

B.Tech IV Year I Semester (R13) Supplementary Examinations June 2017

ARTIFICIAL INTELLIGENCE

(Computer Science and Engineering)

Time: 3 hours

Max. Marks: 70

PART – A
(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- (a) What are the applications of artificial intelligence?
 - (b) List out the characteristics of a problem.
 - (c) What is predicate logic?
 - (d) Write various advanced knowledge representation techniques.
 - (e) What is certainty factor theory?
 - (f) What is MYCIN expert system?
 - (g) Write about deductive Learning.
 - (h) Define machine learning system.
 - (i) What is fuzzy logic?
 - (j) Write short notes on natural language processing.

PART – B
(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

- 2 (a) Discuss about iterative-deepening A* with an example.
(b) Explain Bounded Look-ahead strategy.

OR

- 3 (a) Describe about Heuristic Search techniques.
(b) Explain Alpha-Beta Pruning.

UNIT – II

- 4 Define semantic network. How do you represent knowledge using semantic network and frames?

OR

- 5 (a) What is natural deduction system? Explain in detail.
(b) List some of the rules of Axiomatic system.

UNIT – III

- 6 (a) Explain Architecture of expert systems.
(b) Describe about different phases in building expert systems.

OR

- 7 (a) Differentiate between expert systems Vs traditional systems.
(b) Explain Bayesian Belief networks.

UNIT – IV

- 8 (a) Differentiate supervised and unsupervised learning.
(b) What is Single-Layer Feed Forward network? Explain in detail.

OR

- 9 (a) Describe about design issues of artificial neural networks.
(b) Explain Multi-Layer Feed-Forward network in detail.

UNIT – V

- 10 Explain genetic programming concepts in detail.

OR

- 11 What is ant colony algorithm? Describe in detail.
