

(FOR THE CANDIDATES ADMITTED

SUBJECT CODE

23 UCT 6E7

DURING THE ACADEMIC YEAR 2023-24 ONLY)

REG.NO.

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

END-OF-SEMESTER EXAMINATIONS : MAY– 2026

B.Sc. – COMPUTER TECHNOLOGY

MAXIMUM MARKS: 75

VI SEMESTER

TIME : 3 HOURS

PART – III

ARTIFICIAL INTELLIGENCE

SECTION – A

(10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.

(K1)

1. Which of the following is a key characteristic of Artificial Intelligence systems?
 - a) Limited memory
 - b) Reactive machines
 - c) Self-awareness
 - d) Predictive analytics
2. In AI, what does the term "heuristic" refer to?
 - a) A guaranteed solution
 - b) A shortcut to find a good solution
 - c) An exact algorithm
 - d) A random solution
3. What is knowledge representation in AI?
 - a) The process of storing data
 - b) A method to optimize algorithms
 - c) The way knowledge is organized and structured
 - d) A programming language
4. Expert Systems are primarily used for.....
 - a) Enhancing network communication
 - b) Providing decision-making assistance in specialized fields
 - c) Increasing data storage capacity
 - d) Speeding up computer processors
5. What role does backtracking play in AI problem-solving?
 - a) It avoids revisiting already explored paths
 - b) It guarantees finding the optimal solution
 - c) It simplifies the problem
 - d) It is used to store solutions

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES.

(K2)

6. The first AI program to exploit means_ends analysis was called what?
7. What is meant by instance?
8. Define frame.
9. What is Backward Chaining?
10. What is Recursion?

(CONTD 2)

SECTION – B (5 X 5 = 25 MARKS)

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

11. a) State the characteristics of Production system.
(OR)
b) Illustrate the Best-first Search method.
12. a) Discuss the issues in knowledge representation.
(OR)
b) How to represent Instance and Isa Relationship?
13. a) Explain Conceptual Dependency.
(OR)
b) How to add Alpha - Beta cutoffs?
14. a) Explain Backward Chaining.
(OR)
b) Explain Knowledge Engineering.
15. a) State the rules for converting English to prolog.
(OR)
b) Write a short note on I/O Streams.

SECTION – C

(5 X 8 = 40 MARKS)

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

(K4 (Or) K5)

16. a) State the characteristics of problem.
(OR)
b) Explain Heuristic Search Techniques.
17. a) Describe the approaches to knowledge representation.
(OR)
b) Compare Procedural versus Declarative knowledge.
18. a) Discuss the key idea of game playing.
(OR)
b) Describe the minimax search procedure.
19. a) State the Characteristics of Expert System.
(OR)
b) Explain Expert System Life Cycles.
20. a) Explain the Control structures in detail.
(OR)
b) Write a brief note on dynamic database.