TM243773M

Reg. No :.....

Name :.....

MASTER'S DEGREE (C.S.S) EXAMINATION, NOVEMBER 2024

2023 ADMISSIONS REGULAR

SEMESTER III - CORE COURSE BUSINESS ANALYTICS

BA3C11TM20 - Analytics with R

Time : 3 Hours **Maximum Weight : 30**

Part A

I. Answer any Eight questions. Each question carries 1 weight **(8x1=8)**

1. Define t test in R.
2. Write any four basic built in functions in R.
3. Explain logistic regression in R.
4. Define heteroskedasticity.
5. Explain Kaplan - Meier method in survival analysis.
6. Distinguish between survival function and hazard function.
7. Explain Wilcoxon paired test in R.
8. Define cluster analysis.
9. Describe funnel plot.
10. Distinguish between survival analysis and regression analysis.

Part B

II. Answer any Six questions. Each question carries 2 weight **(6x2=12)**

11. Write a short note on built-in data files in R.
12. Give the R code for simple linear regression.
13. Write a short note on density estimation.
14. Explain the importance of scatter plot in regression analysis.
15. What is the package used in R to generate GEE?
16. State the assumptions of linear mixed effect model.
17.
    1. Define principal components.
    2. Explain the manual procedure for computing principal components.
18. Explain the procedures involved in meta analysis.

Part C

III. Answer any Two questions. Each question carries 5 weight **(2x5=10)**

19. Explain different statistical test procedures and its implementation in R.
20. Explain Kernel density estimation and its implementation in R.
21. Explain different non-parametric statistical tests and give their syntax in R.
22. What are decision trees and how do you implement decision trees analysis in R.