

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

~~May - June 2025~~  
~~Nov - Dec 2024 - 25~~

(B. Tech) Program: Electronics & Telecommunication Engineering Scheme: IIB

*carry on* Regular Examination: LY Semester: VII

Course Code: EXDLC7031 and Course Name: Artificial Intelligence

Date of Exam: ~~26/11/2024~~  
~~27/10/2025~~

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 <b>two</b> questions out of three: (05 marks each)	10		
a)	Differentiate uninformed and informed search strategies. Which one is better and why?		2	U
b)	Explain steps involved in real world problem solving.		6	U
c)	Explain what kind of knowledge needs to be represented in AI systems.		5	U
Q 2	Solve any <b>two</b> questions out of three: (05 marks each)	10		
a)	Explain how AI will help in Robotics application.		6	U
b)	Discuss the properties of forward and backward chaining methods		3	U
c)	Illustrate partial order planning and its four components		5	U
Q.3	Solve any <b>two</b> questions out of three. (10 marks each)	20		
a)	What are Heuristic functions? Explain their significance in informed search. Explain any one search technique that incorporates heuristic functions/values.		3	Ap
b)	Describe Local search algorithm with appropriate diagram and Hill climbing search with its pseudo program.		2	U
c)	Explain steps in Resolution in First order logic and its graph with an example.		4	Ap
Q.4	Solve any <b>two</b> questions out of three. (10 marks each)	20		
a)	Discuss different types of knowledge under knowledge-based representation. Provide example for each type of knowledge types		4	U
b)	Describe the Utility-based Agents along with its schematic diagram.		1	U

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c)	i) Explain Propositional Logic and First Order Predicate with suitable Example. ii) Illustrate Hierarchical planning with example.		4	U
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