

(3 Hours)

Total Marks: 80

- N.B.
1. Question **No. 1** is compulsory
 2. Attempt any **three** questions from remaining five questions
 3. Assume suitable data if **necessary** and justify the assumptions
 4. Figures to the **right** indicate full marks

- Q1 Solve any Four out of Five** 20
- A Describe problem formulation with Missionaries and Cannibals Problem 05
- B Convert in to FOPL 05
- EVERYONE LIKE EVERYONE
 - ALL GRADUATES ARE UNEMPLOYED
- C Write a PROLOG program for Fibonacci of given number. 05
- D Identify the PEAS descriptor for Medical Diagnosis System. 05
- E Write a short note on: AI Perspectives: Acting and Thinking humanly 05
- Q2** A Explain the Expert Systems along with its Components. Give real life example of Expert system 10
- B Explain any two Environment Types in detail. 10
- Q3** A Compare and contrast simulated annealing with Hill climbing 10
- B Illustrate forward chaining and backward chaining in propositional logic with example. 10
- Q4** A Explain different inference rule for First Order predicate logic 10
- B What do you understand by Min Max Search and alpha beta search? Explain in detail with example. 10
- Q5** A Consider the following statements. 10
- (a) Prakash likes all kind of food.
- (b) Mango and Fish are food.
- (c) Anything anyone eats and is not killed is food.
- (d) Jay eats peanuts and still alive.
- (e) Meena eats everything that Jay eats.
- Prove that Prakash likes Peanuts using Resolution.
- B Explain various methods of knowledge representation techniques. 10
- Q6** A Explain Iterative Deepening Search Algorithm based on performance measure. 10
- B Explain Prior and Posterior Probability with example. 10