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B. E. (Seventh Semester) Examination,

April-May, 2016

(Old Scheme)

(IT Engg. Branch)

ARTIFICIAL INTELLIGENCE & EXPERT SYSTEMS

Time Allowed : Three hours

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Maximum Marks : 80

Minimum Pass Marks : 28

Note : Attempt all questions. Part (a) from each question is compulsory. Attempt any two parts from parts (b), (c) and (d) of each question.

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Unit-I

1. (a) What is Production Systems? 2

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Unit-IV

4. (a) What is Linear Planning? 2
(b) Short notes on :
(i) Certainty factor
(ii) STRIPS 7
(c) Explain Block Word program with suitable example. 7
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(d) What are the different levels of analysis of NLP? 7

Unit-V

5. (a) Define Knowledge Acquisition. 2
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(b) What is Learning? How can we learn? 7
(c) Explain case study of CASNET expert sys. 7
(d) Explain Architecture of E. S. with each components. 7

(b) Define Searching. What are the ways of searching explain any one with Algorithms? 7

(c) Explain Forward and Backward chaining with suitable examples. CSVTUonline.com 7

(d) Give a solution of missinarius and Cannibals problem and write its limitation. 7

Unit-II

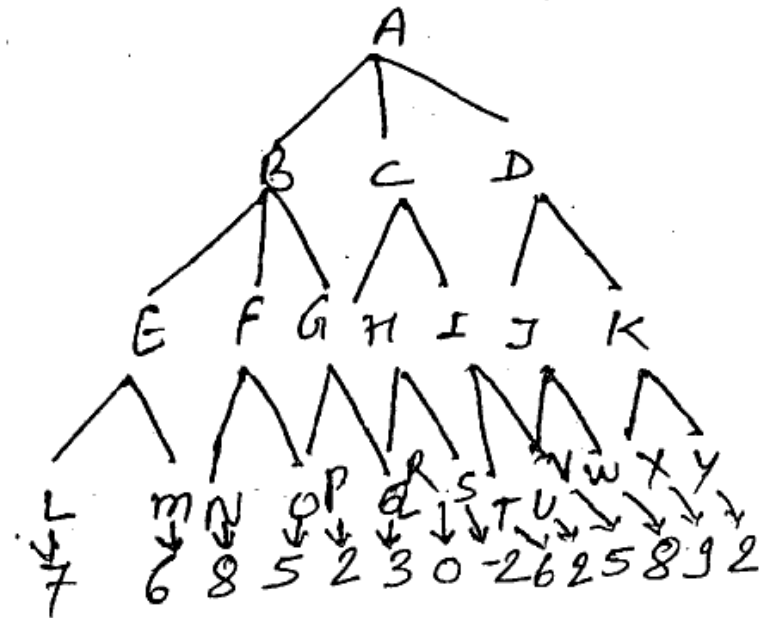
2. (a) Define Game Playing. 2

(b) Trace the constraint satisfaction procedure solving the following cryptarithmic problem. 7

$$\begin{array}{r}
 C O C A \\
 + C O L A \\
 \hline
 O A S I S
 \end{array}$$

(c) What is Hill climbing search? Explain its types? 7 -

(d) Write down the algorithm for minimax search and perform minimax and $\alpha - \beta$ cutoff on following tree. 7



Unit-III

3. (a) What is FOPL? 2

(b) Short notes on :

(i) Resolution Principle

(ii) CD 7

(c) Define frame. What is the main difference between Declarative and Procedural frame? 7

(d) Write a LISP program for factorial No. and also explain list manipulation functions. 7