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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (CSE) / (AI&ML) (Sem.–6)

MACHINE LEARNING

Subject Code : BTCS619-18

M.Code : 93395

Date of Examination : 03-06-2025

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 **FIVE** questions carrying **FIVE** marks each and students have to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.

SECTION-A

1. Write briefly :

- a) Write advantages of Supervised Learning.
- b) What do you mean by Learning associations.
- c) What do you mean by Data Transformation? Explain.
- d) What is the purpose of splitting data into training and test sets?
- e) What is Simple Linear Regression?
- f) Explain in brief about the term RSqure in reference to Evaluating Regression Models Performance.
- g) Explain the concept of K-Nearest Neighbours(K-NN) Algorithm in brief?
- h) Explain in brief about Decision tree.
- i) What do you mean by Recombination in reference to Genetic Algorithms?
- j) What is the purpose of the selection operation in a genetic algorithm?

SECTION - B

2. Explain the concept of Unsupervised learning along with its advantages and disadvantages.
3. Write a detailed note on the Data Reduction.
4. Write a detailed note on Polynomial Regression.
5. Explain in detail about Logistic Regression.
6. Write a detailed note on Activation Functions.

SECTION - C

7. Discuss in Detail about Data Cleaning.
8. Explain in detail about need and Applications of Clustering.
9. **Write a detailed note on following:**
 - a) Reinforcement Learning
 - b) Naïve Algorithm.

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