VIT Vidyalankar Institute of Technology ACCREDITED A+ BY NAAC	**Department of Information Technology**

Semester	B.E. Semester VIII – INFT
Subject	R programming
Laboratory Teacher	Prof. Shruti Agrawal

Student Name	Prashik Nikumbe	
Roll Number	18101A0040	
Grade and Subject Teacher's Signature		

Platform	Simplilearn
Course Name	R programming for beginners (https://www.simplilearn.com/r-programming-free-course-skillup)
Course Duration	7 hours

Assignment

1. R is an _____ programming language

a) Closed source
b) Open source
c) GPL

Answer: Open source

2. R programming language is an implementation of which of the following languages?

a) C
b) C++
c) S
d) Fortran

Answer: S

3. R programming can be for statistical analysis and data visualization

a) TRUE
b) FALSE

Answer: TRUE

4. What is the shortcut to clear the console of RStudio?

a) Ctrl + C
b) Ctrl + R
c) Type - clear()
d) Ctrl + L

Answer: Ctrl + L

5. A variable name can have combination of letters and digits.

a) TRUE
b) FALSE

Answer: TRUE

6. Which of the following is not a valid variable name in R?

a) test
b) 2total
c) test_
d) .total

Answer: test

7. What is the output of the following R code? p <- 12.5 .q <- 15 r <- p + .q print(r)

a) 26
b) 27
c) 27.5
d) Error

Answer: 27.5

8. What is the output of the below code? var <- "TRUE" typeof(var)

a) character
b) logical
c) double
d) complex

Answer: character

9. What is the output of the following code? x <- c(TRUE, FALSE,0, 1, 4) !x

a) FALSE TRUE TRUE FALSE FALSE
b) FALSE TRUE 1 0 0
c) 0 1 1 0 0
d) Error

Answer: FALSE TRUE TRUE FALSE FALSE

10. What does the "%%" operator return?

a) The product of an operation
b) The remainder of a division
c) The sum of an operation

Answer: The remainder of a division

11. When does an OR operator (|) return TRUE?

a) If both the elements are TRUE.
b) If one of the elements is TRUE.
c) When one of the elements are TRUE.

Answer: If one of the elements is TRUE.

12. What is the output of the following operation? 40-70+10/5

a) -4
b) 24
c) 30
d) -28

Answer: -28

13. What is the function used in R to assign a vector?

a) v()
b) c()
c) vt()
d) vector()

Answer: c()

14. What is the class of vector v? v <- c(2, 4, "India", "YouTube", 10.5)

a) Numeric
b) Character

Answer: Character

15. What will the following code return? v <- c(3, 4, 5, 6) l <- c("e", "v", "j") r <- c(v, l) r

a) 3 4 5 6 "e" "v" "j"
b) "3" "4" "5" "6" "e" "v" "j"
c) "3" "4" "5" "6" e v j
d) 3 4 5 6 e v j

Answer: "3" "4" "5" "6" "e" "v" "j"

16. What will be the result of the following code example? x <- 0:3 as.logical(x)

a) FALSE TRUE TRUE TRUE
b) 1 2 3 4
c) FALSE FALSE TRUE TRUE
d) TRUE FALSE FALSE FALSE

Answer: FALSE TRUE TRUE TRUE

17. List can contain objects of the same data type only.

a) TRUE
b) FALSE

Answer: FALSE

18. What will the below code example return? v <- c("Programming", "1.5", 200, TRUE) is.list(v)

a) TRUE
b) FALSE

Answer: FALSE

19. What is the output of the below code snippet? list_1 <- list("India", "US", c(100,200), TRUE, 15) list_1[2]

a) "India" "US"
b) "US"
c) "India"

Answer: "US"

20.What is the result of the below program? list_1 <- list(c("India", "US"), c(10000, 20000)) names(list_1) <- c("Countries", "Employees") list_1$India

a) Countries
b) "India" "US"
c) NULL
d) Error

Answer: NULL

21.What is the use of ncol argument in the matrix function?

a) To give column names.
b) To assign row labels.
c) To give column labels.
d) To assign the number of columns in the matrix.

Answer: To assign the number of columns in the matrix.

