

L118
21/12/13 FN

Reg. No. :

| | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

Question Paper Code : 75509

5 Year M.Sc. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2013.

Elective

Computer Technology

XCS 005 — EXPERT SYSTEMS

(Regulation 2003)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. List the characteristics of expert systems.
2. What do you mean by production systems?
3. State the limitations of predicate logic.
4. Define the term resolutions systems.
5. What is an inference net?
6. Write the issues when implementing some uncertainty scheme.
7. What is meant by knowledge engineering?
8. Mention the task of formalization phase in expert system.
9. Write note on decision traces.
10. What is meant by backward chaining?

PART B — (5 × 16 = 80 marks)

11. (a) Describe the general concept, elements and advantages of expert system.

Or

- (b) Explain the procedural paradigms of expert system. State the advantages and disadvantages of it.

12. (a) Describe the issues in knowledge representation. Explain the semantic nets and first order predicate logic.

Or

- (b) Illustrate the various methods of inferences in expert system briefly.

13. (a) What is meant by reasoning under uncertainty? Explain the semantics of conditional and compound probabilities briefly.

Or

- (b) Discuss about the uncertainty in inference chains. Discuss about temporal reasoning and Markov chains under uncertainty.

14. (a) Illustrate the stages and errors in the development of expert system elaborately.

Or

- (b) Explain the detailed life cycle model of expert systems.

15. (a) Discuss the measures of belief and disbelief of certainty factors. State the advantages and disadvantages of certainty factor.

Or

- (b) Illustrate the operational details and inference mechanism of PROSPECTOR.