

**School of Business****Bachelor of Business Administration in Business Analytics  
Semester End Examination - Jul 2024**

Duration : 180 Minutes  
Max Marks : 100

**Sem V - D1UF502T - R Programming**General Instructions

Answer to the specific question asked

Draw neat, labelled diagrams wherever necessary

Approved data hand books are allowed subject to verification by the Invigilator

- 1) How can you check the data type of a variable in R programming? K1(2)
- 2) A survey was conducted to find the average age of participants in a marathon. The ages of 10 participants are: [25, 30, 35, 40, 45, 50, 55, 60, 65, 70]. Write an R program to compute the mean of the ages. K2(4)
- 3) Elaborate the code for matrix creation using R program. K2(6)
- 4) Write a R program to create vectors to store Customer Name, Phone Number and their City K3(9)
- 5) Illustrate the advantages of using graphical representations over tables or raw data for data exploration and communication. K3(9)
- 6) Describe the difference between positive and negative correlation, and provide an example of each. K5(10)
- 7) In a study, you want to determine if the mean height of a sample of 50 adults is significantly different from a known population mean height of 65 inches. Perform a one-sample t-test and state the null and alternative hypotheses. K4(12)
- 8) Demonstrate matrix operations using R programming. K5(15)
- 9) Illustrate what are the assumptions underlying the t-test and chi-square test, and how can violations of these assumptions affect the results? K5(15)
- 10) Investigate the statistical and programming features of R. K6(18)