

**BALLARI INSTITUTE OF TECHNOLOGY & MANAGEMENT**

(Autonomous Institute under Visvesvaraya Technological University, Belagavi)

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Course Code

**22CS/AI/CA/CD383**

Third Semester B.E. Degree Examinations, March/ April 2024

**R PROGRAMMING**

Duration: 1 hr

Max. Marks: 50

*Instructions to the Candidates:*

- All questions are compulsory
- Each question carries 1 mark
- Use only black ball point pen
- Darkening two circles for the same question makes the answer invalid
- Damaging/overwriting, using whiteners on the OMR are strictly prohibited.

**Q. No****Question**

- \_\_\_\_\_ programming language is a dialect of S.  
A. B                      B. C                      C. R                      D. K
- Which of the following is a valid variable name in R?  
A. 2var                      B. Var2                      C. Var\*2                      D. Var#2
- Which of the following statement is alternative to help ("rbind")?  
A. ?rbind                      B. print(rbind)                      C. bind(rbind)                      D. matrix(rbind)
- If a command is not complete at the end of a line, R will give a different prompt, by default it is  
A. \*                      B. -                      C. +                      D. /
- How many atomic classes of objects are available in R?  
A. 1                      B. 2                      C. 3                      D. 5
- Numbers in 'R' are generally treated as \_\_\_\_\_ precision real numbers.  
A. single                      B. double                      C. real                      D. imaginary
- A single element of a character vector is referred as \_\_\_\_\_  
A. Character string                      B. String                      C. Data strings                      D. Raw data
- R files has an extension of  
A. .R                      B. .S                      C. .CPP                      D. .C
- Functionality of R is divided into several  
A. Functions                      B. Domains                      C. Packages                      D. Files
- In R, the longer programs are referred to as  
A. Files                      B. Structures                      C. Scripts                      D. Data
- What is the output of the following R code?  
options(digits = 10) 20/6  
A. 3.33                      B. 3.33333                      C. 3.3333                      D. 3.333333333
- In the expression var <- 400 in R, what is the class of 'var' as determined by the class ( ) function?  
A. Character                      B. Numeric                      C. Integer                      D. Word
- What is the output of the following code?  
seq(from = 1, to = 9, by = 2)  
A. 1 3 5 7 9                      B. 1 3 5 7 9 11                      C. 1 2 3 4 5 6 7 8                      D. Error

14. What is the output of the following code?  
`Var1 <- "Simple Assignment"`  
`Var2 <- "Leftward Assignment!"`  
`"Rightward Assignment" -> Var3`  
`print(Var1)`  
`print(Var2)`  
`print(Var3)`
- A. "Simple Assignment"  
 "Leftward Assignment!"  
 C. Simple Assignment  
 Leftward Assignment!  
 Rightward Assignment
- B. "Simple Assignment"  
 "Leftward Assignment!"  
 "Rightward Assignment"
- D. Error
15. What is a vector?  
 A. Vector is a variable which hold values of different type  
 B. Vector is able to store only one value  
 C. Vector is an indexed list of variables.  
 D. None of the above is correct
16. What is the output of the following code?  
`x <- seq(1, 20, by = 2)`  
`y <- rep(4, 4)`  
`z <- c(y, x)`
- A. 4 4 4 4 1 3 5 7 9  
 11 13 15 17 19
- B. 1 3 5 7 9 11 13  
 15 17 19
- C. 4 4 4 4
- D. 1 2 3 4 5 6 7 8 9  
 10 11 12 13 14 15  
 16 17 18 19 20
17. What is the output of the following code?  
`x <- c(1.2, 0.9, 0.8, 1, 1.2)`  
`x.mean <- sum(x)/length(x)`  
`x.mean - mean(x)`
- A. 3.1456
- B. 0
- C. 1.9864
- D. 3.3333
18. What is the output of the following code?  
`a <- c(22, 99, NA, 43)`  
`is.na(a)`
- A. FALSE FALSE TRUE FALSE
- B. FALSE FALSE TRUE TRUE
- C. TRUE TRUE FALSE TRUE
- D. None of the above
19. What is the output of the following code?  
`c(0, 0, 1, 1) & c(0, 1, 0, 1)`
- A. FALSE FALSE FALSE TRUE
- B. FALSE FALSE TRUE TRUE
- C. TRUE TRUE FALSE TRUE
- D. TRUE FALSE FALSE TRUE
20. Which function is used to include additional rows in a matrix?  
 A. include()  
 B. rbind()  
 C. merge()  
 D. append\_item()
21. What is the output of the following code :  
`pmin(c(9,8,7),c(9,2,9),c(6,8,9))`
- A. 6 2 7
- B. 7 2 9
- C. 9 2 9
- D. Error
22. What is the output of the following code:  
`x <- 4`  
`switch(x, 2+2, mean(1:10), sum(1:5), seq(0,x))`
- A. 150
- B. 5.5
- C. Error
- D. 0 1 2 3 4
23. What is the output of the following code:  
`sum(((1:3)^2)^2)`
- A. 42
- B. 24
- C. 63
- D. 98

