

Total No. of Questions : 9 } [Total No. of Printed Pages : 3

Roll No.

IT-833(N)

B. E. (Eighth Semester) EXAMINATION, June, 2011

(Information Technology Engg. Branch)

ARTIFICIAL INTELLIGENCE

(Elective – III)

[IT-833(N)]

Time : Three Hours

Maximum Marks : 100

Minimum Pass Marks : 35

Note : Attempt any one question from each Unit except Q. No. 9. All questions carry equal marks.

Unit – I

1. (a) Explain various types of production systems with their characteristics. 10
- (b) Why heuristic search techniques are considered to be more powerful than the traditional search techniques ? 10

Or

2. (a) Find the state space representation of 8-Puzzle problem. 10
- (b) Explain best first, depth first and breadth first search. When would best first search be worse than simple breadth first search ? 10

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Unit – II

3. (a) Discuss various approaches of knowledge representation with the help of examples. 10
(b) What is propositional logic ? Explain the knowledge representation using propositional logic. 10

Or

4. (a) Convert the following sentences to predicate logic : 10
(i) Marcus was a man.
(ii) All men are mortal.
(iii) No mortal lives longer than 150 years.
(b) Differentiate the monotonic and non-monotonic reasoning. 10

Unit – III

5. (a) Briefly describe semantic net. Also explain partitioned semantic net with example. 10
(b) What are scripts ? What are the important components of scripts ? 10

Or

6. (a) Discuss conceptual dependency and explain how information can be represented using conceptual dependency. 10
(b) Explain forward and backward reasoning. A problem solving search can proceed either forward or backward. What factors determine the choice of direction for a particular problem ? 10

Unit – IV

7. (a) Explain minimax procedure. Is this procedure a breadth first or depth first search ? 10
(b) Explain block world problem in robotics with example. 10

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Or

8. (a) Explain various strategies of game playing. 10
(b) What are the levels of knowledge used in language understanding ? Also write down the techniques used in NLP. 10

Unit – V

9. Write short notes on any *three* of the following : 20
(a) Fuzzy logic
(b) Learning techniques
(c) Common sense
(d) Expert system
(e) Application of neural networks