**COMSATS University Islamabad, ISLAMABAD Campus**

**Terminal Examination (Fall 2020)**

Department of Computer Science

**Short Questions**

**Class:** BCS-VI & BSE- VII SEMESTER **Dated:** 06 January *2021*

**Subject:** Machine Learning **Time Allowed:** 50 mins

**Instructors**: Dr. Usman Yaseen, Umar Nauman **Maximum Marks**: 20

Please answer briefly (not more than 3 lines) and to the point: **(10 x 2 = 20)**

1. What Are the Different Types of Machine Learning? Write a one-line description of each.
2. What is the difference between linear regression and logistic regression?
3. When Will You Use Classification over Regression?
4. What is Overfitting, and How Can You Avoid It?
5. What is the difference between False Positive and False Negative?
6. What is the difference between clustering and classification?
7. Compare K-means and KNN Algorithms, when both are using the same value of k (e.g k=3) and Manhattan Distance as distance formula.
8. Why we perform pruning in Decision Trees?
9. What is the difference between a perceptron and a neural network?
10. What is an activation function in neural networks? What are the three most commonly used activation functions?

Due Date: 6th January 2021 (before the announced time)

NOTE: Turn it in time on MS Teams, after saving your document with your registration number e.g “FA21-BSE-007.docx”