**Applied Machine Learning Important Questions**

1. What do you mean by well-posed learning problem? Explain with example. (Unit-1)
2. Explain the steps in designing the learning system. (Unit-1)
3. Describe the Candidate-Elimination Algorithm. (Unit-1)
4. Explain the working of the Candidate-Elimination algorithm taking enjoy sport concept and training instance given below: (Unit-1)



1. Explain the following with examples: (Unit-1) – Not there
   1. Find-S algorithm
   2. List-Then Eliminate algorithm
2. Define Decision Tree learning. Explain the decision tree learning algorithm with an example. (Unit-2)
3. Describe Hypothesis search space in decision tree learning. (Unit-2) – Not there
4. Discuss the necessary measures required to select the attributes in building the decision trees using ID3 algorithm. (Unit-2) – Not there
5. Give decision trees to represent the following Boolean functions: – Not there



1. Consider the following set of training examples:



a. What is the entropy of this collection of training examples with respect to the

target function classification?

b. What is the information gain of a2 relative to these training examples?

1. Explain Binomial Distribution with an example (Unit-3) – Not there
2. Explain the basic definitions of Sampling theory. (Unit-3) – Not there
3. Write short notes on the following: (Unit-3)
   1. Binomial Distribution
   2. Estimating Hypothesis accuracy
4. Explain Naive Bayes classifier and Bayesian Belief Networks.
5. What is Brute-Force MAP hypothesis learner? How is it related to concept learning?
6. What is instance-based learning? Explain KNN algorithm with example.
7. Explain mistake bound model of learning for finds and having algorithm.
8. Discuss the method of learning using locally weighted linear regression describe the genetic algorithm steps using population fitness function and other necessary data.
9. Describe the genetic algorithm steps using population fitness function and other necessary data.
10. Explain different types of operators involved in single GA with examples.
11. What do you mean by reinforcement learning? How does it differ from other function approximation tasks
12. Explain different types of models of evolution and learnings.

**SAQ’S**

1. What are the different types of crossover operators?
2. What is crowding in genetic algorithms?
3. What is inductive logic programming?
4. Differentiate lazy learning vs eager learning.
5. Write the advantages of instance-based learning.
6. Why KNN is known as lazy learning algorithm.
7. Who are consistent learners?
8. What is mistake-bound?
9. Define conditional probability.