Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 18MCAP109

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MCA II Year I Semester (R18) Supplementary End Semester Examinations – August 2022

INTRODUCTION TO MACHINE LEARNING

Time: 3Hrs **Max Marks: 60**

Attempt all the questions. All parts of the question must be answered in one place only.
In Q.no 1 to 5 answer either A or B only

Q.No	Question	Marks	CO	BL
Q.1(A)	a) How to design the learning system?	6M	1	2
	b) Explain the various issues in Machine Learning?	6M	1	2
	OR			
Q.1(B)	a) How does the Naive Bayes classifier work?	6M	1	2
	b) Why Naive Bayes is called Naive?	6M	1	2
Q.2(A)	a) How to implement Decision Tree algorithm for classification?	6M	2	2
	b) How to address the over fitting problem in the training of the decision tree classifier?	6M	2	3
	OR			
Q.2(B)	a) How you formulate SVM for a regression problem statement?	6M	2	2
	b) Can an SVM classifier outputs a confidence score when it classifies an instance? What about a probability?	6M	2	3
Q.3(A)	a) What is the difference between belief propagation and back propagation?	6M	3	2
	b) How do you explain belief propagation algorithm in Bayesian networks?	6M	3	3
	OR			
Q.3(B)	a) What are the 3 fundamental problems Markov models are characterized with?	6M	3	2
	b) Where is hidden Markov model used?	6M	3	3
Q.4(A)	a) How silhouette score makes impact in the K-Means algorithm?	6M	4	3
	b) What is the main difference between k-Means and k-Nearest Neighbours?	6M	4	2
	OR			
Q.4(B)	a) Why Gaussian model is used?	6M	4	2
	b) How is Gauss calculated?	6M	4	3
Q.5(A)	a) What is the remark in the back propagation?	6M	5	2
	b) Use The Back propagation algorithm to find The Gradient of F(X, Y, Z, W) = Max(X + Y, Z2) + (X + W)? at the point (X = 2, Y=3, Z=2, W=7).	6M	5	4
	OR			
Q.5(B)	Illustrative the Real Time Face Recognition using Effective Supervised Machine Learning Algorithms?	12M	5	5

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