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Roll No.

322831(22)

B. E. (Eighth Semester) Examination, April-May 2021

(New Scheme)

(CSE Engg. Branch)

ARTIFICIAL INTELLIGENCE and EXPERT SYSTEMS

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

***Note : Attempt all questions. Part (a) is compulsory.
Attempt any two parts from (b), (c) and (d) of
each questions. Diagram is necessary
whenever if required.***

Unit-I

1. (a) Define Heuristic function. 2
- (b) Explain AO* algorithm with suitable example. 7
- (c) Explain Hill Climb algorithm with its limitations. 7

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[2]

- (d) Give the list of application area of artificial intelligence. 7

Unit-II

2. (a) What do you mean by WFF? 2
(b) What are the properties of a knowledge based system? Describe various knowledge representation techniques. 7
(c) How knowledge is represented using semantic Net? 7
(d) Give semantic representation for the following facts : 7
(i) Ram is taller than Harry.
(ii) Every Dog has bitter a politician.
(iii) Football is a Game. It is played by Ball it is popular in Europe.

Unit-III

3. (a) What do you mean by Fuzzy Logic? 2
(b) What is Baye's theorem? Give the limitation of Naive Bayesian system. 7

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- (c) Differentiate between supervised and unsupervised learning. 7
(d) Write short notes on : (any two) 7
(i) Bayesian Belief Network
(ii) Dempster Shafer Theory
(iii) Decision Tree

Unit-IV

4. (a) Derive a parse tree of the following sentence : 2
"Mohan slept on the Bench".
(b) Discuss the basic steps of Natural Language Processing (NLP). 7
(c) Differentiate between forward and backward reasoning. 7
(d) Discuss the partial order planning. Giving suitable example. 7

Unit-V

5. (a) Write any five name of expert system. 2

- (b) Draw the architecture of an expert system. Explain it. 7
- (c) Explain the process of knowledge Acquisition. 7
- (d) Explain rule based system with example. 7