

Tribhuvan University
Institute of Science and Technology

2070

Bachelor Level/ Second Year/ Forth Semester/ Science

Full Marks: 60

Computer Science and Information Technology (CSc.255)

Pass Marks: 24

(Introduction to Cognitive Science)

Time: 3 hours

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Attempt all the questions.

1. Define the cognitive science and its applications in computer science. Compare cognitive science with other science.
2. Explain the architecture of an expert system and its applicability in different areas.
3. Explain the various approaches and issues in knowledge representation and also explain the various problems in representing knowledge.
4. Differentiate between procedural and declaration knowledge with an example.

OR

Explain A* search algorithm with example.

5. Explain the breadth first search technique with example and also explain the benefits of it.
6. Derive the mathematical model of neural network system with example and also explain about its importance.
7. What are the steps in natural language processing? List and explain them briefly.
8. Explain the Chomsky Hierarchy with example.
9. Explain the pinker approach in the cognitive science. What is its relation with Descartes? Explain.
10. Why lexicon and morphology are needed in natural language processing? Explain with example.

OR

Explain the parameter of natural language processing with its syntax and example.