15MT832

USN ☐☐☐☐☐☐☐☐☐☐

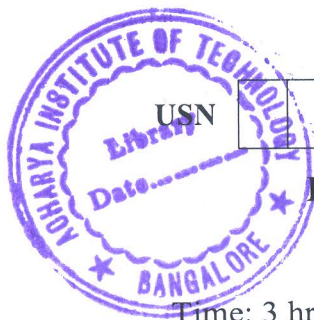## Eighth Semester B.E. Degree Examination, June/July 2019
Artificial Intelligence

Time: 3 hrs.   Max. Marks: 80

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

Module-1

1 a. Define Artificial Intelligence. Discuss the importance of Artificial Intelligence. **(08 Marks)**
   b. Outline the early work done in the field of Artificial Intelligence. **(08 Marks)**

OR

2 a. Discuss the multidisciplinary aspects of Artificial Intelligence and related fields. **(08 Marks)**
   b. Explain Artificial Intelligence Techniques and Alan Turing Machine. **(08 Marks)**

Module-2

3 a. Explain Breadth First Search Algorithm and outline its merits and demerits. **(08 Marks)**
   b. Explain Depth First Search Algorithm and outline its advantages. **(08 Marks)**

OR

4 a. Explain Simple Hill Climbing Algorithm with relevant details. **(08 Marks)**
   b. Explain Steepest Ascent Hill Climbing algorithm with relevant details. **(08 Marks)**

Module-3

5 a. Define Expert System. Discuss the characteristics of Expert system. **(08 Marks)**
   b. Explain Expert System Architecture and steps to develop an Expert System. **(08 Marks)**

OR

6 a. Explain the operation of MYSIN as an Expert System in diagnosing bacterial infections. **(08 Marks)**
   b. Explain the operation of Dendral as an Expert system in helping an organic chemist. **(08 Marks)**

Module-4

7 a. Explain Rule based system architectures with relevant details. **(08 Marks)**
   b. Explain Semantic Network Architectures with relevant details. **(08 Marks)**

OR

8 a. Explain Decision Tree Architectures with relevant details. **(08 Marks)**
   b. Explain Neural Network Architectures with relevant details. **(08 Marks)**

Module-5

9 a. Define Perceptron. Explain simple perceptron with neat diagram and relevant details. **(08 Marks)**
   b. Explain Perceptron Learning Algorithm with relevant parameters. **(08 Marks)**

OR

10 a. Explain Learning Automaton model with a case study of temperature control model. **(08 Marks)**
   b. Explain Genetic Algorithm with flow chart. **(08 Marks)**

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