

**Roll No.**

**Total No. of Pages : 02**

**Total No. of Questions : 09**

**M.Sc.(IT) (Sem.-4)**

# MACHINE LEARNING

**Subject Code : PGCA-1945**

**M.Code : 79568**

**Date of Examination : 22-12-2022**

**Time : 3 Hrs.**

**Max. Marks : 70**

**INSTRUCTIONS TO CANDIDATES :**

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION - B & C have FOUR questions each.**
3. **Attempt any FIVE questions from SECTION B & C carrying TEN marks each.**
4. **Select atleast TWO questions from SECTION - B & C.**

## SECTION-A

1. **Write short notes on :**
  - (a) What is deep learning?
  - (b) What is validation?
  - (c) Explain the term “*classification*”.
  - (d) What is difference between “*training and testing data*”?
  - (e) What is cause of over fitting?
  - (f) Explain boosting.
  - (g) What are auto regressive models?
  - (h) Where is clustering used?
  - (i) What is a time series analysis?
  - (j) Explain logic behind random forest algorithm.

### **SECTION-B**

2. What F-measure signifies? How it is calculated?
3. What is gradient descent?
4. Explain k-nearest neighbor algorithm.
5. Write the use of logistic regression.

### **SECTION-C**

6. Explain the use of decision tree.
7. Write the k-mean algorithm.
8. What is the use of principal component analysis?
9. Write a note on Markov models.

**NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.**