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2301N1056

Candidate's Seat No :_____

MBA in BI Sem.-1 Examination

BI-107

FDM

Time : 1-30 Hours] **January-2025** **[Max. Marks : 70**

Instructions :(1) This paper contains **Thirty Five** questions.
(2) Each Question is of 2 Marks.
(3) Each Question is of multiple choices.
(4) All questions are compulsory.

NO.	QUESTION	Marks
Q.1	Which of the following is a valid data type in R programming?	**2**
	A. Character B. TableSet	
	C. GraphNode D. TreeList	
Q.2	Which data type in R is used to store TRUE or FALSE values?	**2**
	A. Boolean B. Numeric	
	C. Logical D. Binary	
Q.3	Which of the following is NOT a valid R data type?	**2**
	A. List B. Array	
	C. Tuple D. Dataframe	
Q.4	Which data type in R is used to handle categorical data?	**2**
	A. List B. Matrix	
	C. dataframe D. Factor	
Q.5	Which data type is used to store text in R?	**2**
	A. Character B. String	
	C. TextArray D. Logical	
Q.6	Which function converts a value to a character type in R?	**2**
	A. As.character() B. Convercharacter()	
	C. Tochar() D. Makechar()	
Q.7	Which of the following is the heterogeneous datatype in R?	**2**
	A. vector B. matrix	
	C. Dataframe D. Array	

(P.T.O)

Q.8 What is the data type of "3.14" in R? **2**

A. Vector
B. Integer
C. numeric
D. character

Q.9 Which of the following is a valid R function for checking if an object is numeric? **2**

A. checkNumeric()
B. is.numeric()
C. verifyNumeric()
D. testnumeric()

Q.10 What does the rep() function do in R? **2**

A. Repeats elements of a vector
B. Generates a sequence of numbers
C. Converts data to a factor
D. Returns the length of a vector

Q.11 How do you find the number of elements in a vector in R? **2**

A. length()
B. seq()
C. rep()
D. factor()

Q.12 What does the seq() function produce when given the arguments seq(1, 10, by = 2)? **2**

A. A sequence of numbers from 1 to 10 with a step of 2
B. A repeated pattern of 1 and 10
C. A factor variable
D. A single value 1

Q.13 What happens when rep(1:3, times = 2) is executed? **2**

A. Generates a sequence from 1 to 3
B. The sequence 1, 2, 3 is repeated twice
C. Creates a factor variable with 2 levels
D. Finds the length of the vector

Q.14 Which of the following is a valid way to handle missing values in R? **2**

A. seq(NA)
B. length(NA)
C. is.na()
D. rep(NA)

Q.15 What is the output of rep(1:2, each = 3)? **2**

A. 1, 1, 1, 2, 2, 2
B. 1, 2, 1, 2, 1, 2
C. A factor variable
D. The length of the vector

Q.16 How can you create a sequence of numbers from 5 to 25, increasing by 5 in R? **2**

A. length(5, 25, by = 5)
B. factor(5, 25, by = 5)
C. rep(5, 25, by = 5)
D. seq(5, 25, by = 5)

Q.17 What does the levels() function do for a factor variable? **2**

A. Creates a sequence of numbers
B. Returns the unique categories in the factor
C. Repeats elements in a
D. Calculates the length of the

vector vector

Q.18 Which conditional statement is used in R for testing multiple conditions? **2**

A. For B. while
C. ifelse() D. break

Q.19 What is the purpose of the break statement in R loops? **2**

A. Skips the current iteration B. Starts a new loop
C. Checks a condition D. Exits the current loop immediately

Q.20 How do you define a user-defined function in R? **2**

A. function_name <- function(arguments) { body } B. def function_name(arguments): { body }
C. create function_name(arguments) { body } D. func_name <- create_function { body }

Q.21 Which statement is used to skip the current iteration of a loop in R? **2**

A. break B. return
C. next D. exit

Q.22 Which loop in R is used for iterating over a sequence of numbers? **2**

A. Ifelse() B. While()
C. Repeat() D. For()

Q.23 What is the purpose of the return() statement in user-defined function in R? **2**

A. To exit a loop B. To return a value from the function
C. To start a loop D. To define a function

Q.24 What is the correct syntax for a while loop in R? **2**

A. while { condition: code block } B. while (condition) do { code block }
C. while (condition) { code block } D. while condition: code block

Q.25 What will the following R function do? **2**

my_function <- function(x) { return(x ^ 2) }

A. Divide the input x by 2 and return the result B. Multiply the input x by 2 and return the result
C. Create a loop that runs twice D. Return the square of input x

Q.26 How do you create a simple function that adds two numbers in R? **2**

A. add_numbers <- function(a, b) { a + b } B. function add(a, b): return a + b
C. create_function(a, b) { a + b D. add <- a + b

(P.T.O)

}

Q.27 Which function in base R is used to create a histogram? **2**

A. Barplot()
B. Histogram()
C. hist()
D. plot()

Q.28 Which ggplot2 function is used to create a scatter plot? **2**

A. geom_histogram()
B. geom_point()
C. geom_plot()
D. geom_scatterplot()

Q.29 What does the boxplot() function in base R visualize? **2**

A. Relationship between two categorical variables
B. Frequency distribution of data
C. A pie chart representation
D. Distribution of a continuous variable, showing medians, quartiles, and outliers

Q.30 In ggplot2, which function is used to create a boxplot? **2**

A. geom_box()
B. geom_boxplot()
C. ggplot_boxplot()
D. plot_box()

Q.31 What does aes() specify in a ggplot2 visualization? **2**

A. The theme of the plot
B. The data to use in the plot
C. Aesthetic mappings such as x, y, color, or size
D. The type of plot to generate

Q.32 What does the main argument in hist() control? **2**

A. The title of the histogram
B. The color of the bars
C. The width of the bins
D. The axis labels

Q.33 Which function in base R is commonly used to perform join operation on two data frames by a common column? **2**

A. join()
B. rbind()
C. cbind()
D. merge()

Q.34 What type of join does merge(x, y, by = "column") perform by default in base R? **2**

A. Left join
B. Inner join
C. Full join
D. Right join

Q.35 What will the result be when following code is executed? **2**

merge(df1, df2, by = "key", all.y = TRUE)

A. A right join, keeping all rows from df2 and matching rows from df1
B. A left join, keeping all rows from df1
C. An inner join of df1 and df2
D. A Cross join of df1 and df2