

(FOR THE CANDIDATES ADMITTED

23UAI308

DURING THE ACADEMIC YEAR 2024 ONLY)

REG.NO. :

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

END-OF-SEMESTER EXAMINATIONS : NOVEMBER-2024

Bsc CS WITH AI & ML

MAXIMUM MARKS: 75

SEMESTER : III

TIME : 3 HOURS

**PART - III**

**23UAI308 – INTRODUCTION TO ARTIFICIAL INTELLIGENCE**

**SECTION – A**

**(10 X 1 = 10 MARKS)**

**ANSWER THE FOLLOWING QUESTIONS.**

**(K1)**

1. Who is known as the -Father of AI"?
  - a) Charles Babbage
  - b) John McCarthy
  - c) Alan Turing
  - d) Andrew Ng
2. Which search method takes less memory?
  - a) Depth-First Search
  - b) Breadth-First search
  - c) Linear Search
  - d) Optimal search
3. A problem solving approach works well for \_\_\_\_\_
  - a) 8-Puzzle problem
  - b) 8-queen problem
  - c) Finding a optimal path from a given source to a destination
  - d) Mars Hover (Robot Navigation)
4. A search algorithm takes \_\_\_\_\_ as an input and returns \_\_\_\_\_ as an output.
  - a) Input, output
  - b) Problem, solution
  - c) Solution, problem
  - d) Parameters, sequence of actions
5. Web Crawler is a/an \_\_\_\_\_
  - a) Intelligent goal-based agent
  - b) Problem-solving agent
  - c) Simple reflex agent
  - d) Model based agent

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

**(K2)**

6. What is Artificial Intelligence?
7. Which is a component of Artificial Intelligence?
8. What is Greedy Best First search?
9. How many numbers of logical symbols are in AI?
10. What is an AI 'agent'?

**SECTION – B**

**(5 X 5 = 25 MARKS)**

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

11. a) Write a note on the concept of Rationality in Intelligent Agents.

**(OR)**

- b) Explain agent types and their PEAS descriptions.

12. a) Elucidate Problem Solving Agents.  
(OR)  
b) Discuss Depth-first search
13. a) Explicate the Minimax Algorithms.  
(OR)  
b) What are the structures of problems in CSP's? Explain.
14. a) Discuss Logic in Logical agents.  
(OR)  
b) Describe Inference in first order logic
15. a) Elucidate Language models in AI Applications.  
(OR)  
b) Write a brief note about Natural Language Processing in AI.

**SECTION – C****(5 X 8 = 40 MARKS)****ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. (K4 (Or) K5)**

16. a) Discuss History of Artificial Intelligence.  
(OR)  
b) Implicate Structure of the Agents.
17. a) Explicate Toy Problems.  
(OR)  
b) Describe Breadth-first search.
18. a) Write a note on Alpha-Beta Pruning.  
(OR)  
b) Explain Backtracking Search for CSP's
19. a) Enlighten Propositional Logic  
(OR)  
b) Explain Syntax and semantics of First Order Logic
20. a) Converse on Information Retrieval and Extraction in AI Applications.  
(OR)  
b) Write brief note on Machine Translation and Speech Recognition in AI Applications.

\*\*\*\*\*