C 20280 (Pages : 2) Name.....

Reg. No.....

EIGHTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION, JUNE 2006

CS 2K 803. ARTIFICIAL INTELLIGENCE

Time : Three Hours Maximum : 100 Marks

Part A

Answer **all** *questions.*

1. (a) Write short notes on forward chaining and backward chaining with suitable example.
   (b) Explain the alpha-beta procedure with an example and explain the search efficiency of it.
   (c) Explain about resolution in the propositional calculus.
   (d) Define briefly semantics of quantifiers.
   (e) Discuss about the back propagation method.
   (f) Explain the phrase-structure grammars in understanding language strings.
   (g) Discuss the basic LISP primitives.
   (h) Explain the process of implementing substitution sets using association lists.

(8 × 5 = 40 marks)

Part B

UNIT I

2. (a) Discuss perception and action components with suitable example.

Or

   (b) Write the procedure for algorithm A * and discuss the features of it.

(15 marks)

UNIT II

3. (a) Discuss the steps to convert arbitrary cuffs to clause form in predicate calculus.

Or

   (b) Explain the process of unification and unity algorithm.

(15 marks)

UNIT III

4. (a) Explain the semantic analysis in understanding language strings.

Or

   (b) Explain about probabilistic inference in detail.

(15 marks)

Turn over

UNIT IV

5. (a) Explain the following :—

(i) Recursion and iteration.

(ii) Predicates.

Or

(b) Write a LISP program to solve the 8-queens problem (*Note*. No two queens are on the same row, column or diagonal).

(15 marks)

(4 × 15 = 60 marks)