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1411E1213

Candidate's Seat No :_____

PG-D.D.A. (Rep.) Sem.-1 Examination

DA-102

F. D. M.

Time : 2-30 Hours] November-2025 [Max. Marks : 70

Duration: 1 Hour

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	What is R primarily used for?				**2**
	A. Web development		B. Statistical computing and graphics		
	C. Game development		D. Mobile app development		
Q.2	What is the output of class (c(1, 2, 3))?				**2**
	A. Character		B. Numeric		
	C. integer		D. factor		
Q.3	Which function is used to check the structure of an object in R?				**2**
	A. str()		B. class()		
	C. typeof()		D. summary()		
Q.4	How do you concatenate strings in R?				**2**
	A. Using +		B. Using paste()		
	C. Using join()		D. Using concat()		
Q.5	Which operator is used to test equality in R?				**2**
	A. =		B. ==		
	C. ===		D. :		
Q.6	What will rep(1:3, times = 2) produce?				**2**
	A. 1, 2, 3, 1, 2, 3		B. 1, 1, 2, 2, 3, 3		
	C. An error		D. None of the above		
Q.7	What is the correct syntax for writing an if-else statement in R?				**2**
	A. if() { ... } else { ... }		B. if: ... else: ...		
	C. if { ... } else { ... }		D. None of the above		
Q.8	What is a factor in R?				**2**
	A. A numeric vector		B. A character vector with levels		
	C. A data frame		D. None of the above		
Q.9	What is the purpose of the $ operator in R?				**2**
	A. Access elements of a vector		B. Access columns in a data frame		
	C. Access levels of a factor		D. All of the above		

P.T.O

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Q.10 How do you add layers to a ggplot plot? **2**

A. Using +
B. Using add_layer()
C. Using plot_add()
D. Using layer()

Q.11 In statistics, what does the term "outlier" refer to? **2**

A. A value that repeats frequently
B. A value significantly different from others in a data set
C. A value that minimizes error
D. None of the above

Q.12 Which function is used to create a linear regression model in R? **2**

A. lm()
B. regression()
C. model()
D. linear_model()

Q.13 What is the purpose of facet_wrap() in ggplot2? **2**

A. To add titles to the plot
B. To create multiple plots based on a factor
C. To color the points in a scatter plot
D. To combine multiple layers

Q.14 What is the output of the following code? **2**

Code

```
x <- c(1, 2, 3, 4, 5)
y <- c(6, 7, 8, 9, 10)
cor(x, y)
```

A. 0
B. 1
C. -1
D. 0.5

Q.15 Which function checks for missing values in R? **2**

A. is.na()
B. is.null()
C. is.empty()
D. is.nan()

Q.16 What is the purpose of the function() function in R? **2**

A. To create a function
B. To make a decision
C. To repeat a block of code
D. To read a file

Q.17 What is the output of the following code? **2**

```
x <- c(TRUE, FALSE, TRUE)
sum(x)
```

A. 0
B. 1
C. 3
D. 4

Q.18 In statistics, what is the purpose of a p-value? **2**

A. To measure the spread of data
B. To test a hypothesis
C. To calculate the mean
D. To find correlation

Q.19 What is the primary purpose of the aes() function in ggplot2? **2**

A. To set colors for points
B. To define the mapping of variables to aesthetics
C. To create the plot title
D. To adjust axis scales

Q.20 What is the result of this code? **2**

```
x <- matrix(1:9, nrow = 3, ncol = 3)
x[2, 3]
```

A. 5 B. 6
C. 8 D. ERROR

Q.21 What does this code do? **2**

```
df <- data.frame(x = c(1, 2), y = c(3, 4))
df$x[2] <- 5
df
```

A. Modifies the second row of column x to 5 B. Deletes the second row of column x
C. Adds a new row to the dataframe D. None of the above

Q.22 How does theme() function affect a ggplot2 plot? **2**

A. It changes the data source for the plot B. It modifies aesthetic attributes
C. It alters plot appearance by modifying non-data components D. It adjusts data alignment

Q.23 How do you create a sequence of dates from January 1, 2021, to January 10, 2021, in R? **2**

A. seq(as.Date("2021-01-01"), as.Date("2021-01-10"), by = "day") B. sequence("2021-01-01", "2021-01-10")
C. dates("2021-01-01", "2021-01-10") D. range(as.Date("2021-01-01"), as.Date("2021-01-10"))

Q.24 What is the output of the R code **2**

```
x <- c(3, 7, NA, 4, 7)
y <- c(5, NA, 1, 2, 2)
x + y
```

A. 8 NA NA 6 9 B. 8 7 1 6 9
C. Missing Data D. 15.5

Q.25 Which of the following is true about R lists? **2**

A. Lists in R can only hold elements of the same type. B. Lists in R are a type of vector.
C. Lists in R cannot contain other lists. D. Lists in R can hold elements of different types.

Q.26 Which R operator is used for element-wise multiplication of two vectors? **2**

A. * B. %*%
C. ^ D. %/%

Q.27 What is the result of the expression *is.vector(list(1,2,3))* in R? **2**

A. TRUE B. FALSE
C. Error D. NULL

P.T.O

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Q.28 What does the *dim()* function return when applied to a data frame in R? **2**

A. The number of elements in the data frame
B. The number of columns in the data frame
C. A vector containing the number of rows and columns
D. The length of the data frame

Q.29 Which keyword is used to define a global variable inside a function in R? **2**

A. global
B. <<-
C. ::
D. globalVar

Q.30 Which of the following statement would print "0" "1" "2" "3" "4" "5" "6" for the following R code? **2**

```
x <- 0:6
```

A. as.character(x)
B. as.logical(x)
C. as.numeric(x)
D. as.num(y)

Q.31 Which function takes a dim attribute which creates the required number of dimensions? **2**

A. Vector
B. Array
C. Matrix
D. Lists

Q.32 What is the output of the following code in R? **2**

```
x <- c(1, 2, 3)
y <- c(4, 5, 6)
z <- cbind(x, y)
z
```

A. A matrix with two rows and three columns
B. A matrix with three rows and two columns
C. A list with two elements
D. An error message

Q.33 What is the output of the following code in R? **2**

```
x <- c(1, 2, 3, 4, 5)
mean(x)
```

A. 3
B. 3.5
C. 4
D. 5

Q.34 Which of the following is a valid way to read in a CSV file in R? **2**

A. read.csv("data.csv")
B. read.table("data.csv")
C. read.excel("data.csv")
D. load("data.csv")

Q.35 Which of the following statements about factors in R is true? **2**

A. Factors are used to represent numeric data in R.
B. Factors are used to represent categorical data in R.
C. Factors are used to represent missing values in R.
D. Factors are used to represent character data in R.