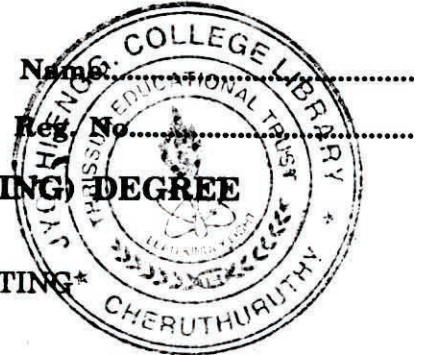


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**EIGHTH SEMESTER B.TECH. (ENGINEERING) DEGREE  
EXAMINATION, APRIL 2013**

IT 09 803 L10—INTELLIGENT COMPUTING\*

(2009 Admissions)

Time : Three Hours

Maximum : 70 Marks

**Part A**

**All questions are compulsory**

1. List any four properties of task environments.
2. Draw semantic network showing the representation of the logical assertion fly (Shankar, New York, New Delhi, Yesterday).
3. Draw decomposition of build house action.
4. Show topology and conditional probability tables in a sample Bayesian network.
5. Same attribute is never tested twice along one path in a decision tree. Why not?

(5 × 2 = 10 marks)

**Part B**

**Answer any four**

6. What is agent problem? Explain it with an example.
7. Discuss the procedure for converting a first order logic sentence to an equivalent CNF sentence.
8. Write down the bayes rule and brief the use of it with an example.
9. Discuss about propositions in detail.
10. Write and explain the boosting method algorithm for ensemble learning.
11. Explain single layer feed-forward neural networks.

(4 × 5 = 20 marks)

**Part C**

**Answer all questions**

12. (a) List out the steps in A\* search and explain each with an example.

Or

- (b) Write about alpha-beta pruning.

**Turn over**

13. (a) Explain the use of forward and backward chaining for reasoning patterns in propositional logic.

Or

(b) Write unification algorithm and explain.

14. (a) Discuss about efficient representation of conditional distributions.

Or

(b) Write about the axioms of probability.

15. (a) With neat example, explain about active reinforcement learning.

Or

(b) Name the hardware components needed to design a robot. Explain each in detail.

(4 × 10 = 40 marks)