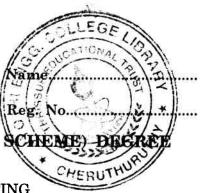**C 1075**   (Pages : 2)

EIGHTH SEMESTER B.TECH. [ENGINEERING] (09 SCHEME) DEGREE EXAMINATION, APRIL 2016

IT 09 803 L10—INTELLIGENT COMPUTING

Time : Three Hours   Maximum : 70 Marks

Part A

Answer all questions.

1. Compare Breadth first search and Depth first search.

2. Represent the following sentence in FOPL.

   "Chirpy is either a penguin or an ostrich".

3. When do we say that the rule of inference is admissible ?

4. What is an uncertain problem ? Give its disadvantages.

5. Write the advantages of decision trees over those of production rules.

                                                              (5 × 2 = 10 marks)

Part B

Answer any four questions.

6. Construct a heuristic function for the 'moving tiles' problem.

7. Convert the following statements into Predicate logic :—

   (a) Parent and Child are inverse relations.

   (b) There is someone who is loved by everyone.

8. What are AND-OR Graphs ? Give an example.

9. What is Unification ? Give an example.

10. Write a note on practical planners.

11. List the computational advantages of neural networks.

                                                              (4 × 5 = 20 marks)

Part C

Answer the following.

12. Describe the structure of basic problem solving agents with a complete example.

Or

13. Write the min-max search procedure. Also, list the refinements added to improve the performance of min-max procedure.

14. What are the factors that determine the choice of direction (forward or backward) of a particular problem ? Determine whether the search would proceed forward or backward for water-jug problem.

Or

15. Show how a JTMS could be used to select a TV program to watch. Consider rules such as "If it is 6.00, then watch the news on channel 1 else watch the cricket match in channel 2".

16. "Crossing the signal when it shows GREEN". Write the goals and Plans in STRIPS language to recognize this situation. Use your own Preconditions.

Or

17. How will you approach uncertainty through Bayesian networks ? Explain with an example.

18. Explain how knowledge based principles can be applied to Neural networks.

Or

19. Give the architecture of an Incremental Learning system and its working principles.

(4 × 10 = 40 marks)