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CS/IT–702

B. E. (Seventh Semester) EXAMINATION, June, 2007

(Common for CS & IT Engg.)

ARTIFICIAL INTELLIGENCE

Time : Three Hours

Maximum Marks : 100

Minimum Pass Marks : 35

Note : Attempt any *five* questions. Answer should be laconic.

1. (a) Explain your own critieria for Computer Software to be consider intelligent.   6

   (b) Differentiate between Breadth First Search and Depth First Search.   7

   (c) What is production rule ? Discuss.   7

2. (a) Explain how to branch and bound techniques could be use to find the shortest solution to a water jug problem.   10

   (b) Write down the A* algorithm with its merits and demerits.   10

3. Consider the following sentences :

   (i) Krishna like all kind of food

   (ii) Apples are food

   (iii) Bread is food

   (iv) Anything anyone eat and is not killed by is food

   P. T. O.

   (v) Ravi eats peanuts and is still alive

   (vi) Chetan eat every thing Ravi eats

   (a) Translate these sentences into formula in predicate logic.   10

   (b) Prove that Krishna likes peanuts using resolution.   10

4. Show and explain the conceptual dependency of the following :   20

   (a) John pushed the cart

   (b) The plants grew

   (c) John ran yesterday

   (d) John is a teacher

   (e) While going home, I saw a frog

5. (a) Construct partitioned semantic net representation for the following :   10

   (i) Every batter hit a ball

   (ii) Amit gave the book to Aruna

   (b) Explain Hill climbing algorithm.   10

6. (a) How the minimax and alpha beta pruning are done on tree ? Explain with example.   12

   (b) What is neural network ? Write its various applications.   8

7. Differentiate between the following :   20

   (a) Language understanding and language generation

   (b) Forward and Backward Reasoning

   (c) Supervised learning and unsupervised learning.

8. Write notes on any *three* of the following :   20

   (a) Unification algorithm   (d) Fuzzy logic

   (b) Baye's theorem   (c) MYCIN

   (c) Frames