B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

February / March 2023 Semester End Main Examinations

Programme: B.E.   **Semester: VII**
Branch: MEDICAL ELECTRONICS   **Duration: 3 hrs.**
Course Code: 19ML7PCMCL   **Max Marks: 100**
Course: Machine Learning   **Date: 20.02.2023**

Instructions: 1. Answer any FIVE full questions, choosing one full question from each unit.
2. Missing data, if any, may be suitably assumed.

UNIT - I

1	a)	Explain the data science lifecycle from start to end with the help of diagram	**10**
	b)	What are packages in Python? Explain its need in Machine Learing.	**10**

UNIT - II

2	a)	What are the popular libraries used in Python for data visualization? Explain any two libraries and their functioning.	**10**
	b)	What is linear regression? Explain its implementation with pseudocode	**10**

UNIT - III

3	a)	Implement a Decision Tree Regression model with a pseudocode	**10**
	b)	Explain the working of gradient descent algorithm with appropriate diagram.	**10**

UNIT - IV

4	a)	Why we cannot use accuracy as the right performance metric every time. while evaluating a machine learning model? Justify.	**10**
	b)	Explain Naive Bayes Classifier with its advantage and disadvantages	**10**

OR

5	a)	What is random forest and implement random forest algorithm using python.	**10**
	b)	Briefly explain the types of feature selection algorithms.	**10**

UNIT - V

6	a)	Why is SHAP a more popular and reliable technique?	**05**
	b)	What are IaaS, PaaS, and SaaS?	**05**
	c)	What is Model Interpretation? Explain its types with an example	**10**

OR

7	a)	The SHAP library offers different visualizations? Explain them	**10**
	b)	Differentiate between ELI5 and Skater.	**10**

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