ED-792

M.Sc 4th Semester
Examination, May-June 2021

COMPUTER SCIENCE

Paper - II

Artificial Intelligence and Expert System

Time : Three Hours]   [*Maximum Marks* : 100

Note : Answer any **two** parts from each question. All questions carry equal marks.

Unit-I

1. (*a*) What is Artificial Intelligence and Artificial Intelligence Technique ? Briefly explain how AI Technique can be represented.

   (*b*) How to define a problem as state space search ? Discuss it with the help of an example.

   (*c*) Differentiate between Breadth First Search and Depth First Search with example.

Unit-II

2. (*a*) Explain the algorithm for steepest hill climbing.

   (*b*) Discuss the memory bounded heuristic search with example.

   (*c*) Explain the Minimax search algorithm in detail.

Unit-III

3. (*a*) Briefly explain about knowledge representation using Predicate logic.

   (*b*) What is iteration and recursion ? Explain Iterative deepening search.

   (*c*) Discuss the basic task of a probabilistic inference mechanism.

Unit-IV

4. (*a*) What is Natural Language Processing ? Write the overview of Linguistics with example.

   (*b*) What is Transition Network ? Explain the types of Transition Network with example.

   (*c*) Write the semantics of Bayesian network and explain with example.

Unit-V

5. (*a*) Discuss the stages in the development of expert system tools.

   (*b*) Explain polling and interrupt mode to monitor I/O interface.

   (*c*) Sketch the components of an Expert System Shell and explain.

———