

Code No: R22A6601

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

II B.Tech II Semester Regular Examinations, June 2024**Artificial Intelligence****(CSE-AIML & B.Tech-AIML)**

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Time: 3 hours**Max. Marks: 60****Note:** This question paper contains two parts A and B

Part A is compulsory which carries 10 marks and Answer all questions.

Part B Consists of 5 SECTIONS (One SECTION for each UNIT). Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 10 marks.

<u>PART-A (10 Marks)</u>			BCLL	CO(s)	Marks
<u>(Write all answers of this part at one place)</u>					
1	A	List the fields that form the basis for AI.	L4	CO-I	[1M]
	B	List the steps involved in simple problem solving agent.	L3	CO-I	[1M]
	C	Define Bayes theorem	L1	CO-II	[1M]
	D	List some of the knowledge representation techniques	L3	CO-II	[1M]
	E	What are the ways in which one can understand the semantics of a belief network?	6	CO-III	[1M]
	F	How to deal with uncertainty?	L3	CO-III	[1M]
	G	What are types of learning?	L1	CO-IV	[1M]
	H	What is Winston's Learning Program	L1	CO-IV	[1M]
	I	Define the knowledge acquisition process.	L2	CO-V	[1M]
	J	Differentiate Human Expert and Expert system?	L3	CO-V	[1M]
<u>PART-B (50 Marks)</u>					
<u>SECTION-I</u>					
2	A	Evaluate a problem as a state space search with an example?	L2	CO-I	[5M]
	B	Describe the following in detail: - a) Hill climbing b) Best first search c) Constraint satisfaction	L1	CO-I	[5M]
OR					
3	A	What is AI? List the Task domains of AI.	L1	CO-I	[5M]
	B	Prepare the merits and demerits of depth-first and breadth-first search with the algorithm?	L3	CO-I	[5M]
<u>SECTION-II</u>					
4	A	Describe the Issues in knowledge representation	L2	CO-II	[5M]
	B	Differentiate uninformed search and informed search.	L2	CO-II	[5M]
OR					
5	A	Explain Alpha-Beta Pruning	L5	CO-II	[5M]
	B	Explain A* algorithm with example	L1	CO-II	[5M]
<u>SECTION-III</u>					
6	A	What is the significance of knowledge representation? Give differences between database and knowledge base	L4	CO-III	[5M]
	B	Explain forward versus backward reasoning with examples	L2	CO-III	[5M]

OR

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|---|---|---|----|--------|------|
| 7 | A | What are the elements and symbols of first order logic? | L1 | CO-III | [5M] |
| | B | Write a note on non-monotonic logic and default logic. | L2 | CO-III | [5M] |

SECTION-IV

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|---|---|--|----|-------|------|
| 8 | A | Explain learning in decision tree with an example. | L3 | CO-IV | [5M] |
| | B | Write a note on non-monotonic logic and default logic. | L1 | CO-IV | [5M] |

OR

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|---|---|--|----|-------|------|
| 9 | A | Write a short notes on
a. Rote Learning b. Learning by taking advice | L1 | CO-IV | [5M] |
| | B | Write a short note on
a. Learning a problem solving b. Learning from examples | L3 | CO-IV | [5M] |

SECTION-V

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|----|---|---|----|------|------|
| 10 | A | Explain the basic components and applications of expert system. | L2 | CO-V | [5M] |
| | B | Write the applications of expert systems. | L4 | CO-V | [5M] |

OR

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|----|---|---|----|------|------|
| 11 | A | Explain about the knowledge acquisition. | L2 | CO-V | [5M] |
| | B | What are the capabilities of Expert system? | L1 | CO-V | [5M] |
