Question Booklet Code

A

21MAT2SLP

**Question Booklet
Serial Number**

M.Sc. II Semester (NEP) Degree Examination,
October - 2023
MATHEMATICS
R-Programming

Time : 1 Hour   Maximum Marks : 30

INSTRUCTIONS TO CANDIDATES

1. The Question Paper will be given in the form of a Question Booklet. There will be four/two versions of Question Booklets with Question Booklet Code viz. **A**, **B**, **C** & **D** / **A** & **B**/ **A** only.

2. The Question Booklet Serial Number is printed on the top right margin of the facing sheet. If your Question Booklet is un-numbered, please get it replaced by new Question Booklet with same Code.

3. Immediately after the commencement of the examination, the candidate should check that the Question Booklet supplied to him contains all the 30 questions in serial order. The Question Booklet does not have unprinted or torn or missing pages and if so he/she should bring it to the notice of the Invigilator and get it replaced by a complete booklet with same Code. This is most important.

4. A blank sheet of paper is attached to the Question Booklet. This may be used for Rough Work.

5. **Please read carefully all the instructions on the top of the Answer Sheet before marking your answers.**

6. Each question is provided with four choices **(A)**, **(B)**, **(C)** and **(D)** having one correct answer. Choose the correct answer and darken the bubble corresponding to the question number using **Black Ball-Point Pen** in the OMR Answer Sheet.

7. No candidate will be allowed to leave the examination hall till the end of the session and without handing over his/her Answer Sheet to the Invigilator.

8. Strict compliance of instructions is essential. Any malpractice or attempt to commit any kind of malpractice in the Examination will result in the disqualification of the candidate.

9. First fifteen minutes is provided to fill the general information of the Student. Eg. Student Name, Student ID, etc. in the OMR Answer Sheet

10. Without the instruction of the Invigilator do not open the Question Paper Booklet Seal.

1. What is the output of following code ?

    t ← C ("sun", "mon", "tue", "wed", "thurs", "fri", "sat")

    x ← t [C (-2, -5)]

    print (x)

    (A) "mon" "Thurs"   (B) "sun" "Tue" "wed" "fri" "sat"

    (C) "tue" "fri" "Sat"   (D) None of the above

2. In R, && logical operator is used for :

    (A) logical NOT   (B) logical OR

    (C) logical AND   (D) none of the above

3. Data frames are created using the function :

    (A) data frame { }   (B) data.frame [ ]

    (C) data.frame ( )   (D) DATA.FRAME [ ]

4. In R, histogram is used for :

    (A) collecting the data set   (B) analyzing the data set

    (C) summarizing the data set   (D) labelling the data set

5. Which one of the following is not a basic data type ?

    (A) Numeric   (B) Character   (C) Integer   (D) Data frame

6. What is the output of the following R code ?

    X ← C ("a", "b")

    as.numeric (X)

    (A) [1] 12   (B) [1] TRUE TRUE

    (C) [1] NA NA   (D) [1] NAN

7. Which function is used to create the vector with more than one element ?

(A)   C ()   (B)   library ()   (C)   plot ()   (D)   par ()

8. _____ is used to skip an operation of a loop.

(A)   next   (B)   skip

(C)   group   (D)   none of the above

9. The operator ←, <←, = is used for :

(A)   Left words assignment   (B)   Right words using assignment

(C)   Both (A) and (B)   (D)   None of the above

10. The original language from which R is technically developed ?

(A)   B   (B)   C   (C)   S   (D)   C++

11. What is R ?

(A)   A statistical programming language

(B)   A spreadsheet program

(C)   A web development language

(D)   An operating system

12. Which of the following is a valid variable name in R ?

(A)   .var_name   (B)   var_name%   (C)   .2var_name   (D)   _var_name

13. What is the output of the following code in R ?

X ← 1 : 5

Y ← x^2

plot (X, Y)

(A)   a scatter plot of X versus Y   (B)   a line plot of X versus Y

(C)   a histogram of X and Y   (D)   an error message

14. In the syntax of text i.e. text (X, Y, labels), X and Y represents :

(A) axis X and Y

(B) numeric values specifying the co-ordinates of the text to plot

(C) both (A) and (B)

(D) none of the above

15. The basic syntax of box plot contains "main" which refers to :

(A) title of the source file   (B) title of the data

(C) title of the graph   (D) none of the above

16. Which of the following is a valid way 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]

17. What is the output of the following code ?

V ← C (2, 5.5, 6, 9)

T ← C (8, 2.5, 14, 9)

print (V ! T)

(A) FALSE FALSE TRUE FALSE   (B) FALSE FALSE FALSE TRUE

(C) TRUE TRUE TRUE FALSE   (D) None of the above

18. Break statement :

(A) Terminates the loop and transfers execution to the statements immediately following the if statement

(B) Terminates the loop and transfers execution to the statements immediately following the loop

(C) Skip the current iteration of a loop without terminating it

(D) None of the above

19. List, a R - object can contain :

(A) elements of only same data type

(B) elements of different data type

(C) various elements of same type

(D) none of the above

20. What is the output of following code ?

V ← "TRUE"

print (class (V))

(A) "logical"   (B) "string"   (C) "character"   (D) none of these

21. Which of the following is not a loop ?

(A) Repeat loop   (B) While loop   (C) for loop   (D) if loop

22. What is the purpose of decision making statements ?

(A) to run set of codes again and again

(B) to select and execute a statement from a given set of statements

(C) to alter the direction and the flow of the program

(D) none of these

23. In R, program, bar graph represents :

(A) data in triangular bar   (B) data in square bar

(C) data in rectangular bar   (D) data in diagonal bar

24. Which function is used to create a vector ?

(A) C [ ]   (B) C ( )   (C) ;C ( )   (D) C : ( )

25. Which of the following is true for a vector in R ?

(A) It is a homogeneous 1-dimensional data structure

(B) It is a heterogeneous 1-dimensional data structure

(C) It is a homogeneous 2-dimensional data structure

(D) It is a heterogeneous 2-dimensional data structure

26. Which function cannot be used to import a csv file in R ?

(A) read.table ( )   (B) read. csv ( )

(C) read-excel ( )   (D) none of these

27. How do you insert comments in R code ?

(A) # This is a Comment   (B) /* This is a Comment

(C) ‖ This is a Comment   (D) None of the above

28. How do you create a variable named x with the numeric value 5 ?

(A) $x : 5$ (B) $x \leftarrow 5$ (C) int $x = 5$ (D) all the above

29. Which function is often used to concatenate elements ?

(A) join ( )   (B) merge ( )   (C) paste ( )   (D) concat ( )

30. Which statement is used to skip the current iteration of a loop ?

(A) stop   (B) exit   (C) break   (D) next

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SPACE FOR ROUGH WORK

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