Course Code: 23CS6D04

BONAM VENKATA CHALAMAYYA INSTITUTE OF TECHNOLOGY & SCIENCE

(AUTONOMOUS)

III - B.TechII-Semester Regular Examinations (BR23), MAY - 2026

MACHINE LEARNING (CSE)

Time: 3 hours Max. Marks: 70

Question Paper consists of Part-A and Part-B
*Answer **ALL** the question in **Part-A** and**Part-B***

PART–A (10X2 = 20M)

		Marks	CO	BL
1. a)	What is the difference between **Learning by Rote** and **Learning by Induction**?	(2M)	CO1	2
b)	What is meant by **Model Evaluation**?	(2M)	CO1	2
c)	What is a **Proximity Measure**?	(2M)	CO2	3
d)	What is the difference between **KNN Classifier** and **Radius Distance Nearest Neighbor**?	(2M)	CO2	3
e)	What is **Bias–Variance Trade-off**?	(2M)	CO3	3
f)	What is **Naive Bayes Classifier**?	(2M)	CO3	3
g)	Define **Logistic Regression**.	(2M)	CO4	3
h)	What is **Backpropagation** in MLP?	(2M)	CO4	3
i)	What is **Soft Clustering**?	(2M)	CO5	3
j)	What is **Spectral Clustering**?	(2M)	CO5	3

PART–B (5X10 = 50M)

2a.	Explain different **types of data in Machine Learning** with suitable examples.	10(M)	CO1	2
	(OR)			
3a.	Explain the importance of data sets and feature selection in Machine Learning with examples.	10(M)	CO1	2
4a.	Describe the **Radius Nearest Neighbor algorithm** and compare it with KNN.	10(M)	CO2	3
	(OR)			
5a.	Explain **proximity measures for binary patterns** with suitable examples.	10(M)	CO2	3
6a.	Explain the **properties of decision trees** and discuss their real-world applications.	10(M)	CO3	3
	(OR)			
7a.	Describe **regression using decision trees** with a suitable example. *(10M)*	10(M)	CO3	3
8a.	Compare **linear regression and logistic regression** with use cases.	10(M)	CO4	3
	(OR)			
9a.	Explain the **linearly non-separable case in SVM** and how it is handled.	10(M)	CO4	3

10a	Discuss **Fuzzy C-Means clustering** and its advantages over K-Means.	10(M)	CO5	3
	(OR)			
11a	Explain the role of **matrix factorization in clustering** with examples.	10(M)	CO5	3

****