Tutorial

# Unit 1

1. Define AI? Explain about its importance.
2. Write about application of AI in Brief.
3. Define Learning, knowledge and its application.
4. Solve all questions of this chapter from UT and Assessment.

# Unit 2

1. What is an agent? Explain about it types in brief.
2. Write short notes on Goal based agent and Utility based agent.
3. What is environment? Explain about its types.
4. What is an intelligent system/ agent? Write about its features
5. What do you mean by inference and resolution in predicate logic?

Translate the following English sentences into FOL .

i) Every gardener likes the sun.

ii) You can fool some of the people all of the time.

iii) No purple mushroom is poisonous.

iv) There are exactly two purple mushrooms.

1. Write about min-max algorithm and alpha-beta pruning.
2. Define evaluation function. Explain evaluation function of TTT and draw its game tree.
3. Solve all questions of this chapter from UT and Assessment.

# Unit 3

1. Define Pattern and Classification.
2. What is over fitting? How could it be resolved?
3. Write about the procedure of pattern classification.
4. Write short notes on nearest neighbor method in pattern classification.
5. Why is Pattern classification required?
6. Solve all questions of this chapter from UT and Assessment.

# Unit 4

1. Differentiate between biological neural network and Artificial Neural network?
2. What is perceptron? Write about Perceptron training algorithm.
3. Define multilayer neural network?
4. Explain Back propagation training algorithm with example.
5. Solve all questions of this chapter from UT and Assessment.

# Unit 5

1. Define probabilistic Reasoning with an example.
2. Define Bayes Network and Markov Network.
3. Define HMM with its applications.
4. Solve all questions of this chapter from UT and Assessment.

# Unit 6

1. Draw a neat flowchart of genetic algorithm and explain each phases in brief.
2. Write about Crossover and mutation.
3. Write about GA Operators.
4. Define genetic algorithm.
5. Using genetic algorithm optimize the equation f(x) = x2‑, from the range 1 to 15, and population size = 6.
6. Solve all questions of this chapter from UT and Assessment.

# Unit 7

1. What is an expert System? Explain about its characteristics and advantages.
2. Explain different Expert system tools [Nature and expert system building tools].
3. Explain stages in development of expert system.
4. Solve all questions of this chapter from UT and Assessment.

# Unit 8

1. What is swarm intelligence and Particle swarm intelligence?
2. Write about working of Ant colony System.
3. Write about importance of ant colony system.
4. Write short notes on biological and artificial ant colony system.
5. What are applications of Ant colony Intelligence?
6. Solve all questions of this chapter from UT and Assessment.