



**Part B**

**5x6=30**

**Answer ALL questions**

**Answer should not exceed 400 words or two page**

- 11.a. Summarize the factors that make up rationality.  
(or)
- 11.b. Define problem solving agents and list its algorithms.
- 12.a. Write a note on Structure of Prolog program and give example.  
(or)
- 12.b. Explain Logic programming by Prolog.
- 13.a. Define Heuristic function. Explain its types.  
(or)
- 13.b. Write short notes on simulated annealing.
- 14.a. How would you formulate Constraint Satisfaction Problem?  
(or)
- 14.b. Explain A\* algorithm with example.
- 15.a. Differentiate between forward and backward chaining with diagram.  
(or)
- 15.b. Describe the Steps to Build an Expert System.

**Part C**

**5X12=60**

**Answer ALL questions**

**Answer should not exceed 800 words or four pages**

- 16.a. Give State space representation for Water jug Problem with algorithm.  
(or)
- 16.b. Draw and Describe the Architecture of Utility based agent.  
How it is different from Model based agent?
- 17.a. i) Write a note on prolog programming language.  
ii) How backtracking is done in prolog? Explain with a neat diagram.  
(or)
- 17.b. Explain the concept of Lists in Prolog with example.
- 18.a. Brief about Hill climbing and Steepest Ascent hill climbing algorithms.  
(or)
- 18.b. i) Differentiate informed search and uninformed search.  
ii) Describe Heuristic function and its types.
- 19.a. Compare and elaborate greedy best first search and A\* algorithms  
with neat diagrams.  
(or)
- 19.b. Explain in detail about Mean end analysis.
- 20.a. i) Describe the utilization and functionality of Expert system.  
ii) Define PEAS representation. Give a note on PEAS representation of vacuum  
cleaner.  
(or)
- 20.b. Brief about Expert System Architecture and Applications.

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