

<b>Course Code</b>	<b>2</b>	<b>1</b>	<b>A</b>	<b>C</b>	<b>S</b>	<b>4</b>	<b>8</b>	<b>2</b>
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(Common to CSE & AIML)

**Max. Marks: 100**

- *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.*

<u>Q. No</u>	<u>Question</u>			
1	_____ programming language is a dialect of S.	a) B	b) B	a) B
2	Which of the following will start the R program?	a) \$ R	a) \$ R	a) \$ R
3	In 1991, R was created by Ross Ihaka and Robert Gentleman in the _____ University.	a) John Hopkins	b) California	c) Harvard
4	Finally, in _____ R version 1.0.0 was released to the public.	a) 2000	b) 2005	c) 2010
5	Which of the following describes R language?	a) Free	b) Paid	c) Trial Version
6	The copyright for the primary source code for R is held by the _____ Foundation	a) A	b) S	c) C
7	Which of the following statement is alternative to _____ is? solve	a) help(solve)	b) print(solve)	c) bind(solve)
8	If a command is not complete at the end of a line, R will display _____ prompt	a) *	b) -	c) +
9	R has how many atomic classes of objects?	a) 1	b) 2	c) 3
10	Numbers in R are generally treated as _____ precision real numbers	a) single	b) double	c) real
11	If you explicitly want an integer, you need to specify the _____ suffix	a) D	b) R	c) L
12	What will be the output of the following R code? > x <- vector ("numeric", length = 10), > x	a) 10	b) 0 0 0 0 0 0 0 0 0 0	c) 01
13	The _____ function can be used to create vectors of objects by concatenating things together	a) cp ()	b) c ()	c) concat ()

- 14 A single element of a character vector is referred as \_\_\_\_\_  
 a) Character string      b) String      c) Data strings      d) Raw data
- 15 R files has an extension \_\_\_\_\_  
 a). R      b). S      c). Rp      d) .c
- 16 The longer programs are called \_\_\_\_\_  
 a) Files      b) Structures      c) Scripts      d) Data
- 17 In the expression `x <- 4` in R, what is the class of 'x' as determined by the ``class ()'` function?  
 a) Character      b) Numeric      c) Integer      d) Word
- 18 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 9      d) Error
- 19 What is the output generated by the following code?  
`seq (by = -2, 9, 1)`  
 a) 9 7 5 3 1      b) 1 3 5 7 9      c) 1 3 9 7 5      d) 5 7 9 3 1
- 20 What is the output generated by the following function? `> (y <- rep (3, 4))`  
 a) 3 3 3 3      b) 4 4 4 4      c) 3333      d) 4444
- 21 Write a function to get the following output: 100 101 102 103 104 105 106 107 108 109 110  
 a) `x <- (100:110)`      b) `x<- seq (100,110,2)`      c) `c (100,110)`      d) `x<-(110,110, -2)`
- 22 What is the output generated by the following expression: `c(1, 2, 3, 4) + c(1, 2)`  
 a) 2 4 4 6      b) 1 2 3 4 1 2      c) 1 2 1 2 3 4      d) 2 4 6 4
- 23 What is the output of the function: `> mean (1:6)`  
 a) 6      b) 3      c) 3.5      d) 4
- 24 What is the command to print the sorted list in reverse order?  
`> sort(y)`      b) `> rev(sort(y))`      c) `sort(rev(y))`      d) `rev(y)`  
 What is the output for the following function?
- 25 `> x <- c (1, 1, 2, 3, 5, 8, 13)`  
`> which (x%%2 == 0)`  
 a) 2, 8      b) 3, 6      c) 2, 3, 8      d) 5, 6
- 26 Functionality of R is divided into a number of \_\_\_\_\_  
 Functions      Domains      Packages      Files
- 27 Which of the following is a valid variable name in R?  
 a) 2var      b) var2      c) var\_2      d) var#2
- 28 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
- 29 What is the meaning of "<-" ?  
 a) Functions      b) Loops      c) Addition      d) Assignment
- 30 Which of the following functions in R can be used to remove missing values from a vector?  
 a) `na.rm ()`      b) `na. omit ()`      c) `na. fill ()`      d) `na. exclude ()`
- 31 Which statement is used to stop a loop?  
 a) Stop      b) exit      c) break      d) return
- 32 Which function is used to add additional columns in a matrix?  
 a) `add ()`      b) `cbind ()`      c) `join ()`      d) `append item()`

