Tribhuvan University
Institute of science and technology
2068

Bachelor Level/second Year/Forth semester full marks:60

Introduction to cognitive science
pass marks :24

Time :3hrs

Attempt all the questions.

1. Define cognitive science with two examples. Compare it with psychology and explain with suitable example.

2. Explain briefly the background of artificial Intelligence. The rational thinking is important in artificial intelligence, Justify it with suitable example.

3. Knowledge can be represented with if then rules, explain it with two practical examples.

4. The searching can be represented using tree .Explain the algorithm of depth first search with suitable example.

OR

Hill-climbing search is a heuristic search, justify it along with algorithm and practical example.

5. What do you understand by Turing machine? Design a Turing machine with finite set of states as qo and q1, alphabets are 'a' and 'b', initial state is qo and assume 6 suitable transitions.

6. Explain the basic model for computation with suitable practical example.

7. What are the important of neural network? Explain the mathematical model of neural network system with suitable example.

8. What do you mean by Hebbian Learning? Explain it with suitable practical example and algorithm.

9. Explain Gelernter approach in the cognitive science. What is its relation with Descartes, explain with suitable example.

10. Differentiate between natural language understanding and generating with suitable example.

OR

List the parameters of natural language processing. Explain in detail about auditory inputs with suitable example.