[Time: 3 Hours]   **[Marks:75]**

Please check whether you have got the right question paper.

N.B: 1.   **All** questions are **compulsory**
          2.   **Answer to the two sections must be written in same answer book and should be submitted together**
          3.   **Write answer to same questions together**
          4.   **Mixing of sub-questions is not allowed.**

SECTION-I

Q.1 (A) Give overview of an intelligent agents?   **06**
       (B) State and explain 8 queen problem.   **07**

OR

Q.1 (A) Write a short note on AI. Mention its applications.   **06**
       (B) Differentiate Forward and Backward chaining.   **07**

Q.2 (A) Explain First order logic with examples   **06**
       (B) Explain Planning. Why it is necessary.   **07**

OR

Q.2 (A) Write a note on Dempster-shafers belief networks theory.   **06**
       (B) Differentiate Mutation and Crossover in genetic algorithm.   **07**

Q.3 (A) Write a note on multi-layered feed forward network.   **06**
       (B) Explain component steps of communications.   **06**

OR

Q.3 (A) Mention the application of Intelligent systems in ROBOTICS   **06**
       (B) Write a note on knowledge acquisition.   **06**

SECTION-II

Q.4 (A) Explain RBF network.   **06**
       (B) Explain error correction learning.   **07**

OR

Q.4 (A) What is supervised learning? Is it better than unsupervised learning?   **06**
       (B) Write a note on McCulloch and Pitts neuron.   **07**

Q.5 (A) Explain XOR problem in Neural networks.   **06**
       (B) Explain Fuzzy Logic with one examples.   **06**

OR

Q.5 (A) Write a note on perceptron convergence theorem.   **06**
       (B) State any 2 signal functions and explain.   **06**

Q.6 (A) Explain back-propagation algorithm.   **06**
       (B) Why do we used deffuzzification?   **06**

OR

Q.6 (A) Explain any 2 architectures of neural networks.   **06**
       (B) Explain the least mean square method.   **06**