SY Div: - A – G – ASA – SDA -

Practical Exam Question Bank

1. Write an R script that checks if a number is divisible by both 2 and 3 using logical operators and Create a for loop to calculate the sum, average, minimum and maximum of the first 10 natural numbers.
2. Write an R script that combines multiple logical conditions to filter elements from a list (or array) and Create a for loop to calculate the sum, average, minimum and maximum of the first 10 natural numbers.
3. Write an R script that creates a dataframe and filters rows based on a specific condition using subsetting. Also, use a for loop to iterate over a numeric vector and create a new vector containing the squared values of each element.
4. Write an R script that creates a multidimensional array and demonstrates how to perform array slicing to extract a specific subarray. Also, use a for loop to iterate over a numeric vector and create a new vector Addition of two vectors.
5. Write an R script that creates a list (or array) of integers and performs the following operations: append, insert, delete, display min, max, sum and average and find any specific element.
6. Write an R script that takes a user-input number and uses an if/else statement to determine whether it is positive, negative, or zero. Take some numbers from users and store in x and y vectors to plot any kind of graph using it.
7. Write an R script to read a CSV file named into a dataframe and display the first few rows, summary, information of dataset. Display the data from csv in line, scatter, histogram and dot plot.
8. Implement a nested if/else statement to classify a given number as odd or even and, within each category, as positive, negative, or zero. Display the data from csv in line, scatter, histogram and dot plot.
9. Use the appropriate R package to read data from an Excel file ("data.xlsx") and print 5-point summary of the dataframe along with box-whisker plot and dot plot.
10. Write a script that reads data from a CSV file, calculates the average of a specific column, and uses an if/else statement to determine whether the average is above or below a certain threshold. Display the data from csv in line, scatter, histogram and dot plot.
11. Write an R script to create standardized (Z-) scores for several variables Using the preexisting Drinks.csv data file and Display the data from drinks.csv using line graph, scatter plot, histogram and dot plot.

12. Write an R script to run Frequencies to explore the distributions of several variables Using the preexisting Census.csv data file and display the data from csv file in line graph, scatter plot, histogram and dot plot.
13. Write an R script to create two way cross tabulations to explore the relationship between several variables and to use the Chart Builder to visualize the relationship Using the preexisting Census.csv data file.
14. Write an R script to visualize the relationship between two scale variables creating scatter plots and to quantify this relationship with the correlation coefficient using census.csv data file.
15. Write an R script to run the Independent-Samples T Test, to interpret the output and visualize the results with an error bar chart. Using the preexisting Census.csv data file.
16. Write an R script to use One-Way ANOVA with post hoc tests to explore the relationship between several variables Using the preexisting data file Census.csv and represent it using any two suitable graphs.
17. Write an R script that creates a dataframe and filters rows based on a specific condition using subsetting. use a for loop to iterate over two numeric vector and create a new vector containing the sum values of each element, and represent it using any two suitable graphs.
18. Write an R script that creates a multidimensional array and demonstrates how to perform array slicing to extract a specific subarray. Also, use line or scatter plot to represent the matrix values visually, and represent it using any two suitable graphs.
19. Make stacked dotplots of the same variable from csv file provided to you based on the values of one of your categorical variables. For example, if your quantitative variable is GPAs of students, your categorical variable could be gender. Comment on the similarities and differences between the distributions for the different values of your categorical variable.
20. Calculate summary measures (mean, standard deviation, first quartile, third quartile and interquartile range) for the variable you graphed above. Do this for the entire data set, as well as for the different groups formed by the categorical variable that you used to divide the data set.
21. Create a histogram and a dotplot of the data. Comment on any symmetry or skewness and on the presence of clusters and any potential outliers. And draw a box-and-whisker plot for the entire data set.

22. Prepare an appropriate type of frequency distribution table for one of the quantitative variables and then compute relative frequencies and cumulative relative frequencies using census.csv dataset.
23. Prepare an appropriate type of frequency distribution table for one of the quantitative variables and then compute relative frequencies and cumulative relative frequencies using Drinks.csv data file.
24. Write an R script to visualize the relationship between two scale variables creating scatter plots and to quantify this relationship with the correlation coefficient using Drinks.csv data file.
25. Calculate summary measures (mean, standard deviation, first quartile, third quartile and interquartile range) for the variable you graphed above. Do this for the entire data set, as well as for the different groups formed by the categorical variable that you used to divide the data set using Census.csv data file.
26. Use the appropriate R package to read data from an Excel file ("data.xlsx") and print 5-point summary of the dataframe along with box-whisker plot and dot plot using drinks.csv data file.
27. Write an R script to create standardized (Z-) scores for several variables Using the preexisting Drinks.csv data file and Display the data from census.csv using line graph, scatter plot, histogram and dot plot.
28. Write an R script to run Frequencies to explore the distributions of several variables Using the preexisting provided .csv data file and display the data from csv file in line graph, scatter plot, histogram and dot plot
29. Write an R script to obtain summary statistics for scale variables Using the preexisting Drinks.csv data file and visualize it using any two types of graphs.
30. Write an R script to visualize the relationship between two scale variables from provided data file creating scatter plots and to quantify this relationship with the correlation coefficient.