



25804039

QP CODE: 25804039

Reg No :

Name :

MCA DEGREE EXAMINATION, OCTOBER 2025

Third Semester

MASTER OF COMPUTER APPLICATION

CORE - MCACT301 - MACHINE LEARNING TECHNIQUES

2020 ADMISSION ONWARDS

18C9B275

Time: 3 Hours

Maximum: 75 Marks

Part A

*Answer any **ten** questions*

*Each question carries **3** marks*

1. Discuss about regression.
2. Compare Artificial Intelligence Vs. Machine learning Vs. Deep learning.
3. Differentiate between training data set and testing data set in Classification.
4. How does the decision tree algorithm works?
5. How do we choose the factor K in KNN algorithm?
6. Discuss about binary feature selection
7. Define the term Factor Analysis.
8. What is the use of Distance Function in Clustering?
9. Differentiate Agglomerative hierarchical clustering and Divisive hierarchical clustering.
10. Write a note on Density reachable and density-connectivity.
11. Define Multilayer Perceptrons.
12. What do you mean by backpropagation neural network.

(10×3=30 marks)

Part B

*Answer **all** questions*

*Each question carries **9** marks*

13. a) Explain about different types of supervised machine learning techniques with example.

OR





- b) What are the applications of machine learning? Explain any five.
14. a) Give a detailed explanation about Vapnik-Chervonenkis dimension with example.
OR
- b) Is regression is a Supervised Learning technique? Justify your answer. Compare Regression and Classification with example.
15. a) Explain the method of feature Extraction and feature Selection.
OR
- b) Explain about step by step procedure for PCA with example.
16. a) Discuss the working of k-means partitioning algorithm used in clustering data.
OR
- b) Discuss about the terms i) Voting ii) Bagging iii) Boosting.
17. a) Give the structure of biological neural system and Artificial neural system with diagrams. Also compare these two.
OR
- b) Discuss the different application area neural networks.

(5×9=45 marks)

