



ADAMAS UNIVERSITY
END-SEMESTER EXAMINATION : MAY 2021
(Academic Session: 2020 – 21)

Name of the Program:	B.TECH [ECE]	Semester:	VIII
Paper Title :	Machine Learning	Paper Code:	ECS61112
Maximum Marks :	40	Time duration:	3 Hrs
Total No of questions:	08	Total No of Pages:	02
(Any other information for the student may be mentioned here)	1. At top sheet, clearly mention Name, Univ. Roll No., Enrolment No., Paper Name & Code, Date of Exam. 2. All parts of a Question should be answered consecutively. Each Answer should start from a fresh page. 3. Assumptions made if any, should be stated clearly at the beginning of your answer.		

Answer all the Groups

Group A

Answer all the questions of the following

$5 \times 1 = 5$

1.
 - a) What does rank of matrix signify?
 - b) What Are the Applications of Supervised Machine Learning in Modern Businesses?
 - c) What is norm of a vector?
 - d) What is the difference between inductive and deductive learning?
 - e) When Will You Use Classification over Regression?

GROUP –B

Answer *any three* of the following

$3 \times 5 = 15$

2. What is machine Learning? Explain different perspective and issues in Machine Learning. [5]
3. What is KNN? How do we choose the factor 'K'? [5]
4. Distinguish between supervised learning and Reinforcement learning. Illustrate with an example. [5]
5. Illustrate K means clustering algorithm with an example. [5]

GROUP –C

Answer *any two* of the following

$2 \times 10 = 20$

6.
 - a) Identify the suitable learning method in each case and explain it.
 - (i) Grouping people in a social network
 - (ii) Training a robotic arm
 - b) Is regression a supervised learning technique? Justify your answer. [5+5=10]

7. . What is bias in recommender system? How does it impacts the prediction? Explore some techniques that are employed to improve the performance of recommender system. [3+3+4=10]
8. a) What is Naïve Bayes? Why do we need Naïve Bayes?
b) Write a short note on SVM.

[5+5=10]
