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Name.....

Reg. No.....

THIRD SEMESTER M.Sc. DEGREE EXAMINATION, FEBRUARY 2009

Computer Science

CS 304—ARTIFICIAL INTELLIGENCE

(2005 Admission onwards)

Time : Three Hours

Maximum : 80 Marks

Part A

*Answer any **five** questions.
Each question carries 8 marks.*

Define AI. Mention some applications. What are AI techniques ?

Discuss Generate and Test method of search.

3. Discuss procedural and declarative knowledge representation.

4 Differentiate propositional and predicate calculus. Describe resolution to answer questions with a simple example.

What are the conveniences and demerits of first order predicate logic ?

6' Implement DFS in PROLOG.

7. Describe the architecture of expert system. What is knowledge engineering ?

(5 x 8 = 40 marks)

Part B

*Answer any **four** questions.
Each question carries 10 marks.*

8. Describe DFS and BFS. When are they preferred ? Are these informed searches ? Justify.

9. Briefly discuss constraint satisfaction procedure.

10. (a) A person P marries an elderly widow W. W has a grown-up daughter D.P's father F marries D. Using backward reasoning show that P is his own grandfather.

(b) Use resolution to show that D is her own grandmother.

11. Describe the types of syntactic parsing.

12. (a) Mention some important expert systems.

(b) Explain the reasoning method in MYCIN.

13. Illustrate FAIL and CUT in PROLOG. Discuss the conveniences of PROLOG as AI programming language.

(4 x 10 = 40 marks)