22. The cbind() function in R is used to combine vectors and matrices by rows.

a) TRUE
b) FALSE

Answer: FALSE

23. What is the output of the following matrix code? > matrix(2:10, nrow = 4, byrow = F)

a) [,1] [,2] [,3] [1,] 2 3 4 [2,] 5 6 7 [3,] 8 9 10 [4,] 2 3 4
b) [,1] [,2] [,3] [1,] 2 6 10 [2,] 3 7 NA [3,] 4 8 NA [4,] 5 9 NA
c) [,1] [,2] [,3] [1,] 2 6 10 [2,] 3 7 2 [3,] 4 8 3 [4,] 5 9 4
d) [,1] [,2] [,3] [1,] 2 3 4 [2,] 5 6 7 [3,] 8 9 10 [4,] NA NA NA

Answer: [,1] [,2] [,3] [1,] 2 6 10 [2,] 3 7 2 [3,] 4 8 3 [4,] 5 9 4

24. Given a vector x, how will you convert it into a list.

a) is.list(x)
b) unlist(x)
c) as.list(x)
d) list(x)

Answer: as.list(x)

25. Below is an Employee data frame. What will be the output of print(Emp[2:2, 1:2]) Name Dept Age 1 Ammy HR 32 2 Ramson Marketing 30 3 Jolly Legal 35

a) Dept Age 2 Marketing 30
b) Dept Age 1 HR 32 2 Marketing 30
c) Name Dept 1 Ammy HR 2 Ramson Marketing 3 Jolly Legal

Answer: Dept Age 2 Marketing 30

26. Given below is an Employee data frame. What will the operation Emp[1:2, c('Dept','Name')] result in? Name Dept Age 1 Ammy HR 32 2 Ramson Marketing 30 3 Jolly Legal 35

a) "HR" "Marketing"
b) Dept Name 1 HR Ammy 2 Marketing Ramson
c) Dept Name 2 Marketing Ramson
d) Name Dept 1 Ammy HR 2 Ramson Marketing

Answer: Dept Name 1 HR Ammy 2 Marketing Ramson

27. What is the output of the below user-defined function? player <- "I play football" play <- function(player){ print(player) player <- 'I would like to play basketball' print(player) } print(player) play(player)

a) "I play football" "I play football"
b) "I play football" "I would like to play basketball"
c) "I would like to play basketball" "I would like to play basketball"

Answer: "I play football" "I would like to play basketball"

28. What is the result of the below code snippet? for (i in 2:8) { if (!i %% 3){ next } print(i) }

a) 2 4 5 7 8
b) 2 3 4 5 6
c) 3 6
d) 2 4 6 7 8

Answer: 3 6

29. What will be the output of the below while loop? wins <- 0 playoffs <- c() while (wins <= 10){ if (wins < 5){ print("Out from playoffs") playoffs <- c(playoffs, "Out from playoffs") } else { print ("In playoffs") playoffs <- c(playoffs, "In playoffs") break } wins <- wins + 1 }

a) "In playoffs" "Out from playoffs" "Out from playoffs" "Out from playoffs" "Out from playoffs" "Out from playoffs"
b) "Out from playoffs" "In playoffs"
c) "Out from playoffs" "Out from playoffs" "Out from playoffs" "Out from playoffs" "In playoffs"
d) "Out from playoffs" "Out from playoffs" "Out from playoffs" "Out from playoffs" "Out from playoffs" "In playoffs"

Answer: "Out from playoffs" "Out from playoffs" "Out from playoffs" "Out from playoffs" "Out from playoffs" "In playoffs"

30. The summary() function creates new variables and preserves the existing ones.

a) TRUE
b) FALSE

Answer: FALSE

31. What is the correct output for the below R code? Emp_df <- data.frame(name = c("John", "Carry", "Russel", "Finch"), age = c(45, 34, 28, 50), weight = c(79, 75, 68, 80)) Emp_df.name<- arrange(Emp_df, weight) print(Emp_df.name)

a) name age weight 1 Russel 50 68 2 Carry 45 75 3 John 34 79 4 Finch 28 80
b) name age weight 1 Russel 28 68 2 Carry 34 75 3 John 45 79 4 Finch 50 80
c) name age weight 1 Carry 34 75 2 Finch 50 80 3 John 45 79 4 Russel 28 68
d) name age weight 1 Russel 28 80 2 Carry 34 79 3 John 45 75 4 Finch 50 68

Answer: name age weight 1 Russel 28 68 2 Carry 34 75 3 John 45 79 4 Finch 50 80

32. What does sample_frac(dataframe, 0.5) signify?

a) Return 5% of data from the dataframe
b) Return 5 random samples from the dataframe.
c) Return 50% of data from the dataframe.
d) Return 50 random samples from the dataframe.

