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18MT743

Seventh Semester B.E. Degree Examination, Dec.2024/Jan.2025
Artificial Intelligence

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1 a. What is Artificial Intelligence? Explain briefly the scope of artificial intelligence. **(10 Marks)**
   b. Explain briefly the early work in artificial intelligence. **(10 Marks)**

OR

2 a. With neat diagram, explain in detail Alan Turing machine. **(10 Marks)**
   b. What is an intelligent agent? Explain in detail intelligent agent with its characteristics and applications. **(10 Marks)**

Module-2

3 a. Explain Depth first search algorithm. **(10 Marks)**
   b. Explain Breadth first search algorithm. **(10 Marks)**

OR

4 a. Explain simple Hill Climbing algorithm. **(10 Marks)**
   b. Explain Steepest Ascent Hill Climbing algorithm. **(10 Marks)**

Module-3

5 a. What is expert system? What are the characteristics of expert system? **(10 Marks)**
   b. Explain the steps to develop an expert system. **(10 Marks)**

OR

6 a. Write in detail about MYCIN and explain how MYCIN works. **(10 Marks)**
   b. Write in detail about DENDRAL and explain Low DENDRAL works. **(10 Marks)**

Module-4

7 a. Explain semantic network architecture with neat diagram. **(10 Marks)**
   b. Explain decision tree architecture with neat diagram. **(10 Marks)**

OR

8 a. Explain blackboard system architecture with neat diagram. **(10 Marks)**
   b. Explain with neat diagram neural network architecture. **(10 Marks)**

Module-5

9 a. Define Perceptron. Explain simple perceptron with neat diagram and relevant details. **(10 Marks)**
   b. Explain Genetic algorithm with flow chart. **(10 Marks)**

OR

10 a. Explain Learning automation model with a case study of temperature control model. **(10 Marks)**
   b. What is the role of an intelligent editor? Explain intelligent editors with relevant details. **(10 Marks)**

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