(NO. OF PAGES: 3)

(FOR THE CANDIDATES ADMITTED 22UAI309

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

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

END-OF-SEMESTER EXAMINATIONS : NOVEMBER -2023

BSC.COMP.SCIENCE WITH AI **MAXIMUM MARKS: 50**

SEMESTER : III **TIME : 3 HOURS**

PART - III

22UAI309– INTRODUCTION TO AI

SECTION – A (10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS. (K1)

1. An AI agent perceives and acts upon the environment using ---------
a) Sensors and Actuators b) Perceiver
c) Agent program d) Environment

2. What is the other name of informed search strategy?

a) Simple search b) Online search
c) Heuristic search d) Brute force search

3. The condition for alpha-beta pruning is --------

a) $\alpha \geq \beta$ b)$\alpha \leq \beta$

c) $\alpha \neq \beta$ d) $\alpha = \beta$

4. ---------- chaining starts from the known facts, triggers all the rules whose premises are satisfied, adding their conclusions to the known facts.
a) Forward b) Validity

c) Backward d) Proposition

5. ---------measures the proportion of all the relevant documents in the collection that are in the result set.

a) Precision b) Recall

c) F-Measure d) Accuracy

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

6. Consider the taxi driving agent that deals with the happy and unhappy state of passengers. Construct a PEAS description for the same.

7. Differentiate between Depth first and Depth limited search.

8. Define constraint satisfaction problem.

9. Define the deduction theorem.

10. What is meant in speech recognition.

ETHICAL PAPER

(CONTD …. 2)

SECTION – B (5 X 3 = 15 MARKS)

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

11. a) Compare deterministic and stochastic environments in an agent design.

(OR)

b) List any three applications of Artificial Intelligence.

12.a) Illustrate Breadth first search algorithm.

(OR)

b) Demonstrate Greedy best first search algorithm.

13.a) Examine the constraints in the assembly of a car.

(OR)

b) Describe any two real world problem solved using problem solving agents.

14.a) Differentiate logical equivalence and validity in propositional logic**.**

(OR)

b) Illustrate Backward chaining.

15.a) List the measures to evaluate an Information Retrieval system.

.(OR)

b) Interpret the n-gram character models for language identification.

SECTION – C (5 X 5 = 25 MARKS)

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

16. a) Can autonomous car be designed as a simple reflex agent? Analyze and justify your answer.

(OR)

b) Explain any two types of agents used in intelligent systems.

17. a) Examine the steps in A* search.

(OR)

b) Analyze the uniform cost search algorithm and its advantages.

18.a) Apply the Constraint Satisfaction Problem for the Map coloring problem.

(OR)

b) Demonstrate the the Backtracking & local search for CPS.

19. a) Outline the steps in Proportional login with an example.

(OR)

b) Elaborate on Forward chaining and its principles.

20 .a) Explain the Natural language processing in detail.

(OR)

b) Describe the steps in machine translation.

****