Answer: Return 50% of data from the dataframe.

33. Which function help to split a column into multiple columns?

a) spread()
b) separate()
c) split()
d) unite()

Answer: separate()

34. Give the below dataframe result, what will the following pipe operator operation result in. result %>% gather(match, goals, match1:match2) > result name match1 match2 1 Albert 2 1 2 Xavi 0 3 3 Martin 1 0

a) name match goals 1 Albert match1 2 2 Xavi match1 0 3 Martin match1 1 4 Albert match2 1 5 Xavi match2 3 6 Martin match2 0
b) name match goals 1 Albert match1 2 2 Albert match2 1 3 Xavi match1 0 4 Xavi match2 3 5 Martin match1 1 6 Martin match2 0

Answer: name match goals 1 Albert match1 2 2 Xavi match1 0 3 Martin match1 1 4 Albert match2 1 5 Xavi match2 3 6 Martin match2 0

35. Which of the following functions work similar to separate() in tidyr?

a) sep()
b) gather()
c) extract()

Answer: extract()

36. Which function reshapes long format data to wide format?

a) gather()
b) spread()
c) unite()
d) separate()

Answer: spread()

37. Which plot should you use to visualize the relationship between two continuous variables?

a) Scatter plot
b) Histogram
c) Bar plot
d) Box plot

Answer: Scatter plot

38. What is the correct option for the below code? ggplot(mtcars, aes(a = mpg ^ 2, b = wt / cyl)) + geom_point()

a) Map aesthetics to variables.
b) Map aesthetics to functions of variables.
c) Map aesthetics to constants

Answer: Map aesthetics to functions of variables.

39. How will the resultant matrix look like for the below code? l < - matrix(LETTERS[5:10], ncol=2) l

a) [,1] [,2] [1,] "E" "F" [2,] "G" "H" [3,] "I" "J"
b) [,1] [,2] [1,] "E" "H" [2,] "F" "I" [3,] "G" "J"
c) [,1] [,2] [,3] [1,] "E" "F" "G" [2,] "H" "I" "J"
d) [,1] [,2] [,3] [1,] "E" "G" "I" [2,] "F" "H" "J"

Answer: [,1] [,2] [1,] "E" "H" [2,] "F" "I" [3,] "G" "J"

40. From the below Employee (Emp) data frame, how will you subset the data frame where employee age is greater than 33? > Emp Name Dept Age 1 Ammy HR 32 2 Ramson Product 30 3 Jolly Legal 35 4 Halen Content 36

a) subset(Emp, subset = Age>33)
b) subset(Emp, Age=33)
c) subset(Emp(Age>33))
d) subset(Age>33, Emp)

Answer: subset(Emp, subset = Age>33)

41. What is the output of the below code sample? discount<-function(item_cost,units) { if(units>55) { discount_per=20 }else { discount_per=14 } total_discount = item_cost*(discount_per/100) return(total_discount) } discount(50000,40)

a) 10000
b) 5000
c) 7000
d) 8000

Answer: 7000

42. Choose the correct result for the following operation performed on the below Emp_df dataframe. > filter(Emp_df,age < 35 | weight <= 79) Emp_df name age weight 1 John 45 79 2 Carry 34 75 3 Russel 28 68 4 Finch 50 80

a) name age weight 1 John 45 79 2 Carry 34 75 3 Russel 28 68
b) name age weight 1 John 45 79
c) name age weight 1 John 45 79 2 Finch 50 80
d) name age weight 1 Carry 34 75 2 Russel 28 68 3 Finch 50 79

Answer: name age weight 1 John 45 79 2 Carry 34 75 3 Russel 28 68

43. The _____ function helps you create layers, overriding the default position and stat if needed.

a) ggplot
b) geom
c) fplot
d) gplot

Answer: geom