

Roll No.

Total Pages : 03

BT-7/M-20

37154

EXPERT SYSTEMS

CSE-425N

Time : Three Hours]

[Maximum Marks : 75

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

Unit I

1. (a) Compare hill climbing algorithm and best first search techniques. 7
(b) What is Minmax strategy for game playing ?
Develop an algorithm for Minmax. 8
2. What is main difference between scripts and frame structures for knowledge representation ? Also write their advantages and limitations. 15

Unit II

3. (a) Briefly give historical evolution of an expert system. 7

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- (b) Elaborate rule-based architecture of an expert system. **8**
- 4. (a) Explain, how uncertainty is propagated through a chain of rules during consultations with an expert system ? **7**
- (b) Identify and describe two good application areas for an expert system with a medical college and hospital environment. **8**

Unit III

- 5. Discuss the following expert system development phases :
 - (a) Problem Identification
 - (b) Development of prototype
 - (c) Planning a full stage system. **5,5,5**
- 6. (a) Elaborate the major problems faced in knowledge acquisition. **8**
- (b) How expert system tools help in expert system development ? **7**

Unit IV

- 7. Discuss the role of the following personals in an expert system development :
 - (a) User
 - (b) Knowledge Engineer
 - (c) System Development personal. **5,5,5**

8. Write notes on the following : 5,5,5
- (a) Tuning an expert system
 - (b) Verifying an expert system
 - (c) Validating an expert system