

Q - 4 Answer the following questions. [10]

- (a) Testing set is not a part of training set. State True/False and Justify. [02]
- (b) What is minimum-confidence? What is an equation to calculate confidence of rule? [02]
- (c) List any four machine learning open-source libraries. [02]
- (d) What is the use of slack variable in SVM? [02]
- (e) List the difference between Machine Learning and Deep Learning [02]

Q - 5 Answer the following questions. [Any Two] [10]

- (a) Explain Back propagation algorithm in Neural Network. [05]
- (b) Discuss various activation functions of Artificial Neural Network. [05]
- (c) What is overfitting and underfitting in Machine Learning? [05]

Q - 6 Answer the following questions. [Any Three] [15]

- (a) The values of independent variable X and dependent value Y are given below: [05]

X	Y
0	2
1	3
2	5
3	4
4	6

Find the least square regression line $Y = aX + b$.

Estimate the value of Y when X is 10.

- (b) Explain methods of cross-validation in classification. [05]
- (c) Write a short note on Convolutional Neural Networks. [05]
- (d) How machine learning can be helpful to predict new cases of Novel coronavirus (COVID-19)? Write a case study. [05]
