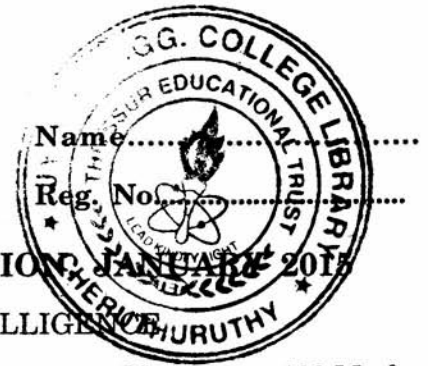


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FIRST SEMESTER M.TECH. DEGREE EXAMINATION, JANUARY 2015

MCS/MCL 10 105A—COMPUTATIONAL INTELLIGENCE

Time : Three Hours

Maximum : 100 Marks

Answer any **five** questions choosing atleast **one** from each module.

Module I

1. (a) What is default reasoning ? (4 marks)
- (b) How is it different from non-monotonic reasoning ? (4 marks)
- (c) Describe a state space in which iterative deepening search performs much worse than depth-first search. (12 marks)
2. (a) Compare and contrast uninformed and heuristic search strategies. (10 marks)
- (b) Discuss the challenges faced by the AI community in today's environment. (10 marks)

Module II

3. Capture in logical form enough knowledge to answer a series of questions about the following simple sentence. (4 knowledge + 3 + 3 = 10 marks)

Yesterday, John went to the North Berkeley Safeway Supermarket and bought two pounds of tomatoes and a pound of ground beef.

1. Is John a child or an adult (Adult)
 2. Did John buy and meat ? (Yes).
4. Explain the problem of constraint satisfaction with a neat example of your own.

Module III

5. Explain the syntax and semantics of Bayesian networks.
6. Write a note on various forms of learning strategies, with necessary illustrations.

Module IV

7. Discuss the challenges of Indian Language Processing.
8. The following is a short story. Describe the idea of automatically visualizing the story as a comic :

THE WOLF AND THE CRANE

A WOLF who had a bone stuck in his throat hired a Crane, for a large sum, to put her head into his mouth and draw out the bone. When the Crane had extracted the bone and demanded the promised payment, the Wolf, grinning and grinding his teeth, exclaimed : "Why, you have surely already had a sufficient recompense, in having been permitted to draw out your head in safety from the mouth and jaws of a wolf." In serving the wicked, expect no reward, and be thankful if you escape injury for your pains.

[5 × 20 = 100 marks]