Roll No.												

PRESIDENCY UNIVERSITY
BENGALURU
RESEARCH & DEVELOPMENT

Ph.D. Course Work – Mid Term Examination

September 2024

School/Department: Engineering / Mathematics
Course Code: MAT 843
Course Name: Machine Learning and Deep Learning
Course Credit: 4-0-0

Date: 27/09/2024
Time: 2:00PM to 3:30PM
Max Marks: 50
Weightage: 25%

Instructions:

(i) *Read the question properly and answer accordingly.*
(ii) *The question paper consists of 3 parts.*
(iii) *Scientific and Non-programmable calculators are permitted.*

Part A [Memory Recall Questions]

Answer all the Questions. Each question carries 2 marks. (5Qx2M=10M)

1. Define artificial intelligence, machine learning, and deep learning.

(C.O.NO.1) [Knowledge]

2. What are the common algorithms used in supervised learning?

(C.O.NO.1) [Knowledge]

3. How do you handle overfitting in supervised learning models?

(C.O.NO.1) [Knowledge]

4. What role does data preprocessing play in association rule learning?

(C.O.NO.2) [Knowledge]

5. Mention applications of SVM. (C.O.NO. 2) [Knowledge]

Part B [Thought Provoking Questions]

Answer all the Questions. Each question carries 4 marks. (4Qx4M=16M)

5. What are the classifications of machine learning? (C.O.NO. 1) [Comprehension]

6. Mention some of the machine learning classifiers with their applications.

(C.O.NO. 1) [Comprehension]

7. How do you evaluate the performance of a supervised learning model?

(C.O.NO. 2) [Comprehension]

8. Discuss some of the real-world applications of supervised learning Algorithms.

(C.O.NO.2) [Comprehension]

Part C [Problem Solving Questions]

Answer all the Questions. Each question carries 10 marks. (3Qx8M=24M)

10 Explain the concept of feature extraction in unsupervised learning.

(C.O.NO.1) [Application]

11. Difference between supervised and unsupervised learning.

(C.O.NO.1)[Application]

12. Describe the main challenges faced in machine learning.

(C.O.NO.2) [Application]