- 33 What is the output of the following code: `pmin (c (1,2,3), c (3,2,1), c (2,2,2))`  
a) 1 2 1                      b) 2 1 2                      c) 1 2 3                      d) 3 2 1
- 34 What is the output of the following code: `pmax (c (1,2,3), c(3,2,1), c(2,2,2))`  
a) List all objects              b) Removes all              c) Remove current              d) None of the
- 35 \_\_\_\_\_ is used to skip an iteration of a loop.  
a) Next                      b) skip                      c) group                      d) cancel
- 36 What will be the output of the following R code?  

```
> y <- "fruit" > switch (y, fruit = "banana", vegetable = "broccoli", "Neither")
```

a) "banana"                      b) "Neither"                      c) "broccoli"                      d) Error
- 37 What will be the output of the following R code?  

```
> x <- 3
> switch (x, 2+2, mean(1:10), sum(1:5))
```

a) 15                      b) 5.5                      c) NULL                      d) Error
- 38 What will be the output of the following R code?  
`sum ((1:3) ^2)`  
a) 12                      b) 13                      c) 14                      d) 11
- 39 Point out the correct statement? Note: (A: True and B: False)  
a) `ifelse (test, B, A)`              b) `elseif (test, A, B)`              c) `if (test, A, B)`              d) `ifelse(test, A, B)`
- 40 Which function is used to display output.  
a) `show ()`                      b) `read ()`                      c) `printf()`                      d) `display ()`
- 41 `cat ()` function is used to concatenate two or more strings?  
a) Yes                      b) No
- 42 What will be the output of the following R code?  

```
> x <- data. Frame (foo = 1:4, bar = c(T, T, F, F))
> ncol(x)
```

a) 2                      b) 7                      c) 4                      d) 9
- 43 Name the function to create a data frame?  
a) `df()`                      b) `dframe()`                      c) `dataframe ()`                      d) `data.frame()`
- 44 Collection of objects currently stored in R is called as  
a) list                      b) task                      c) workspace                      d) package
- 45 The \_\_\_\_\_ stores the nominal values as a vector of integers in the range of 1 to unique values in the nominal variable.  
a) Lists                      b) Factor                      c) Matrix                      d) Functions
- 46 The following values: 10.5, 55 and 787, belongs to which data type?  
a) numeric                      b) integer                      c) complex                      d) All of the above
- 47 -----Function is used to enter in data from the terminal?  
a) `SCAN( )`                      b) `Scan;`                      c) `scan( )`                      d) `Scandata( )`
- 48 To bind a row onto an already existing matrix, the \_\_\_\_\_ function can be used.  
a) `Sbnd( )`                      b) `Sbind( )`                      c) `) rbind ( )`                      d) `Gbind( )`
- 49 A \_\_\_\_\_ is a two-dimensional rectangular data set  
a) Vector                      b) Lists                      c) Matrix                      d) Functions
- 50 Data frames can be converted to a matrix by calling data  
a) `as.mat()`                      b) `as.matr()`                      c) `as.mat()`                      d) `as.matrix()`
- 51 Which function is used to find the amount of rows and columns in an array?  
a) `dim()`                      b) `nchar()`                      c) `length()`                      d) `dim_len()`

- 52 \_\_\_\_\_ is used to apply a function over subsets of a vector.  
a) mapply()                      b) lapply()                      c) apply()                      d) tapply()
- 53 lapply functions takes \_\_\_\_\_  
a) two                      b) three                      c) four                      d) five
- 54 Identify the function which is used to return a subset of the columns of a data frame?  
a) select                      b) retrieve                      c) get                      d) set
- 55 \_\_\_\_\_ remove all the variables from the workspace.  
a) rm(list=ls())                      b) ls()                      c) rm(x)                      d) attach(mat)
- 56 Data frames can contain which of the following types of data?  
a) Integers only                      b) Integers and numeric only                      c) Any type of data                      d) Integers, numeric and character only
- 57 Identify 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]
- 58 The \_\_\_\_\_ is used for reading tabular data?  
a) read.csv ( )                      b) dget                      c) readLines                      d) writeline
- 59 Which function in R is used to remove missing values from a vector?  
a) na.rm()                      b) na.omit()                      c) na.fill()                      d) na.exclude()
- 60 Which function is used to determine the names assigned to a list?  
a) names                      b) name                      c) nam                      d) nem
- 61 Consider the following code: for (x 1:10). Which keyword is missing inside the for loop to output the numbers 1 to 10?  
a) in                      b) seq                      c) list                      d) inside
- 62 Collection of objects currently stored in R is called as  
a) list                      b) task                      c) workspace                      d) package
- What is the meaning of the following R function?
- 63 x <- c(4, 5, 1, 2, 3, 3, 4, 4, 5, 6)  
x <- as.factor(x)  
a) x becomes a factor                      b) x is a factor                      c) x is not a vector                      d) x does not exist
- 64 The four most frequently used types of data objects in R are vectors, matrices, data frames and \_\_\_\_\_  
a) Lists                      b) Function                      c) Interfaces                      d) Packages
- 65 Lists can be created using the \_\_\_\_\_ function  
a) Lists.atrrix                      b) Matrix.li                      c) Matrix.lists                      d) list
- 66 Joining two lists can be achieved either using the \_\_\_\_\_ function  
a) join()                      b) c()                      c) delete()                      d) reduce()
- 67 The length of a list is \_\_\_\_\_ to the number of components in that list  
a) Equal                      b) Triple                      c) Double                      d) One fourth
- 68 Individual R objects can be saved to a file using the function  
a) save                      b) put                      c) get                      d) save\_image
- 69 An ordered collection of objects or components are called  
a) Datasets                      b) Lists                      c) Databases                      d) Data frames
- 70 If the function in a console is.matrix(X) returns true then X can be considered as a \_\_\_\_\_  
a) Vector                      b) Matrix Vector                      c) Matrix Object                      d) Matrix data object

