

(FOR THE CANDIDATES ADMITTED

DURING THE ACADEMIC YEAR 2020 ONLY)

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20 UIT 6E6

REG.NO. :

**N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI
END-OF-SEMESTER EXAMINATIONS : MAY 2023**

B.Sc. –INFORMATION TECHNOLOGY

MAXIMUM MARKS: 70

SEMESTER : VI

TIME : 3 HOURS

**PART - III
ARTIFICIAL INTELLIGENCE**

SECTION – A (10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS:

MULTIPLE CHOICE QUESTIONS:

1. The search algorithm which is similar to the minimax search, but removes the branches that don't affect the final output is known as_____.
 - a) Depth-first search
 - b. Breadth-first search
 - c) Alpha-beta pruning
 - d. None of the above
2. Which term describes the common-sense of the judgmental part of problem-solving?
 - a. Value-based
 - b. Critical
 - c. Analytical
 - d. Heuristic
3. In Artificial Intelligence, knowledge can be represented as_____.
 - (I). Predicate Logic
 - (II) Propositional Logic
 - (III).Compound Logic
 - (IV).Machine Logic
 - a. Both I and II
 - b. Only II
 - c. Both II and III
 - d. Only IV
4. In an Unsupervised learning _____
 - a) Specific output values are given
 - b) Specific output values are not given
 - c) No specific Inputs are given
 - d) Both inputs and outputs are given
5. Which of the given language is not commonly used for AI?
 - a) LISP
 - b) PROLOG
 - c) Python
 - d) Perl

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES

6. What is an Expert System?
7. Define Frames.
8. What do you mean by Recursion?
9. List the applications of AI.
10. What are the types of Knowledge Representation Properties?

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SECTION – B

(5 x 5 = 25 MARKS)

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

11.a. Define Artificial Intelligence. Explain AI Techniques.

(OR)

b. Describe Production System.

12. a. List and explain Approaches in Knowledge representation.

(OR)

b. Compare procedural and declarative knowledge.

13. a. Show Minimax Search Procedure.

(OR)

b. List the advantages of Frame-based expert system. State the difficulties involved in developing a frame-based expert system?

14. a. What are the fundamental characteristics of an Expert System?

(OR)

b. With a suitable example, describe backward chaining inference process used in an expert system.

15. a. Sketch the Arithmetic Operators in Prolog.

(OR)

b. Discuss List in Prolog AI.

SECTION – C

(4 X 10 = 40 MARKS)

ANSWER ANY FOUR OUT OF SIX QUESTIONS:

(16th QUESTION IS COMPULSORY AND ANSWER ANY THREE QUESTIONS FROM Qn. 17 to 21)

16. Prove Problem Reduction.

17. Conclude Mean-Ends Analysis with an example.

18. Discuss Logic Programming.

19. Examine Alpha-Beta Cutoff.

20. Draw and Explain an Expert System Architecture.

21. Explain (i).Dynamic Database (ii). I/O Streams
