

Code: 13A05707

R13

B.Tech IV Year I Semester (R13) Regular Examinations November/December 2016

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) Define state space.
 - (b) How heuristic search techniques can be implemented?
 - (c) What do you mean by resolution?
 - (d) How extended semantic networks used to represent Knowledge?
 - (e) What is uncertainty measure?
 - (f) List out various applications of expert systems.
 - (g) Define Inductive learning.
 - (h) What are the silent features of recurrent networks?
 - (i) List various fuzzy operations.
 - (j) What are silent features of natural language processing?

PART – B

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

UNIT – I

- 2 (a) What is constraint satisfaction problem? Explain it using suitable examples.
(b) Give a brief note on alpha-beta pruning.

OR

- 3 What are the various features of heuristic techniques?

UNIT – II

- 4 What do you mean by resolution? How it can be implemented? Explain using suitable examples.

OR

- 5 How frames and semantic nets can be used in knowledge representation?

UNIT – III

- 6 (a) Differentiate expert systems with traditional systems.
(b) Explain the importance of probability theory.

OR

- 7 What is the importance of Bayesian belief networks?

UNIT – IV

- 8 Differentiate supervised learning and its techniques' with unsupervised learning and its techniques.

OR

- 9 What are the features of artificial neural networks, how Single layered perceptron is different from multi layer perceptron.

UNIT – V

- 10 How classical sets are different from fuzzy sets and list out various operations on fuzzy sets?

OR

- 11 (a) What are the features of evolutionary programming?
(b) What is the importance of ant colony paradigm?
