2320

B.E. 6th Semester (I.T.) Examination, December–2011

INTELLIGENT SYSTEM

Paper - CSE-304-E

Time allowed : 3 hours] *[Maximum marks :100*

***Note :** Attempt **five** questions in all. All questions carry equal marks.*

1. What is AI? Explain its Foundation and history in detail.

2. (a) What do you mean by Hill Climbing? Explain its algorithm with the problems associated with this algorithm.

   (b) Write a program in PROLOG to implement the selection sorting.

3. (a) Test the validity of following arguments with the help of inferencing method. "If milk is black then every cow is white. If every cow is white then it has four legs. If every cow has four legs then every buffalo is white and brisk. The milk is black. Therefore the buffalo is white."

(b) Make a Procedural frame for the following example :

"For Replacing the damaged RAM of your personal computer."

4. Explain Dempster Shaffer Theory, How does it remove the disadvantages of Baye's Probability Inference. Using Dempster Shaffer Approach, find the uncertainty of the following prediction.

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

5. (a) Compare and contrast Monotonic and Non-Monotonic Reasoning.

(b) Differentiate between Knowledge Base and Database.

6. (a) Explain the architecture of Expert System with its types.

(b) Explain various learning methods.

7. (a) What do you mean by Natural Language Processing ? Explain in detail.

   (b) Explain the architecture of neural Network.

8. Write short notes on the following :

   (a) A * Algorithm

   (b) Bayes Theorem

   (c) Genetic Algorithm

   (d) Themetic Role Frames

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B. Tech. (IT) 6th Sem.

Examination – May, 2015

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 : Question No. 1 is ***compulsory***. Attempt ***five*** questions in total, selecting ***one*** question from each Sections. All questions carry equal marks.

1. (a) What is heuristic search ? Give an example. 5

(b) Explain various knowledge representation issues. 5

(c) What do you mean by reasoning under uncertainty ? 5

(d) Mention current trends in AI. 5

SECTION – A

2. (a) Explain intelligence and artificial intelligence. How do you distinguish between the two ? Give different definitions based on various forms of intelligence. 10

(b) Explain hill climbing algorithm. 10

3. Explain A* algorithm. Is A* algorithm guaranteed to find an optimal goal path if one exits. Explain giving examples. 20

SECTION – B

4. (a) Describe the properties of knowledge representation system. 10

(b) What do you mean by knowledge acquisition ? Write different methods used for knowledge acquisition. 10

5. Write notes on : 10 + 10 = 20

(a) Semantic nets.

(b) Saye's theorem.

SECTION – C

6. (a) What do you mean by planning ? Explain various steps in planning process. 10

(b) Explain non-monotonic reasoning. 10

7. Write notes on : 10 + 10 = 20

(a) Fuzzy reasoning.

(b) Partial order planning.

SECTION – D

8. What is an expert system ? Describe various components of an expert system. Mention some advantages and disadvantages of expert systems. 20

9. Write notes on : 10 + 10 = 20

(a) Rule based system architecture.

(b) Natural language processing.

B.Tech 6th Semester (IT) F-Scheme Examination,

May–2017

INTELLIGENT SYSTEM

Paper-CSE-304-F

Time allowed : 3 hours] *[Maximum marks : 100*

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

1. Explain the following : 4×5=20

(a) Blind search and heuristic search technique.

(b) Various knowledge representation issues.

(c) Partial order planning.

(d) Genetic algorithm.

Section-A

2. (a) Explain intelligence and artificial intelligence. How do you distinguish between the two ? Give different definitions based on various forms of intelligence. 10

(b) Write a program in PROLOG to solve a tower of Hanoi problem. 10

3. Explain AO* algorithm. Is AO* algorithm guaranteed to find an optimal goal path if one exists. Explain giving examples. 20

Section-B

4. (a) Describe the properties of knowledge representation system. 10

   (b) Describe Dempster Shafer theory. 10

5. Write notes on : 20

   (a) Rule based deduction systems

   (b) Baye's theorem

Section-C

6. (a) Explain non monotonic reasoning. 10

   (b) What do you mean by planning ? Explain various steps in planning process. 10

7. Write notes on : 20

   (a) Statistical reasoning

   (b) Temporal reasoning

Section-D

8. What is an expert system ? Describe various components and applications of an expert system. Mention some advantages and disadvantages of expert systems. 20

9. What do you mean by natural language processing ? Explain various stages of natural language processing. Also mention need and advantages of natural language processing. 20

9. Briefly explain : 20

(a) Neural Networks

(b) Natural language processing

(c) Genetic algorithms

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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