	Ap											
	<table><tr><td><b>Start State</b></td><td><b>Goal State</b></td></tr><tr><td><table><tr><td>A</td></tr><tr><td>D</td></tr><tr><td>C</td></tr><tr><td>B</td></tr></table></td><td><table><tr><td>D</td></tr><tr><td>C</td></tr><tr><td>B</td></tr><tr><td>A</td></tr></table></td></tr></table>		<b>Start State</b>	<b>Goal State</b>	<table><tr><td>A</td></tr><tr><td>D</td></tr><tr><td>C</td></tr><tr><td>B</td></tr></table>	A	D	C	B	<table><tr><td>D</td></tr><tr><td>C</td></tr><tr><td>B</td></tr><tr><td>A</td></tr></table>	D	C	B	A	
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c)	Discuss in detail about component of Artificial Intelligence.	CO1	Un												
Q.4	Solve any <b>two</b> questions out of three. (10 marks each)	20													
a)	Explain a working of partial order planner.		CO5	Un											
b)	Discuss about AI application in healthcare.		CO6	Un											
c)	Draw the block diagram of backward chaining and explain it in detail.		CO4	Un											

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