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CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
III–B.TECH–I–Semester End Examinations (Supply) - June- 2025
ARTIFICIAL INTELLIGENCE
(COMMON FOR CSE, IT, CSD)

[Time: 3 Hours]   [Max. Marks: 60]

Note: This question paper contains two parts A and B.
    Part A is compulsory which carries 10 marks. Answer all questions in Part A.
    Part B consists of 5 Units. Answer any one full question from each unit. Each question
    carries 10 marks.

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PART-A   (10 Marks)
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1. a) Explain the importance of Artificial Intelligence.   [1M]
   b) Describe cognitive science?   [1M]
   c) What is game playing?   [1M]
   d) Compare forward and backward chaining?   [1M]
   e) Explain Syntax Tree.   [1M]
   f) Classify the elements of propositional logic?   [1M]
   g) Mention the types of reasoning used in AI?   [1M]
   h) Analyze the planning graph in AI?   [1M]
   i) Write baye's theorem.   [1M]
   j) What is the significance of bayesian network?   [1M]

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PART-B   (50 Marks)
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2.   Elaborate the problems encountered during hill climbing and what are the ways   [10M]
      available to deal with these problems.

<div align="center">OR</div>

3.   Distinguish the advantages of Breadth First Search and depth first search.   [10M]

4.   Explain alpha-beta pruning? Explain with an example?   [10M]

<div align="center">OR</div>

5.   Explain in detail about the backtracking search and its role in finding solutions to   [10M]
      constraint satisfaction problems.

6.   Analyze the various approaches and issues in Knowledge Representation. Also   [10M]
      discuss various Problems in representing knowledge.

<div align="center">OR</div>

7.   Apply the concept of unification algorithm used for reasoning under predicate logic   [10M]
      with an example.

8.   Determine Ontological engineering? Explain how it is applied in AI?   [10M]

<div align="center">OR</div>

9.   Classify the algorithms for state space search?   [10M]

10.   Apply the concept of inference with full joint distribution with an example?   [10M]

<div align="center">OR</div>

11.a) Discuss in detail about the approaches to uncertain reasoning.   [5M]
   b) What is Dempster-shafer theory?   [5M]

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