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

Course: Machine Learning   **Semester: VI**
Program: B.Tech- CS-OSSOS   **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**

		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

			CO
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**