19U5103   (Pages: 2)   Name: …………………….

Reg. No: ………………….

FIFTH SEMESTER B.Voc. DEGREE EXAMINATION, NOVEMBER 2021

(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. Resolution was invented by _____

2. _____ depends on the substitution process.

3. _____ is a programming language based on logic.

4. CNF Stands for _____

5. Who is the "father" of artificial intelligence?

6. In LISP, the atom that stands for "False" is _____

   a) t   b) nil   c) y   d) time

7. Heuristic function h(n) is _____

   a) Lowest path cost

   b) Cheapest path from root to goal node

   c) Estimated cost of cheapest path from root to goal node

   d) Average path cost

8. The Al researcher who co-authored both the Handbook of Artificial Intelligence and

   The Fifth Generation is _____

   a) Bruce Lee   b) Randy Davis   c) Ed Feigenbaum   d) Mark Fox

9. What is back propagation?

   a) It is another name given to the curvy function in the perceptron

   b) It is the transmission of error back through the network to adjust the inputs

   c) It is the transmission of error back through the network to allow weights to be

   adjusted so that the network can learn

   d) None of the mentioned

10. Which is not Familiar Connectives in First Order Logic?

    a) and   b) iff   c) or   d) not

(10 × 1 = 10 Marks)

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

11. What are the components of NLP?

12. What is Unification?

13. What is predicates in Lisp?

14. Define Semantics.

15. Name any four predicates used in LISP.

16. Define Artificial intelligence.

17. What are the properties of Search Algorithms?

18. What are the advantages of A* Search algorithm?

19. How many types of Neural Networks? Which are they?

20. Define Resolution.

21. What is Propositional Logic (PL)?

22. What is Disjunction?

(8 × 2 = 16 Marks)

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

23. Explain in detail the history of Artificial Intelligence.

24. What are the different Types of Knowledge Representation?

25. Explain the History of NLP.

26. Explain the Unification used for reasoning under predicate logic with Example.

27. Explain the Rules for Knowledge Representation.

28. Write a lisp program to find a factorial of a given number.

29. Explain the components of Expert Systems.

30. Differentiate uninformed/Blind & Informed/Heuristic Search strategies.

31. Summarize views about Syntax of propositional logic.

(6 × 4 = 24 Marks)

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

32. What is the Structure of an Intelligent Agent? Explain in detail about the 4 types of Agent Programs.

33. Rules for Knowledge Representation

34. Explain in detail the different types of Artificial Intelligence.

35. Explain the concept of learning using decision tree & Neural network approach.

(2 × 15 = 30 Marks)

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