Reg. No ..... Name **25U628**

B. Sc. DEGREE END SEMESTER EXAMINATION - MARCH 2025

SEMESTER 6 : COMPUTER APPLICATION

COURSE : **19U6CRCAP12 : ARTIFICIAL INTELLIGENCE (EL)**

(For Regular 2022 Admission and Supplementary 2021/2020/2019 Admissions)

Time : Three Hours Max. Marks: 75

PART A

Answer All (1 mark each)

1. ---------- is used for identifying objects or regions of interest in an image in AI.
2. Which is the best example of A* search algorithm.
3. CNF stands for _____.
4. Define Policy() in reinforced learning.
5. First-order logic statements can be divided into two parts. Which are they?
6. Define bias.
7. What is the two-dimensional function of a digital image?
8. How can we calculate h(n) in A* algorithm?
9. ---------- provides cost-effective solutions to the complex real-life problems for which hard computing solution does not exist.
10. Write an example for particle swarm optimization.

(1 x 10 = 10)

PART B

Answer any 8 (2 marks each)

11. List the types of RNNs.
12. Define Implication with an example.
13. Which are the two main functions used in min-max algorithm?
14. List out the major goals of AI.
15. Define frame and frame representation.
16. What is the use of genetic algorithm?
17. Why are actions decomposed in hierarchical planning?
18. What are the functions of the input layer, hidden layer and output layer of ANN?
19. What are the steps of 'PICKUP(A)' performed by the robotic arm?
20. Define genetic algorithm.

(2 x 8 = 16)

PART C

Answer any 5 (5 marks each)

21. Define about three operators in means-ends analysis.
22. 'All pompeians were romans'. Write using instance predicate and ISA predicate.
23. Distinguish between supervised and unsupervised learning.
24. Define planning in AI.
25. How does means-ends analysis work?
26. Explain the steps for testing or evaluating a model.
27. What do you meant by swarm intelligence? Explain in detail.

(5 x 5 = 25)

PART D

Answer any 2 (12 marks each)

28. Define Perceptron. Discuss about multi-layed perceptron and its advatages and disadvantages.
29. Explain in detail about the categories of knowledge in AI.
30. Construct the architecture of the robot and discuss that.
31. Explain Ant colony optimization, its objective and pseudocode.

(12 x 2 = 24)