Code No: P18AMT03

HALL TICKET NUMBER

PACE INSTITUTE OF TECHNOLOGY & SCIENCES::ONGOLE
(AUTONOMOUS)
III B.TECH I SEMESTER END REGULAR EXAMINATIONS, DEC/JAN – 2022/23
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)	List the basic design issues to machine learning	[2M]	1	L1
	b)	Demonstrate how to use entropy as evaluation function?	[2M]	2	L3
	c)	Discuss inductive bias?	[2M]	3	L2
	d)	Define clustering? Types of Clustering methods?	[2M]	4	L1
	e)	What is a Genetic Programming in Machine Learning?	[2M]	5	L2

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

Q.No.		Questions	Marks	CO	KL
		UNIT-I			
2.	a)	Discuss any four examples of machine learning applications.	[5M]	1	L2
	b)	Explain the concept of Probably Approximately Correct learning.	[5M]	1	L2
		OR			
3.	a)	Define the terms Hypothesis space and Version space. Illustrate with an Example.	[5M]	1	L4
	b)	Explain the Probabilistic Models with examples?	[5M]	1	L2
		UNIT-II			
4.	a)	Contrast the hypothesis space search in ID3 and candidate elimination algorithm	[5M]	2	L6
	b)	Distinguish between over fitting and under fitting. How it can affect model generalization?	[5M]	2	L4
		OR			
5.	a)	Explain appropriate problem for Neural Network Learning with its Characteristics?	[5M]	2	L2
	b)	Explain the concepts of Entropy and Information gain?	[5M]	2	L3
		UNIT-III			
6.	a)	Discuss the various Ensemble Learning Models?	[5M]	3	L4
	b)	Explain Stacking in Machine Learning?	[5M]	3	L2
		OR			
7.	a)	Explain the Probabilistic Learning model?	[5M]	3	L2
	b)	Discuss the Euclidean Distance in Machine Learning?	[5M]	3	L3
		UNIT-IV			
8.	a)	Explain Binomial Distribution with an example?	[5M]	4	L3
	b)	Write Reinforcement learning problem Characteristics?	[5M]	4	L2
		OR			
9.	a)	What is a bias and Variance in Machine Learning with example?	[5M]	4	L2

	b)	Explain Dynamic Programming in Reinforcement Learning?	[5M]	4	L3
UNIT-V					
10.	a)	Discuss the main features of Genetic Algorithms?	[5M]	5	L2
	b)	Define the terms a) Fitness Function b) selection	[5M]	5	L2
OR					
11.	a)	Discuss the difference between various Models of Evolution in Genetic Algorithms	[5M]	5	L6
	b)	Explain the Parallelizing Genetic Algorithms?	[5M]	5	L4

******