SHRI SHANKARACHARYA TECHNICAL CAMPUS
Bhilai (Chhattisgarh)
An Autonomous Institute

श्री शंकराचार्य टेक्नीकल कैंपस
भिलाई (छत्तीसगढ़)
स्वशासी संस्थान

Approved by AICTE, New Delhi
Affiliated to CSV Technical University, Bhilai
All B Tech Courses Accredited by NBA, New Delhi
Accredited by NAAC with "A" Grade

Session: EVEN SEM (2022-23)

Class Test - 1	Course Name: B Tech CSE-A, CSE-DS	Semester: 6th
Time: 2 Hours	Subject Name: AIML Subject Code:CS102603	Min Marks: 14 Max Marks: 40

Note: Attempt all questions. Parts (a) are compulsory & attempt any two parts from (b), (c) & (d).

Course Outcome:

CO1	Understand a wide variety of learning algorithms.
CO2	Understand how to evaluate models generated from data

Q. No.		Questions	Marks	CO	BL	PI
1	a	Write difference between linear and logistic regression?	2	CO1	L2	1.3.1
1	b	Explain different stages of ML life cycle with neat and clean diagram?	6	CO2	L2	1.3.1
1	c	Explain linear regression. Calculate the linear regression coefficient from given data. X: 1, 2, 3, 4, 5, 6, 7 Y: 9, 8, 10, 12, 11, 13, 14	6	CO3	L2	1.3.1
1	d	What is data normalization? Explain one method with an example?	6	CO3	L1	2.1.2
2	a	Write different scope and limitations of ML?	2	CO2	L3	2.1.3
2	b	Write the difference between supervised learning, unsupervised learning and reinforcement learning with example?	6	CO4	L2	1.3.1
2	c	Explain briefly about Logistic Regression. Find gradient decent of linear regression given sets give graphical representation. Where $\emptyset 1 = 0.0$ ({0,1},{0,2},{0,3}) $\emptyset 2 = 0.5$ ({0.5,1},{1,2},{1.5,3}) $\emptyset 3 = 1.0$ ({1,1},{2,2},{3,3})	6	CO5	L2	1.3.1

Data for Q1(c):

X	Y
1	9
2	8
3	10
4	12
5	11
6	13
7	14

2	d	Explain perceptron convergence theorem?	6	CO2	L3	2.1.3
3	a	Write the difference between online and batch learning?	2	CO3	L2	1.3.1
3	b	Explain relationship and difference between ML, DL, AI and DS?	5	CO1	L3	1.3.1
3	c	In context of machine learning explain under fitting, overfitting, bias and variance trade-off with neat and clean diagram?	5	CO5	L1	2.1.2
3	d	Write different applications of machine learning?	5	CO6	L2	1.3.1