

**PAF-Karachi Institute of Economics and Technology**  
**Course: Machine Learning (S2020)**

**Assignment – 2**

- Note: 1. Individual student submission**  
**2. If your assignment fall in plagiarism, will not be graded**  
**3. Possibility to conduct the viva of your code**

**Max marks : 20**

**Due Date: 28-4-2020**

---

**[Question – 1]**

(a) Decision tree is a method for work both classification and regression. The classification part with entropy with information gain we have done in class.

Your task describe the Decision tree for folloing points:

- (i) What is the decision tree for regression
- (ii) Draw a decision tree diagram for regression
- (iii) Solve an example decision tree for regression by **any method**
- (iv) Fill following table by using decision tree code. (make sure problem is multiclass)

Decision Tree	Sensitivity	Specificity	Accuracy	Precision	AUC
Information Gain					
Gini Index					

**Note: Data set is available at google classroom**