

20U5112

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Name:

Reg. No:

FIFTH SEMESTER B.Voc. DEGREE EXAMINATION, NOVEMBER 2022

(Regular/Supplementary/Improvement)

CC18U GEC5 AR13 - ARTIFICIAL INTELLIGENCE

(Information Technology)

(2018 Admission onwards)

Time: Three Hours

Maximum: 80 Marks

PART A

Answer *all* questions. Each question carries 1 mark.

1. The word "Artificial Intelligence" first adopted by American Computer scientist _____ at the Dartmouth Conference.
2. The information/knowledge about knowledge is _____
3. Propositional logic is also called _____
4. $P \wedge (Q \vee R) =$ _____
5. Unification depends on the _____ process.
6. _____ is the sequence of a specific language which should be followed in order to form a sentence.
7. A sentence such as $P \rightarrow Q$, is called an _____
8. _____ provides an informed way to guess which neighbour of a node will lead to a goal.
9. In LISP for defining functions, macro named _____ is used.
10. _____ is used to set variables in LISP.

(10 × 1 = 10 Marks)

PART B

Answer any *eight* questions. Each question carries 2 marks.

11. Write the Properties of Search algorithm.
12. Define Depth First Search.
13. What is Semantic Network representation?
14. What are the components of knowledge representation system?
15. What are the advantages of neural networks?
16. List the advantages of an expert system.
17. What is the difference between Strong Artificial Intelligence and Weak Artificial Intelligence?

18. Explain what is LISP? Give an example of some of the popular applications built in LISP?
19. What is the programming structure for LISP?
20. Mention what are the two pre-defined packages used in LISP?
21. What are the types of Propositions?
22. Define First order Logic.

(8 × 2 = 16 Marks)

PART C

Answer any *six* questions. Each question carries 4 marks.

23. Explain the different types of Informed Search Algorithms.
24. Briefly describe the different Techniques of Knowledge representation.
25. Differentiate between supervised, unsupervised, and reinforcement learning.
26. Write a LISP Program to check if the number is even or odd.
27. Briefly describe the Logical connectives used in Propositional logic?
28. Write the syntax and basic elements of First order logic or Predicate logic.
29. Write a note on quantifiers in FOL.
30. Laws of Propositional Expressions.
31. Explain the different types of Knowledge in AI.

(6 × 4 = 24 Marks)

PART D

Answer any *two* questions. Each question carries 15 marks.

32. What is Artificial Intelligence? Explain the Applications of AI.
33. Summarize views about Semantics of propositional logic.
34. a) Define Artificial Neural Network. Explain the basic structure of ANN.
b) What are the different components of NLP?
35. Explain the Rules for Knowledge Representation.

(2 × 15 = 30 Marks)
