(To be filled by

It is certified that I have verified that the candidate has attempted the allocated

Signature of Neutral Examiner:_____

Signature of Invigilator:_____

Name of Neutral Examiner:_____

Name of Invigilator:_____

UID:_____

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Q1 Suppose you have to deal with a dataset. In this case, you will use the "USArrests" dataset provided by R.
You have to perform data transformation in the following ways :
a) Abbreviate the names of states.
b) Select the states that contain the letter 'b'
c) Count the frequency of the vowels in and plot their frequency distribution plot.

Q2 Suppose you are working on "IRIS" dataset that consisting of a mix of continuous variables and categorical ones.
Perform the following tasks:
a) On which variables you would apply Barplot and Histogram.
b) Show the visualization through dashboard.

Q3 Suppose you are a data analyst working for a local government agency. Your team has been tasked with analyzing the demographics of the residents in a particular neighborhood.
Using R's built-in "USArrests" dataset, write a program to answer the following questions:
a) What is the median murder rate in the neighborhood?
b) Use a suitable graph to show the relationship between assault rate and percentage of residents with a high school education or higher.

Q4 You are a marketing analyst for a clothing retailer. Using R's built-in "ChickWeight" dataset, perform the following activities:
a) Write a program to compare the weight gain of chicks fed a high protein diet versus those standard diet.
Use a suitable plot to visualize the comparison of weight gain of chicks fed a high protei us those fed a standard diet

form the following activity:
"Titanic" dataset to create a bar plot of the proportion of Survivors for each pass ow the representation through dashboard

e you are a financial analyst for a bank. Using R's built-in "LifeCycleSav form following executions: a) Write a program to compare the savings different income brackets?
table visualization that will demonstrate the comparison of savings ra ferent income brackets?

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Q5 Perform the following activity:
Use the "Titanic" dataset to create a bar plot of the proportion of Survivors for e
class. Show the representation through dashboard

Q6 Suppose you are a financial analyst for a bank. Using R's built-in "LifeC
dataset, perform following executions: a) Write a program to compare the
ndividuals in different income brackets?
) Create a suitable visualization that will demonstrate the comparison of
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Name of Neutral Examiner:_____ Name of Invigilator:_____

UID _____ UID:_____

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u are a financial analyst for a bank. Using R's built-in "LifeCycleSavings" following executions: a) Write a program to compare the savings rates of rent income brackets?
visualization that will demonstrate the comparison of savings rates of income brackets?

Q7 You are a data analyst for a car manufacturer. Using R's built-in "mtcars" dataset, perform following executions:
a) write a program to determine the average miles per gallon for each car in the dataset.
b) Create a suitable plot to visualize relationship between average miles per gallon for each car?

Q8 Suppose you are working with "iris" dataset. Perform the following activities:

a) Write a program to show that this dataset contains significant differences in petal length between the three species of iris flowers (setosa, versicolor, and virginica).
b) Demonstrate with the help of boxplot, the differences in petal length between the three species of iris flowers.

Q9 Suppose you are dealing with "mtcars dataset". You need to perform following tasks:
a) You have to find out the relationship between the horsepower and miles per gallon for cars.
b) Create a scatter plot to visualize the relationship between horsepower and miles per gallon.
c) Add a trend line to the scatter plot to visualize the strength of the relationship.

Q10 Use "mtcars" datatset. Answer the following questions:
a) Write a program to analyze the difference between average fuel efficiency of cars based on their transmission type (automatic vs manual)?

b) Finally, create a visualization to display this information using boxplot?

-- End of Question Paper --