(NO. OF PAGES: 2)

(FOR THE CANDIDATES ADMITTED **22UDA5E1**

DURING THE ACADEMIC YEAR 2022 ONLY) **REG.NO. :**

N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI

END-OF-SEMESTER EXAMINATIONS : NOVEMBER 2024

B.Sc – C S With DA **MAXIMUM MARKS: 50**

SEMESTER-V **TIME : 3 HOURS**

PART – III

22UDA5E1 – ARTIFICIAL INTELLIGENCE

SECTION – A **(10 X 1 = 10 MARK)**

ANSWER THE FOLLOWING QUESTIONS.

MULTIPLE CHOICE QUESTIONS. **(K1)**

1. Select the goal of AI_____ (K1)

   a) To solve artificial problems b) To extract scientific causes

   c) To explain various sorts of intelligence d) To solve real-world problems

2. Constraint satisfaction problems on finite domains are typically solved using a form of _____ (K1)

   a) Search Algorithms b) Heuristic Search algorithms

   c) Greedy Search Algorithms d) All of the mentioned.

3. In AI systems, Knowledge can be represented in two ways. What are these two ways? (K1)

   i) Machine Logic ii) Predicate Logic iii) Propositional Logic iv) Compound Logic

   a) i and ii b) i and iii c) ii and iii d) iii and iv

4. Among the given options, which is also known as inference rule? (K1)

   a) Reference b) Reform c) Resolution d) None of the above

5. In supervised learning, the training dataset consists of:_____ (K1)

   a) Input features and output labels b) Output labels only

   c) Input features only d) None of the above

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES (K2)

6. Define Agent . List some examples of Agents. (K2)

7. Why is Beta Pruning used in Search algorithms of Artificial Intelligence? (K2)

8. Describe the concept of Wumpus World in Artificial Intelligence. (K2)

9. State the syntax and semantics of First order logic. (K2)

10. What is regression in Artificial intelligence? (K2)

SECTION – B (5 X 3 = 15 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. (K3)

11. a) Describe the foundations and history of Artificial Intelligence. (K3)

(OR)

b) Examine Informed Search strategies in short (K3)

12. a) Explain Constraint Satisfaction problem in brief. (K3)

(OR)

b) Sketch the Backtracking search in CSP. (K3)

13. a) Evaluate the issues involved in knowledge representation. (K3)

(OR)

b) Describe Agent Based Propositional Logic. (K3)

14. a) List the Syntax and Semantics of First – Order logic. (K3)

(OR)

b) Compare forward reasoning and backward reasoning. (K3)

15. a) Examine different forms of learning. (K3)

(OR)

b) Sketch the Artificial Neural Networks in short. (K3)

SECTION – C (5 X 5 = 25 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.K4 (Or) K5)

16. a) what is AI? Outline the Foundations and History of AI. (K4)

(OR)

b) Summarize the Uninformed Search Strategies And Informed Search Strategies. (K4)

17. a) Investigate Optimal Decisions in Games Alpha– Beta Pruning**.** (K4)

(OR)

b) Analyze Backtracking Search for Constraint Satisfaction Problem. (K4)

18. a) Examine Knowledge Based Agents In Detail. (K4)

(OR)

b) Outline effective Propositional Model Checking Process. (K4)

19. a) Analyze Unification and Lifting. (K5)

(OR)

b) Discuss Knowledge Engineering in First Order Logic. (K5)

20. a) Summarize the Learning Decision Trees with Example. (K5)

(OR)

b) Evaluate the idea behind Ensemble Learning and four ways to create Ensemble.(K5)

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Ethical paper