SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.Tech III Year II Semester Regular Examinations August-2023
ADVANCED MACHINE LEARNING
CSE(Artificial Intelligence and Machine Learning)

A. Satkush

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

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

UNIT-I

1	a	List out various Unsupervised learning techniques used in Machine Learning.	CO1	L3	6M
	b	Discuss clustering and association rules in unsupervised learning.	CO1	L4	6M

OR

2	a	Analyze the real world applications of ML.	CO1	L3	6M
	b	Explain about Supervised Learning techniques.	CO1	L4	6M

UNIT-II

3	a	Differentiate various Parametric and Non-Parametric Methodsl.	CO2	L3	6M
	b	Analyze Bayesian Decision theory in supervised learning.	CO2	L2	6M

OR

4	a	Illustrate Multi-Layer Perceptron with neat architecture.	CO2	L3	6M
	b	Discuss Back Propagation Algorithm with an example.	CO2	L4	6M

UNIT-III

5	a	How can we measure the distance between two clusters? Explain.	CO3	L3	6M
	b	Explain the various Clustering algorithms.	CO3	L2	6M

OR

6	a	How mixture density is calculated in unsupervised learning? Explain.	CO3	L4	6M
	b	Estimate the problems associated with clustering large data.	CO3	L3	6M

UNIT-IV

7	a	State and explain various Non-Parametric Density Estimation techniques.	CO4	L3	6M
	b	Compare Multidimensionality scaling and Metric dimensionality scaling.	CO4	L2	6M

OR

8	a	Differentiate Feature selection and Feature Extraction.	CO4	L4	6M
	b	Explain about Subset Selection Techniques.	CO4	L3	6M

UNIT-V

9	a	List out the advantages, disadvantages of Temporal difference learning.	CO5	L3	6M
	b	Explain Generalization process in Model Based Learning.	CO5	L4	6M

OR

10	a	Difference between Model based learning and Model free learning.	CO5	L3	6M
	b	Distinguish between model based learning and temporal difference learning.	CO5	L4	6M

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