

Total No. of Questions : 5]

SEAT No. :

P-7961

[Total No. of Pages : 2

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M.B.A.

**304BA : SC-BA-03 - ADVANCED STATISTICAL METHOD
USING R**

(2019 Pattern) (Semester - III)

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) *All questions are compulsory.*
- 2) *All questions carry equal marks.*

Q1) Answer the following questions (Any Five) : [10]

- a) Define Null and alternate hypothesis.
- b) What is ROC curve?
- c) State the significance of correlation analysis.
- d) Define clustering in Data Mining.
- e) Recite the concept of one way ANOVA.
- f) Recall seasonality in time series data.
- g) Define dimension reduction.
- h) Identify any two types of tests used to compare means of two samples.

Q2) Answer the following questions (Any Two) : [10]

- a) Elaborate Autoregressive Integrated moving average model in time series.
- b) Discuss the concept of linear regression. List the parameters to evaluate linear regression model
- c) Elaborate conditional probability with an example.

Q3) Answer the following questions (Any one) : [10]

- a) Explain t-test of hypothesis testing. Write syntax in detail.
- b) Discuss MLR (Multiple Linear Regression) in detail which function is used to perform MLR in R.

P.T.O.

Q4) Answer the following questions (Any one) : [10]

- a) What is confusion matrix? How confusion matrix can be used to evaluate the accuracy of the model?
- b) Discuss the concept of odds and probabilities in Logistic regression. How ROC curve can be used to evaluate the accuracy of Logistic model.

Q5) Answer the following questions (Any one) : [10]

- a) Describe principal component and factor analysis in detail.
- b) Describe Linear Discriminant Analysis (LDA). Write R code for LDA.
