Code No: P18AMT03
HALL TICKET NUMBER

PACE INSTITUTE OF TECHNOLOGY & SCIENCES::ONGOLE
(AUTONOMOUS)
III B.TECH I SEMESTER END SUPPLEMENTARY EXAMINATIONS, MARCH/APRIL – 2023
MACHINE LEARNING
(Common to AIDS, AIML Branches)

Time: 3 hours   Max. Marks: 60

Note: Question Paper consists of Two parts (Part-A and Part-B)
PART-A
Answer all the questions in Part-A (5X2=10M)

Q.No.		Questions	Marks	CO	KL
1.	a)	What are the important components of Learning?	[2M]	1	2
	b)	How is a decision tree pruned?	[2M]	2	1
	c)	List out the various Classification Algorithms?	[2M]	3	2
	d)	Define Ensemble Learning?	[2M]	4	3
	e)	What is meant by fitness function?	[2M]	5	2

PART-B
Answer One Question from each UNIT (5X10=50M)

Q.No.		Questions	Marks	CO	KL
		UNIT-I			
2.	a)	Explain Re-Inforcement learning with example?	[5M]	1	2
	b)	Discuss Geometric models with example?	[5M]	1	4
		OR			
3.	a)	Explain Different perspectives and issues in Machine Learning?	[5M]	1	2
	b)	What are the functions of supervised Learning? Explain Briefly?	[5M]	1	3
		UNIT-II			
4.	a)	Define K-Mode Clustering? With Example?	[5M]	2	2
	b)	Explain the single perceptron with its learning algorithm?	[5M]	2	3
		OR			
5.	a)	Discuss K-Nearest Neighboring Algorithm?	[5M]	2	6
	b)	Explain multilayer Perception with the help of a diagram?	[5M]	2	2
		UNIT-III			
6.	a)	Construct the difference between Bagging and Boosting?	[5M]	3	6
	b)	Explain the Expectation-Maximization (EM) Algorithm?	[5M]	3	2
		OR			
7.	a)	Explain the Q Learning Algorithm assuming deterministic reward and actions with example?	[5M]	3	3
	b)	Discuss the Adaboosting Algorithm?	[5M]	3	2
		UNIT-IV			
8.	a)	Explain Generalization in reinforcement learning?	[5M]	4	4
	b)	Discuss the Binomial Distribution in Machine Learning?	[5M]	4	2
		OR			
9.	a)	Explain Active reinforcement learning with example?	[5M]	4	3
	b)	Discuss about Estimating Binomial Proportions?	[5M]	4	4
		UNIT-V			

10.	a)	Explain the Evolution steps of Genetic Algorithm?	[5M]	5	2
	b)	Illustrate Hypothesis Space Search?	[5M]	5	4
OR					
11.	a)	Discuss Genetic Programming with example?	[5M]	5	3
	b)	Explain Genetic Operator with example?	[5M]	5	2

******