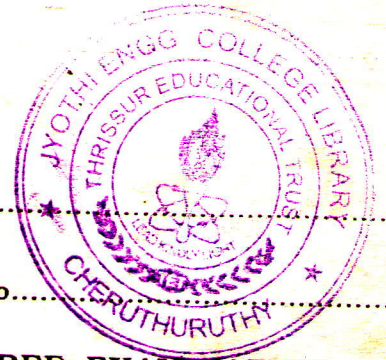


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Name.....

Reg. No.....



**EIGHTH SEMESTER B.TECH. ENGINEERING DEGREE EXAMINATION,  
JUNE 2004  
CSE  
(New Scheme)**

CS 2K 803 : ARTIFICIAL INTELLIGENCE

Time : Three Hours

Maximum : 100 Marks

**Part A**

*Answer all questions.*

- I. 1. What are the different approaches to Artificial Intelligence ? Briefly explain them.
2. What are the three major components of implicit state space graph.
3. Explain the procedure involved in converting *wffs* to conjunctions to clauses.
4. What are taxonomic knowledge ? How it can be encoded using semantic networks ?
5. Define the terms Generalisation, accuracy and overfitting with respect to neural networks.
6. What are modal operators ? Write down the syntax of modal first-order language.
7. Define Association list. Give an example for its usage.
8. Explain how lamda can be used to interface functions to argument tests.

(8 × 5 = 40 marks)

**Part B**

*Answer one question from each unit.*

**Unit I**

- II. a. Explain the depth-first search with example and how they are used in implicit state-space graph search.

*Or*

- b. Explain the minimax algorithm with alpha-beta cut off.

**Unit II**

- III. a. Write down the features of propositional calculus, illustrating the elements of the language, rules of inference and semantics.

*Or*

- b. Explain the use of resolution to prove theorems and answer extraction.

**Unit III**

- IV. a. With basic structure diagram explain the rule-based expert system.

*Or*

- b. Explain the use of knowledge to resolve ambiguities.

**Turn over**

**Unit IV**

V. a. Explain how recursion and iterations are performed in LISP with example.

Or

b. Define a function RADIX-SORT that will sort a list of arrays using radix sort method.

(4 × 15 = 60 marks)