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

May – June 2025
(B. Tech / M. Tech.) Program: Artificial Intelligence & Data Science Scheme IIB
Carry On Regular Examination: TY Semester: V
Course Code: AIC501 and Course Name: Artificial Intelligence
Date of Exam: 23/06/25 Duration: 02.5 Hours Max. Marks: 60

(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)	Discuss about tautologies and contradictions.		CO4	Un
b)	Describe about PEAS description for an automated taxi.		CO2	Un
c)	Explain about Inductive reasoning and Deductive reasoning.		CO1	Un
Q 2	Solve any **two** questions out of three. (05 marks each)	10		
a)	Discuss about AI application in retail.		CO6	Un
b)	Compare between reinforcement learning and supervised learning.		CO5	Un
c)	Apply Heuristic function with 8-Puzzle Problem. 7 5 4 2 6 8 3 1 **Start State** 1 2 3 4 5 6 7 8 **Goal State**		CO3	Ap
Q.3	Solve any **two** questions out of three. (10 marks each)	20		
a)	Explain with a diagram the goal based reflex agent.		CO2	Un
b)	Apply A* search algorithm for 8-Puzzle Problem. 3 7 6 5 1 2 4 8 **Start State** 5 3 6 7 2 4 1 8 **Goal State**		CO3	Ap
c)	Draw the block diagram of backward chaining and explain it in detail.		CO4	Un
Q.4	Solve any **two** questions out of three. (10 marks each)	20		

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a)	Explain a working of partial order planner.		CO5	Un
b)	Explain Breadth first search Algorithm with its Time complexity.		CO3	Ap
c)	Explain about different inference rules of first order logic.		CO4	Un

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