

END SEMESTER EXAMINATION

CLASS: MCA

SEMESTER :II

BRANCH: MCA

SESSION :SP/22

SUBJECT: CA435 MODERN ARTIFICIAL INTELLIGENCE

TIME: 2:00hrs

FULL MARKS: 50

INSTRUCTIONS:

1. The question paper contains 5 theory questions with options, each of 10 marks and total of 50 marks
2. Attempt all questions.
3. The missing data, if any, may be assumed suitably.
4. Before attempting the question paper, be sure that you have got the correct question paper.

- Q.1 What is Artificial Intelligence? Evaluate the proposed AI solution of Tic-Tac-Toe problem. [10]
or Define Agents. Compare the following types of agents: a) Goal Based Agents, b) Utility Based Agents and c) Learning Agents.
- Q.2 What do you understand by uninformed search? Discuss and compare breadth-first search and depth-first search considering suitable example. [10]
or What is heuristic search? Explain Hill-climbing search method. What are the Problems encountered in Hill Climbing search.
- Q.3 What are the main approaches to knowledge representation? Differentiate between forward reasoning and backward reasoning. [10]
or Explain Resolution in predicate logic. Translate the following statements to predicate logic: 1. "All lions are fierce." 2. "Some lions do not drink coffee." 3. "Some fierce creatures do not drink coffee".
- Q.4 Explain Bayesian networks with the help of a suitable example. Explain Dempster-Shafer theory [10]
or Discuss about the different forms of Learning. Explain the difference between Inductive learning and explanation-based learning
- Q.5 What is Natural Language Processing? What are its components? Enlist the limitations of Natural Language Processing. [10]
or What are Robots? Explain the various components of a robot. Discuss the perceiving hardware used in robots.

/* 6th May 2022*/