- 71 Warnings are generated by the \_\_\_\_\_ function  
a) run()                      b) warning()                      c) error()                      d) message()
- 72 Factors are the r-objects which are created using a  
a) Vector                      b) Matrix                      c) Lists                      d) Array
- 73 A data frame is a special type of list where every element of the list has \_\_\_\_\_ length  
a) Same                      b) Different                      c) May be different                      d) May be same
- 74 We can dump() R objects to a file by passing  
a) character vector of their names                      b) object name                      c) arguments                      d) file name
- 75 Unlike writing out a table or CSV file, dump() and dput() preserve the \_\_\_\_\_ so that another user doesn't have to specify the all over again  
a) attribute data                      b) backup data                      c) metadata                      d) normal data
- 76 \_\_\_\_\_ function is used to apply an expression for a given dataset  
a) That()                      b) This()                      c) With()                      d) Unwith()
- 77 The \_\_\_\_\_ function can be used to remove a row of a data frame  
a) select                      b) rename                      c) subset                      d) set
- 78 Individual R objects can be saved to a file using the \_\_\_\_\_ function  
a) Save                      b) Put                      c) Get                      d) save\_image
- 79 The process of changing the object type from one to another is \_\_\_\_\_  
a) Coercion                      b) Conversion                      c) Casting                      d) None of the above
- 80 Which function is used to draw points (markers) in a diagram?  
a) d()                      b) draw()                      c) plot()                      d) canvas()
- 81 Functions are defined using the \_\_\_\_\_ directive and are stored as R objects  
a) function()                      b) funct()                      c) functions()                      d) fun()
- What will be the output of the following R code?  
f <- function() {  
82        ## This is an empty function  
      }  
f()  
a) 0                      b) No result                      c) NULL                      d) 1
- What will be the output of the following R code?  
f <- function() {  
83        ## This is an empty function  
      }  
class(f)  
a) "function"                      b) "class"                      c) "procedure"                      d) "system"
- 84 The \_\_\_\_\_ function returns a list of all the formal arguments of a function  
a) formals()                      b) funct()                      c) formal()                      d) fun()
- 85 A function can have \_\_\_\_\_ number(max) of arguments  
a) 1                      b) 2                      c) 3                      d) n
- 86 If the function comprises more than one expression, then braces are necessary  
a) True                      b) False
- 87 An argument is  
a) Place holder                      b) variable                      c) function                      d) None of the above

- 88 Arguments can have default values  
a) True b) False
- 89 A function always returns a value  
a) True b) False
- 90 \_\_\_\_\_ function in R programming are predefined functions that are available to perform common task or operations  
a) variable b) constant c) user defined d) built-in
- 91 What is the output of the function `print(sum(4:6))`  
a) 10 b) 15 c) 4 d) 6
- 92 What is the output of the function `print(max(4:6))`  
a) 4 b) 5 c) 6 d) 15
- 93 The expression `if(x%%2==0)` then it returns the value which is \_\_\_\_\_ number  
a) even b) odd
- 94 `F=function(x) x^2*4+x/3` is \_\_\_\_\_ function  
a) Inline b) Built-in c) user defined d) None of the above
- What will be the output of the following R code snippet?
- 95 `lm <- function(x) { x * x }`  
`> lm`  
a) `function(x) { x * x }` b) `func(x) { x * x }` c) `function(x) { x / x }` d) `function { x $ x }`
- 96 A function, together with an environment, makes up what is called a \_\_\_\_\_ closure  
a) formal b) function c) reflective d) symmetry
- Which of the variable in the following R code is variable?
- 97 `> f <- function(x, y) {`  
`x^2 + y / z`  
`}`  
a) x b) y c) z d) yy
- 98 \_\_\_\_\_ functions can be “built which contain all of the necessary data for evaluating the function  
a) objective b) reflective c) nested d) symmetry
- 99 \_\_\_\_\_ require you to pass a function whose argument is a vector of parameters  
a) `optimize()` b) `optimise()` c) `opt()` d) `opm()`
- What will be the output of the following R code?
- 100 `> g <- function(x) {`  
`a <- 3`  
`x+a+y`  
`## 'y' is a free variable`  
`}`  
`> y <- 3`  
`> g(2)`  
a) 9 b) 42 c) 8 d) Error

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