Name: Enrolment No:	UPES

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2021

Course: Machine Learning **Semester: VI**
Program: B.Tech- CS-BData **Time: 03 hrs.**
Course Code: CSAI2001P **Max. Marks: 100**

Instructions: all questions are compulsory

SECTION A
Each Questions carry 5 marks

S. No.	Write short notes on the following	CO
Q 1	What is a stump?	CO1
Q2	Identify and explain the 3 different types of Learning methodology in ML.	CO1
Q3	Explain standard deviation.	CO2
Q4	Differentiate between K-Mean & KNN	CO3
Q5	State at least 4 disadvantages of random forest?	CO2
Q6	Differentiate between Liner and Logistic regression.	CO3

SECTION B
Each Questions carry 10 marks

	All questions are compulsory	CO
Q7	Identify and explain the different methodology of finding accuracy in a machine learning algorithm.	CO3
Q8	Differentiate between Decision Tree & Random Forest	CO2
Q9	Explain in detail the working principal of ADABOOST.	CO4
Q10	Explain in detail Feed Forward and Back Propagation Network of ANN with diagram.	CO4
Q 11	Differentiate between classification and clustering with examples	CO3

SECTION-C

Question carry 20 marks
Attempt only 1 Question out of Q12 & Q13

Any 1 question is to be attempted (Marks- [20])	CO

RID	age	income	student	credit_rating	Class: buys_computer
1	<=30	high	no	fair	no
2	<=30	high	no	excellent	no
3	31 ... 40	high	no	fair	yes
4	>40	medium	no	fair	yes
5	>40	low	yes	fair	yes
6	>40	low	yes	excellent	no
7	31 ... 40	low	yes	excellent	yes
8	<=30	medium	no	fair	no
9	<=30	low	yes	fair	yes
10	>40	medium	yes	fair	yes
11	<=30	medium	yes	excellent	yes
12	31 ... 40	medium	no	excellent	yes
13	31 ... 40	high	yes	fair	yes
14	>40	medium	no	excellent	no

Q 12	Given the training data in the table above (Buy Computer Data), predict the class of the following new example using Naïve Bayes classification: age<=30, income=medium, student=yes, credit-rating=fair	CO5
Q13	Compare the different types of activation functions in ANN.	CO5