24. What is collection of objects currently stored in R called as?  
A. List                      B. Queue                      C. Workspace                      D. Package
25. Choose the command to select the first row of a data frame named df in R?  
A. df[0,]                      B. df[1,]                      C. df[,1]                      D. df[,0]
26. Which function is used to find the number of rows and columns in an array?  
A. dim( )                      B. dimension( )                      C. nr x nc( )                      D. length( )
27. Which function displays the structure of an object?  
A. abs( )                      B. str( )                      C. structure( )                      D. struct( )
28. Data frames can be converted to a matrix by calling \_\_\_\_\_ function.  
A. as.mat( )                      B. as.matr( )                      C. as.mat( )                      D. as.matrix( )
29. \_\_\_\_\_ removes all the variables from the workspace.  
A. rm(list=ls())                      B. ls( )                      C. rm.all( )                      D. remove( )
30. How many arguments can a function have in R ?  
A. 1                      B. 2                      C. 3                      D. n
31. Which functions in R programming are predefined functions that are available to perform common task or operations  
A. variable                      B. constant                      C. built-in                      D. user-defined
32. What is the output of the below code, when invoked the function hello(2)  
hello <- function(x) {  
  a <- 4  
  x+a+y  
}  
A. 9                      B. 42                      C. 6                      D. Error
33. When a function has more than one return statement, the executions stops after encountering the \_\_\_\_\_return statement.  
A. First                      B. Last                      C. Both                      D. undefined
34. What is the output of the below code  
v=seq(1,10)  
range(v)  
A. 1                      B. 10                      C. 11                      D. 1 10
35. What is the output of the below code  
aa <- rep(c(10,5, 9), length.out = 1)  
A. 1                      B. 10                      C. 11                      D. 10 5 9
36. What is the output of the following code in R?  
x <- 1:5  
y <- x^2  
plot(x, y)  
A. A scatterplot of x versus y                      B. A line plot of x versus y  
C. A histogram of x                      D. An error message
37. A series of function calls in which one function calls another, which in turn calls the original function is called as:  
A. Recursion                      B. Direct Recursion                      C. Indirect Recursion                      D. Recursive Function
38. How do you start writing an if statement in R?  
A. if (x > y)                      B. if x > y:                      C. if x > y then:                      D. None of the above
39. Which of the following R code extracts the second column for the following matrix?  
A. X[2, ]                      B. X[1,2]                      C. X[,2]                      D. X[1:2]
40. Which of the following statement can be used to explicitly control looping?  
A. if                      B. while                      C. break                      D. for
41. Which of them is used to skip an iteration of a loop?  
A. next                      B. skip                      C. group                      D. goto

42. Accessing elements is achieved through a process called \_\_\_\_  
 A. Outdexing                      B. Indexing                      C. Scrapping                      D. Highlighting
43. Which function loops over a list and evaluate a function on each element.  
 A. lapply()                      B. apply()                      C. sapply()                      D. mapply()
44. Which of the following is used for reading tabular data?  
 A. read.csv ()                      B. read()                      C. readLines()                      D. readf()
45. Which function can be used to determine the names assigned to a list?  
 A. names()                      B. name()                      C. lsnam()                      D. showname()
46. Factors are the r-objects which are created using \_\_\_\_  
 A. Vector                      B. Matrix                      C. Lists                      D. Array
47. Which are indexed by either row or column using a specific name or number?  
 A. Datasets                      B. Data frames                      C. Data                      D. Functions
48. Which function can be used to create a data frame?  
 A. dataframe()                      B. data.frame()                      C. df ()                      D. Dframe()
49. What is the correct way to create a list of strings?  
 A. fruits = v("banana", "apple", "orange")  
 B. fruits = c("banana", "apple", "orange")  
 C. fruits = list("banana", "apple", "orange")  
 D. fruits = vector of ("banana", "apple", "orange")
50. What is the output of the following command?  
 p <- seq(from= 1, to= 4, by= 1)  
 q <- seq(from= 5, to= 8, by= 1)  
 print(any(p + q == 6))  
 A. TRUE                      B. FALSE                      C. UNDEFINED                      D. NaN

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