ACE
Engineering College
(An Autonomous Institution)

Question Paper Code: CM502PC/IT523PE

ACE-R20

III B. Tech- I Semester Supplementary Examination - JULY -2023
MACHINE LEARNING
Common to IT & CSM

Time: 3 Hours **Max. Marks: 70**

H. T. No										

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 20 marks. Answer all questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b as sub questions

PART- A MARKS: 10*2=20

Q.No : 1	Question	Marks
a)	Define Learning	2
b)	Define version space	2
c)	Draw 2-3-1 artificial neural network	2
d)	Define perceptron training rule	2
e)	Write two differences between lazy and eager learner's	2
f)	Define maximum likelihood principle	2
g)	Define Reinforcement learning	2
h)	Give an example for mutation operator.	2
i)	Differentiate between inductive learning and deductive learning.	2
j)	Define explanation based learning	2

PART- B MARKS: 5*10=50

Q.No	Question Description	Marks
2.	Describe candidate elimination algorithm in detail with appropriate example.	10
	(OR)	
3	a. Which disciplines have their influence on machine learning? b. Summarize the issues in Decision Tree learning.	5+5
4	a. Describe gradient descent and delta rule. b. Describe the basics of sampling theory.	6+4
	(OR)	
5.	Write and explain an illustrative example of back propagation algorithm.	10
6	Discuss the relationship between the maximum likelihood hypothesis and the least-squared error hypothesis	10
	(OR)	
7	Design the Bayesian concept learning algorithm and elaborate it with an example.	10
8	Demonstrate the use of genetic algorithm with example	10
	(OR)	
9	Explain the Q–learning with suitable example.	10
10	Explain how to alter the search objective by using prior knowledge.	10
	(OR)	
11	What are the inductive-analytical approaches to learning? Discuss.	10