(FOR THE CANDIDATES ADMITTED

DURING THE ACADEMIC YEAR 2022 ONLY)

22UIT5E2

REG.NO. :

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

END-OF-SEMESTER EXAMINATIONS : NOVEMBER 2024

B.Sc. (IT)   **MAXIMUM MARKS: 50**

SEMESTER : V   **TIME : 3 HOURS**

PART - III
ARTIFICIAL INTELLIGENCE

SECTION – A   **(10 X 1 = 10 MARKS)**

ANSWER THE FOLLOWING QUESTIONS.(K1)

1. What is the term used for describing the judgmental (or) commonsense part of problem solving?

   (a) Heuristic   (b) Critical   (c) Valued based   (d) Analytical

2. _____ is a state that is better than all its neighbors but is not better than some other states farther away.

   (a) ridge   (b) plateau   (c) local maxima   (d) annealing

3. Any instance in which two different objects are compared is a ____ type of knowledge.

   (a) inheritable   (b) relational   (c) inferential   (d) procedural

4. In PROLOG, rules are restricted to ____ clauses.

   (a) Horn   (b) conventional   (c) base   (d) default

5. The _____ carries out the reasoning whereby the expert system reaches a solution.

   (a) knowledge base   (b) database   (c) user interface   (d) inference engine

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

6. Give the advantages of Depth first search.

7. What is simulated annealing?

8. Define: Representational adequacy.

9. Define: Procedural representation.

10. List out the Media Advisor objects.

SECTION – B (5 X 3 = 15 MARKS)
ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.(K3)

11. a) Determine the Breath first search algorithm.
    (OR)
    b) Summarize the problem characteristics.

12. a) Examine the generate and test principles.
    (OR)
    b) Write a note on constrain satisfaction.

13. a) Discover the frame problem in detail.
    (OR)
    b) Investigate the unification algorithm.

14. a) Distinguish procedural versus declarative knowledge.
    (OR)
    b) Describe the control knowledge in detail.

15. a) Discuss the main players of the expert system development team.
    (OR)
    b) Determine the forward chaining inference technique.

SECTION – C (5 X 5 = 25 MARKS)
ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.(K4 /K5)

16. a) Explain the production rules for the water jug problem.
    (OR)
    b) Summarize the concept of Heuristic search techniques.

17. a) Discuss in detail about hill climbing strategies.
    (OR)
    b) Illustrate the A* algorithm.

18. a) Explain any two knowledge representation approaches.
    (OR)
    b) Discuss on instance and Isa relationships.

19. a) Inspect on forward versus backward reasoning.
    (OR)
    b) Describe the legal chess moves using matching method.

20. a) Explain about the knowledge representation rules.
    (OR)
    b) Prepare the advantages and disadvantages of rule-based expert systems.

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