C 46568 (Pages : 2) Name.....

Reg. No.....



# EIGHTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION, JUNE 2008

## CS 2K 803—ARTIFICIAL INTELLIGENCE

Time : Three Hours Maximum : 100 Marks

### Part A

*Answer* **all** *questions.*

I. (a) What are basic needs to build a system to solve a particular problem ?

(b) Mention advantages of Depth First search.

(c) Define single valued attributes.

(d) What is resolution ?

(e) State Baye's Theorem.

(f) What do you mean by syntactic analysis ?

(g) List out basic LISP primitives.

(h) Mention properties of association lists.

(8 × 5 = 40 marks)

### Part B

II. (a) (i) Explain Minimax search procedure. (7 marks)

(ii) How would minimax procedure have to be modified to be used by a program playing a three or four person game rather than a two person one ? (8 marks)

*Or*

(b) (i) Describe simple hill climbing and steepest ascent hill climbing algorithms. (8 marks)

(ii) Compare Forward versus Backward reasoning. (7 marks)

III. (a) (i) Explain in detail about frames. (7 marks)

(ii) Construct one consistent frame representation of all baseball knowledge. (8 marks)

*Or*

(b) (i) Write an algorithm for propositional resolution. (8 marks)

(ii) Write an algorithm convert to clause form. (7 marks)

IV. (a) (i) Write short notes on pragmatic analysis and morphological analysis. (8 marks)

(ii) Compare and contrast neural networks and expert systems in terms of knowledge representation, knowledge acquisition and explanation. (7 marks)

*Or*

**Turn over**

(b) Explain in detail about back propagation algorithm.

5. (a) Explain about LISP recursion and iteration.

*Or*

(b) Explain search algorithms using LISP.

(4 × 15 = 60 marks)