BCA/D-21   **1204**

ARTIFICIAL INTELLIGENCE
Paper-BCA-353

Time : Three Hours]   [Maximum Marks : 80

Note : Attempt *five* questions in all. Question number 1 is compulsory. In addition to compulsory question, student will have to attempt *four* more questions selecting *one* question from each unit. All questions carry equal marks.

Compulsory Question

1. (a) Explain Breadth First Search.   (4)

   (b) Discuss Components of Expert System.   (4)

   (c) Discuss Speech Recognition.   (4)

   (d) What do you mean by Knowledge? Discuss Knowledge Pyramid.   (4)

UNIT-I

2. Discuss the past, present and future of Artificial Intelligence.   (16)

3. Write notes on the following :

   (a) Turing Test and Revised Turing Test.   (8)

   (b) Application Areas of AI.   (8)

UNIT-II

4. Discuss the steps of developing an Expert system by taking any example. (16)

5. (a) Compare and contrast Rule Based *vs*. Model Based Expert Systems. (8)

(b) Discuss the Advantages and Limitations of an Expert System. (8)

UNIT-III

6. What is search process in AI? Explain with different types of search techniques. (16)

7. Explain the following :

(a) Best first search. (8)

(b) AO* Algorithm. (8)

UNIT-IV

8. What is Robotics? Discuss various parts of a Robot. How a Robot will be controlled? Explain. (16)

9. Discuss the concept of Natural Language Processing. Also discuss the fundamental problems in understanding Natural Language. (16)