Sardar Patel Institute of Technology
Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai-400058.
India
(Autonomous College Affiliated to University of Mumbai)

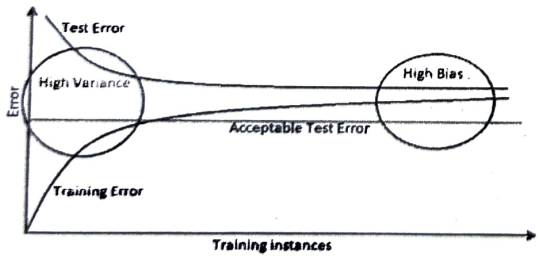
End Semester Examination

Max. Marks: 20
Class: B.E.
Course Code:EC433

Duration: 1 Hr
Semester: VII
Branch: ETRX &EXTC

Name of the Course: Artificial Intelligence and Machine Learning

Instruction:
(1) Attempt any four questions
(2) Draw necessary diagram

Q No.		Max. Marks	BL	CO	PI
Q.1 a)	i)What do you Multicollinearity mean by? Identify the regularization technique which deals with Multicollinearity. ii)What are the requirements of clustering algorithms?	3	3	CO2	2.2.4
b)	Find linear regression equation for the following two sets of data: x: 2, 4, 6, 8 y: 3, 7, 5, 10	2	2	CO1	2.1.2
Q.2	How to identify High Variance or High Bias from given figure 	5	4	CO1	2.2.2
Q.3	Apply the suitable SVM on the following datapoints	5	3	CO2	2.2.2

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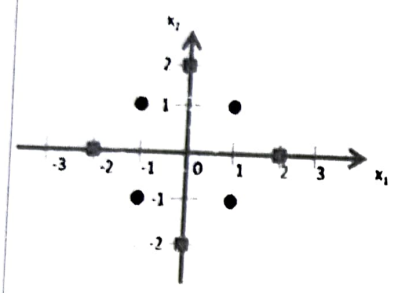

Q.4	What are the characteristics of the problems suited for decision tree learning? Build the decision tree for the Boolean functions $A \vee [B \wedge C]$ A XOR B $[A \wedge B] \vee [C \wedge D]$	5	4	CO2	2.2.1
Q.5	Apply the Naïve Bay's classifier on the following dataset.	5	3	CO2	2.2.2

Weather	Car	Class
Sunny	Working	Go-out
Rainy	Broken	Go-out
Sunny	Working	Go-out
Sunny	Working	Go-out
Sunny	Working	Go-out
Rainy	Broken	Stay-home
Rainy	Broken	Stay-home
Sunny	Working	Stay-home
Sunny	Broken	Stay-home
Rainy	Broken	Stay-home