

BT-8/M-13

8805**EXPERT SYSTEMS**

Paper-CSE-446

Option-(iv)

Time Allowed : 3 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) Explain expert systems and write their important applications.
(b) What is the need of knowledge for developing an expert system? How is knowledge organized?
2,6,3,4
2. Write down the architecture of an expert system, explaining each component. How do expert systems differ from Production systems?
12,3

UNIT-II

3. (a) In the development of an expert system we need knowledge which needs to be organized. Explain.
(b) Describe briefly various methods of knowledge representation, highlighting their merits and limitations.
4,11
4. (a) Write about the various stages of developing an expert system, showing their interactive nature.

- (b) Explain Knowledge Engineering and Paradigm shift in the domain of expert systems. 9,3,3

UNIT-III

5. What are various methods of acquiring knowledge for the expert system with special reference to :
- (a) On-site observation
 - (b) Problem analysis
 - (c) Interviewing the domain expert. 4,4,7
6. Write a complete analysis of developing an expert system in terms of :
- (a) Selection of expert system tool
 - (b) Knowledge consistency
 - (c) Reliability. 8,4,3

UNIT-IV

7. Write down various pitfalls in the planning and development of an expert system. 15
8. Write explanatory notes on :
- (a) Future of expert systems
 - (b) Applications of expert systems. 7,8