Tribhuvan University
Institute of Science and Technology
2076

Full Marks: 60 + 20 + 20
Pass Marks: 24 + 8 + 8
Time: 3 Hours

Bachelor Level / fourth-semester / Science
Computer Science and Information Technology (CSC262)
Theory of Computation

Candidates are required to give their answers in their own words as far as practicable.
The figures in the margin indicate full marks.

Section A

Attempt any Two questions. (2x10=20)

1 Define admissible heuristic with an example. Explain the working mechanism and limitations of hill climbing search.

2 How do you define problem? What are criteria for defining problem? Compare Constraint Satisfaction Problem and Real World Problem in detail with appropriate example.

3 Define Expert System with example. What are stages of expert system development ? Explain.

Section B

Attempt any Eight questions. (8x5=40)

4 How syntactic and semantic analyses are performed in natural language processing?

5 What do you mean by Rational Agent? What are differences between Utility based agent and model based agent?

6 What is state space representation? Illustrate with one example.

7 What is forward chaining? Explain with appropriate example.

8 Convert Following Sentences into Predicate a) All animal who can bark are dog. b) Someone is firing a gun c) All tigers are not fierce

9 Define game. Write the benefits and limitations of depth limited search.

10 What is fuzzy logic? Discuss the different operators used in genetic algorithm.

11 Give an example of reinforcement learning. Explain the types of ANN.