

Roll No.

24333

**B. Tech 6th Semester (IT)
Examination – May, 2018**

INTELLIGENT SYSTEMS

Paper : CSE-304-F

Time : Three Hours]

[Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt *five* questions, selecting one question from each Section and Question No. 1 is *compulsory*.

1. Explain the following :

- (a) Differentiate between Depth first search and Breath first search with example.
- (b) What is knowledge base ? How it is different from Database ?

- (c) What are the various uses of intelligent systems ?
Briefly explain.
- (d) Differentiate between Monotonic and Non-monotonic reasoning. Explain with examples.

SECTION – A

2. (a) Define brute force search and heuristic searching techniques with the help of suitable examples. 10
- (b) Explain AO* algorithm with the help of example. 10
3. (a) Discuss different features of LISP and Prolog. 10
- (b) What is alpha and beta pruning ? Explain with example. 10

SECTION – B

4. Explain Dempster Shafer Theory, How does it remove the disadvantages of Bayes Probability Inference. Using Dempster Shafer Approach, find the uncertainty of the following prediction. 20

"There are 80% chances of rain today. However there is uncertainty regarding the type of cloud cover. Some experts tell he is confident that there are 90% chances of these types of clouds bringing rains."

5. Write a short note on with example : 20

(i) Semantic Nets

(ii) Frames

(iii) Inheritance

SECTION - C

6. (a) Differentiate between Statistical reasoning and Symbolic reasoning. 10

(b) What do you mean by Planning ? Describe planning in situational calculus. 10

7. (a) Define fuzzy reasoning. What are the various operations on fuzzy sets ? 10

(b) Explain Temporal reasoning with detail. 10

SECTION - D

8. What is an expert system ? Describe the architecture of expert system with various components. 20

9. Briefly explain :

20

- (a) Neural Networks
 - (b) Natural language processing
 - (c) Genetic algorithms
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