TILAK MAHARASHTRA VIDYAPEETH, PUNE
MASTER OF SCIENCE (M.SC) IN COMPUTER APPLICATIONS
EXAMINATION : DECEMBER - 2022
SEMESTER - III
Sub: Data Analytics (MSC -303 -19)

Date : 14/12/2022	Total Marks : 60	Time: 10.00 am to 12.30 pm

Instruction:
1. *All questions are compulsory unless and otherwise stated.*
2. *Bold figures to the right of every question are the maximum marks for that question.*
3. *Candidates are advised to attempt questions in order.*
4. *Answers written illegibly are likely to be marked zero.*
5. *Use of scientific calculators, Log tables, Mollier Charts is allowed.*
6. *Draw neat and labelled diagram wherever necessary.*

Q. 1.   Answer the following in 2-3 lines. (Any 5)   **(10)**

1. What do you mean by Data Cleaning?

2. What is Cross-Validation?

3. What is the main key difference between supervised and unsupervised machine learning?

4. What are Different Kernels in SVM?

5. What Is Meant by Data Preprocessing in Machine Learning?

6. Define Data Frame in Pandas.

7. Define neural network.

Q. 2.   Answer the following in short. (Any 4)   **(20)**

1. Explain is classification and regression.

2. How to handle missing values?

3. How to tackle overfitting and underfitting?

4. What is Reinforcement Learning?

5. What is Pruning in Decision Trees, and How Is It Done?

6. Explain NumPy library with its methods.

Q. 3.   Answer the following in detail. (Any 3)   **(30)**

1. What is Machine Learning? Explain different types of Machine learning.

2. Explain Linear Regression with its types.

3. Explain Naïve Bayes algorithm in detail.

4. What is clustering? Explain k-means clustering.

5. Explain the Stages of Building a Model in Machine Learning?