

**2006 CALICUT UNIVERSITY**  
**EIGHTH SEMESTER B.TECH ENGINEERING DEGREE EXAMINATIONS**  
**ARTIFICIAL INTELLIGENCE**  
**(COMPUTER SCIENCE & ENGINEERING,IT)**

JUNE 2006

TIME::3 HOUR  
MARK:100

ANSWER ALL QUESTIONS

**PART A [8\*5=40]**

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.

**PART B [15\*4=60]**

2. (a) Discuss perception and action components with suitable example.  
Or
- (b) Write the procedure for algorithm A \* and discuss the features of it.
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.
4. (a) Explain the semantic analysis in understanding language strings.  
Or
- (b) Explain about probabilistic inference in detail.
5. (a) Explain the following :-  
(i) Recursion and iteration.  
(ii) Predicates.  
Or
- (b) Write a LISP program to solve the 8-queens problem (. `Vote. No two queens are on the same row, column or diagonal).

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