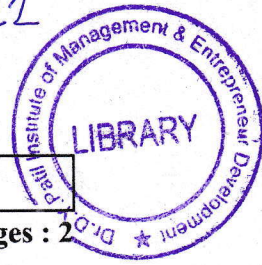


Oct/Nov-2022



Total No. of Questions : 5]

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S.Y.M.B.A.

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

(2019 CBCS Pattern) (Semester - III)

Time : 2½ hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) *All questions are compulsory.*
- 2) *Make appropriate assumptions wherever required.*

Q1) Answer the following questions (Any Five)

[10]

- a) Enlist basic statistical functions in R.
- b) What is difference between parametric and non parametric tests?
- c) Define predictive analytics?
- d) Explain pbinom () function in R.
- e) How do you interpret p value in hypothesis testing?
- f) Write a function to get a list of all the packages installed in R.
- g) Write a function to obtain the transpose of a matrix in R?
- h) What is the purpose of regression analysis in R?

Q2) Answer the following questions (Any Two)

[10]

- a) Explain T-test of hypothesis testing in R. Write syntax and explain in detail.
- b) Define probability. Explain any two functions of probability distribution.
- c) What is linear regression? What do you mean by dependent and independent variables? What is difference between linear & multiple regression?

P.T.O.

Q3) Answer the following question (Any one). [10]

- a) Examine ANOVA in R? State the assumptions and explain one way ANOVA in detail. Also state benefits of ANOVA.
- b) What do you mean by dimension reduction? Explain linear discrimination analysis (LDA) with syntax. Also explain application of LDA in marketing domain.

Q4) Answer the following question (Any One) [10]

- a) Describe descriptive analytics in R. Explain any three functions of descriptive analytics in R.
- b) What is logistics regression in R? Assume suitable data and explain how do you interpret regression coefficients in R?

Q5) Answer the following questions (Any One) [10]

- a) Revise the concept of Time series analysis. Explain how time series analysis is used for business forecasting?
- b) Write short Notes (Any one)
 - i) F Test in R
 - ii) Bayes Theorem
 - iii) Correlation analysis

