

Subject

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Code:-

Subject:-

Machine Learning With
Python

Roll No:-

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TECNIA INSTITUTE OF ADVANCED STUDIES
BCA
Class Test (2025-26)

Sem: Ist

Set-1

Date:

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Time: -1:00 Hours

Max. Marks: 30

General Instructions:

- All Questions are compulsory. Answers should be brief and to the point.
- It comprises three sections, A, B, and C. you are to attempt all the sections.
- Section A – Question No -1 is Very Short Answers type carrying 2 marks each. You are required to answer ALL.
- Section B- Question No-3 is Short Answers type question carrying 5 marks each. You are required to attempt any TWO out of THREE questions given.
- Section C- Question No -4 is Long Answer type question carrying 10 marks each. You need to attempt anyone.
- Students are instructed to cross the blank sheets before handing over the answer sheet to the invigilator.
- No sheet should be left blank. Any written material after a blank sheet will not be evaluated /checked.

		CO	BT	M										
	SECTION –A			(10)										
1.	Attempt All of the following.			(5*2=10)										
	a. What are Different Types of Machine Learning algorithms?	CO1	L1,L2											
	b. What metrics are used to evaluate a Regression Model?	CO3	L1,L2											
	c. What distinguishes a population Regression line from a sample regression line?	CO1	L1,L3											
	d. What do you understand by Type I vs Type II error?	CO2	L2,L3											
	e. What is so naive about Naive Bayes?	CO3	L1,L3											
	SECTION –B													
2.	Answer any <u>Two</u> of the following.			(2*5=10)										
	a. What is the difference between simple, multiple linear and multi class Regressions?	CO1	L2,L3											
	b. Find Coefficients of line of regression $Y= a+bx$ if data attributes are	CO2	L1,L2,L3											
	<table border="1"> <tr> <td>x</td> <td>8</td> <td>3</td> <td>4</td> <td>2</td> </tr> <tr> <td>y</td> <td>20</td> <td>14</td> <td>12</td> <td>10</td> </tr> </table>	x	8	3	4	2	y	20	14	12	10			
x	8	3	4	2										
y	20	14	12	10										

	c.	What kinds of algorithms are used for deriving Decision Trees and their attribute selection measures?		L2,L3	
SECTION –C					
3.	Answer any <u>One</u> of the following.				(1*10=10)
	a.	Briefly Explain Logistic Regression & SVM regression Technique.	CO2	L1,L2,L3	
	b.	A study of 1000 patients revealed that out of the 45 positive tests, 30 had COVID, 15 were falsely positive, and out of the 955 negative tests, 5 were incorrectly positive. Draw the confusion matrix and calculate the accuracy, precision, recall, sensitivity and F1 score from the matrix.	CO3	L1,L2,L3	