

Total No. of Questions : 4]

SEAT No. :

PE-322

[Total No. of Pages : 2

[6580]-693

B.E. (Artificial Intelligence and Data Science) (Insem.)

MACHINE LEARNING

(2019 Pattern) (Semester - VII) (417521)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

- 1) *Answer Q1 or Q2, Q3 or Q4.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figure to the right indicates full marks.*
- 4) *Assume suitable data, if necessary.*

Q1) a) Describe Machine Learning and highlight its key differences from traditional programming Methods. [5]

b) Explain the main difference between Linear Discriminant Analysis (LDA) and Principal Component Analysis (PCA) in reducing dimensions. [6]

c) Write a note on Reinforcement Learning. [4]

OR

Q2) a) What is a logical model in the context of Machine Learning? [5]

b) What distinguishes unsupervised learning from supervised and semi-supervised learning techniques? [6]

c) Explain Grouping and Grading models in a machine learning with example? [4]

Q3) a) Elaborate decision tree regression and random forest regression. [6]

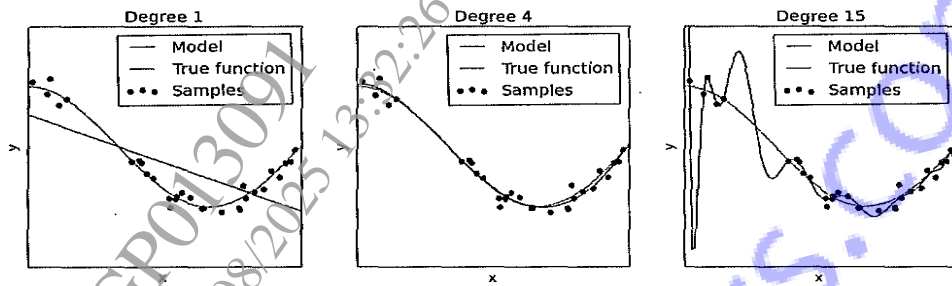
b) Differentiate between multivariate regression from univariate regression? [4]

c) Explain bias-variance trade-off with neat diagram. [5]

P.T.O.

OR

- Q4) a) Which one of these is Underfit or Overfit? Why? Comment with respect to Bias and Variance. [6]



- b) Explain any two evaluation metrics in regression model. [4]
c) List and Explain any two different types of Regression. [5]

