O.P.Code: 20CS0906	R20	H.T.No.									

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

B.Tech. III Year II Semester Regular & Supplementary Examinations June-2025
ADVANCED MACHINE LEARNING
CSE(Artificial Intelligence and Machine Learning)

Time: 3 Hours **Max. Marks: 60**

(Answer all Five Units **5 x 12 = 60** Marks)

		UNIT-I			
1	a	Explain the working process of Machine Leaning and its Applications.	CO1	L2	6M
	b	List out various applications of Machine Learning in real world.	CO1	L1	6M
		OR			
2		Explain about the three different types of machine learning techniques with neat diagrams.	CO1	L5	12M
		UNIT-II			
3	a	Interpret the linear basis function models in supervised learning.	CO2	L1	6M
	b	Explain about Bias-variance decomposition techniques.	CO2	L5	6M
		OR			
4		Discuss Simple Linear, polynomial Regression and regularization techniques in supervised learning.	CO2	L6	12M
		UNIT-III			
5	a	Analyze the working principle of K-means Clustering.	CO3	L3	6M
	b	Give the different types of Clustering algorithms used in clustering.	CO3	L1	6M
		OR			
6		Describe the various types of Hierarchal Clustering techniques.	CO3	L2	12M
		UNIT-IV			
7	a	Explain Linear Discriminant Analysis.	CO4	L5	6M
	b	Outline the various applications of Linear Discriminant Analysis.	CO4	L1	6M
		OR			
8		State and explain various Non-Parametric Density Estimation techniques	CO4	L1	12M
		UNIT-V			
9	a	List the applications and various elements of RL explain it.	CO5	L1	6M
	b	Differentiate the Reinforcement learning and Supervised learning.	CO5	L6	6M
		OR			
10		Illustrate about Temporal Difference Learning(TDL) and its applications.	CO6	L2	12M

*** END ***