Roll No. | | | | | | | | | | | | | **Total No. of Pages : 02**

Total No. of Questions : 07

BCA (Sem.–6)

MACHINE LEARNING

Subject Code : UGCA1950

M.Code : 91697

Date of Examination : 22-05-2023

Time : 3 Hrs. **Max. Marks : 60**

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.**

SECTION-A

1. Write briefly :

a. What is supervised learning? Give an example.

b. Draw the machine learning process flow.

c. How is a decision tree helpful in classification problems?

d. Define a support vector in SVM.

e. Mention few hyperparameters used in SVM.

f. What is k in K-means clustering and how is it chosen?

g. What is the basic element of reinforcement learning?

h. Differentiate between q value and p value.

i. Write the Naive Bayes Theorem mathematically.

j. What is cross validation?

SECTION-B

2. Explain the Linear regression algorithm. Also, discuss how gradient descent is related with linear regression.

3. Take an appropriate example and describe its step-by-step execution using decision tree.

4. Show the implementation of support vector machine for classification.

5. Discuss the hierarchical clustering algorithm and its complexity.

6. What is Markov chain? Explain Markov Decision Process (MDP) in detail.

7. What is a confusion matrix and how it is represented? Discuss all its parameters.

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.