

**D 51733**

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**Name**

**Reg. No.....**

**THIRD SEMESTER M.Sc. DEGREE EXAMINATION, DECEMBER 2013**

**(CUCSS)**

**Computer Science**

**CSC 3C 04—ARTIFICIAL INTELLIGENCE**

Time : Three Hours

Maximum : 36 Weightage

**Part A**

*Answer **all** questions.*

*Each question carries 1 weightage.*

1. List any four characteristics of AI problems.
2. What do you mean by state space search ?
3. What do you mean by Cryptarithmic ?
4. Explain the term knowledge representation.
5. What do you mean by Resolution ? Give example.
6. Differentiate procedural and declarative knowledge.
7. What is the role of trees in Prolog ?
8. Explain the purpose of cut with suitable example.
9. Define Grammar.
10. What do you mean by Pragmatic processing ?
11. Define Expert System.
12. What is an expert system shell ?

(12 x 1 = 12 weightage)

**Part B**

*Answer any **six** questions.*

*Each question carries 2 weightage.*

13. Explain best first search.
14. Explain any four applications of AI.
15. Discuss the issues in knowledge representation.
16. How will you represent knowledge using rules ?
17. Write a prolog program illustrating how objects and relationships are represented in Prolog.

**Turn over**

18. Write notes on Monotonic reasoning.
19. Write short notes on Semantic nets.
20. Discuss salient features of MYCIN.
21. Write notes on knowledge engineering.

(6 x 2 = 12 weightage)

### Part C

*Answer any **three** questions.  
Each question carries 4 **weightage**.*

22. What do you mean by heuristic search ? Explain Hill-climbing approach.
23. Explain forward and backward chaining with examples.
24. Discuss how simple facts can be represented in logic. Illustrate with suitable examples.
25. Discuss Prolog implementation of BFS.
26. Discuss major issues in Natural Language Processing.
27. Write notes on :
  - (a) Expert system life-cycle.
  - (b) Expert system tools.

(3 x 4 = 12 weightage)