

Total No. of Questions : 6]

SEAT No. :

P5192

[Total No. of Pages : 2

B.E./Insem.-593

B.E. (Information Technology) (Semester-I)

MACHINE LEARNING

(2012 Pattern)

Time : 1 Hour]

[Maximum Marks : 30

Instructions to the candidates:

- 1) *Draw neat diagrams wherever necessary.*
- 2) *Assume suitable data, if necessary.*
- 3) *Figures to the right indicate full marks.*

- Q1)** a) Explain supervised learning and unsupervised learning. [5]
b) Explain geometric models. [5]

OR

- Q2)** a) With an example, explain feature as a split and feature as a predictor. [5]
b) Explain grouping and grading models. [5]

- Q3)** a) Calculate true negative rate (tnr), accuracy and pos for the following: [5]

	Predicted+	Predicted-
Actual+	50	25
Actual-	5	20

- b) Explain VC dimension. [5]

OR

- Q4)** a) Prove: precision = $TP/(TP+FP)$ [5]
b) Explain overfitting and underfitting. [5]

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- Q5)** a) What is lasso and ridge regression? [5]
b) Explain perceptron. [5]

OR

- Q6)** a) Explain slack variables, hard margin and soft margin. [5]
b) Explain sigmoid function. [5]

