O.P.Code: 18CS0535	R18	H.T.No.									

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

B.Tech IV Year I Semester Supplementary Examinations June-2024

ARTIFICIAL INTELLIGENCE & MACHINE LEARNING
(Common to CSE & CSIT)

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

PART-A
(Answer all the Questions **5 x 2 = 10** Marks)

1	a	Define components of AI program.	CO1	L1	2M
	b	What are the four ways to evaluate an algorithm? Name them.	CO2	L1	2M
	c	Define classification.	CO3	L1	2M
	d	Differentiate between supervised learning and unsupervised learning.	CO4	L2	2M
	e	Compare unsupervised learning and reinforcement learning.	CO5	L2	2M

PART-B
(Answer all Five Units 5 x 10 = 50 Marks)

UNIT-I

2	a	Explain Foundations of Artificial Intelligence.	CO1	L1	5M
	b	What are the applications of Artificial Intelligence?	CO1	L1	5M
		OR			
3		Describe in detail about i) Simple reflex agent. ii) Model based agent. iii) Utility based agent. iv) Goal based agent.	CO1	L1	10M

UNIT-II

4	a	Describe briefly about problem solving agents with basic algorithm.	CO2	L4	5M
	b	Write in detail about local search algorithm.	CO2	L4	5M
		OR			
5		Briefly explain about Heuristic search algorithm.	CO2	L2	10M

UNIT-III

6		Summarize learning multiple classes.	CO3	L2	10M
		OR			
7	a	Write short notes on Probably Approximately Correct Learning.	CO3	L2	5M
	b	Explain in detail about maximum likelihood estimation.	CO3	L2	5M

UNIT-IV

8		Describe in detail about maximization algorithm.	CO4	L4	10M
		OR			
9		Illustrate in detail about multidimensional scaling.	CO4	L2	10M

UNIT-V

10		State and explain non parametric density estimation.	CO5	L4	10M
		OR			
11		Illustrate in detail about K-armed bandit.	CO5	L2	10M

***** END *****