M. Sc. I. T. (Sem. III) (CBCS) (W.E.F. 2016) Examination
June - 2022
CS-15 : Programming with R for Data Science

Faculty Code : 003
Subject Code : 1083003

Time : $2\frac{1}{2}$ Hours]   [Total Marks : **70**

Instruction : Give the answers of any 5 questions from the following 10.

1 (a) Answer the following in one sentence :   **4**

   (1) DA stands for _____.

   (2) Can recycling rule apply on arithmetic operations of vector ?

   (3) Which method is used to convert objects into character ?

   (4) Which function is used to check the variable value is integer or not ?

   (b) Explain data types.   **2**

   (c) Explain Indexing Lists.   **3**

   (d) Explain data frames and indexing data frames.   **5**

2 (a) Answer the following in one sentence :   **4**

   (1) _____ is analysis of non-numerical data like text, images etc. It focuses on understanding the data.

   (2) Satellite images and weather data are examples of _____ data.

   (3) Character data type store string value. True or False.

   (4) What is the output of following line (sprintf("%s has %d dollars", "Sam", 100))

(b) Explain Arithmetic operators. 2

(c) Explain R object. 3

(d) Explain vectors with recycling and repetition. 5

3 (a) Answer the following in one sentence : 4

    (1) rapply stands for _____

    (2) Which function is used for delete factor ?

    (3) Can you create user defined function in R ? Yes or No

    (4) _____ function in R language is used to generate factors by specifying the pattern of their levels.

(b) Explain r function. 2

(c) Explain string, change case, splitting string, and substrings. 3

(d) Explain repeat, while and for loop with example. 5

4 (a) Answer the following in one sentence : 4

    (1) In R Switch Statement each value is known as _____

    (2) _____ are the data objects that categories the data and stores it. They can Store and Integrate and create the levels.

    (3) Which function is used to convert string into upper case ?

    (4) Sapply stands for _____

(b) What is variable scope ? 2

(c) Explain errors and warnings. 3

(d) Explain factor with example 5

5 (a) Answer the following in one sentence : 4

    (1) CRAN stands for _____.

    (2) The ____ function converts characters to time objects.

    (3) Write the syntax for installing a package.

    (4) In POSIXlt the "lt" stands for _____.

(b) Explain the triple colon operator ::: **2**

(c) Write the syntax for manually package installation for excel file reading. **3**

(d) Write the note on Name space. **5**

6 (a) Answer the following in one sentence : **4**

    (1) DST stands for _____.

    (2) EST stands for _____.

    (3) UTC stands for _____.

    (4) Write the syntax for loading installed package.

(b) What is UTC ? **2**

(c) Explain Dates and Time in R. **3**

(d) Give the steps for install and load the packages. **5**

7 (a) Answer the following in one sentence : **4**

    (1) getwd() function is used to _____.

    (2) Which function is used to create histogram ?

    (3) _____ is used to represent the value as slice of a circle with different colours.

    (4) Which library is used to read JSON file ?

(b) Explain getwd(and setwd() function. **2**

(c) Explain Boxplot() with example. **3**

(d) Give the reading and writing on JSON file format with suitable example. **5**

8 (a) Answer the following in one sentence : **4**

    (1) The _____ function is used to create scatter plot.

    (2) _____ represent the frequency of value of a variable buckets into a range.

    (3) setwd() function is used to _____.

    (4) Main parameter is used to give title of different graphs and charts. True or False.

(b) Give the use of rootnode. **2**

(c) Explain line charts with example. **3**

(d) Give suitable example of converting JSON file into data frame. **5**

9 (a) Answer the following in one sentence : **4**

    (1) BI stands for _____.

    (2) Extension of R markdown file is ____

    (3) MDM full form _____

    (4) YAML stands for _____

(b) Explain Automatic summarization. **2**

(c) Explain Data Collection Methods. **3**

(d) Explain Business Analytic Life Cycle steps. **5**

10 (a) Answer the following in one sentence : **4**

    (1) BA stands for _____.

    (2) ____ package include the functions like select, filter, arrange, rename, mutate, join etc.

    (3) Which packages are used in R for Data manipulation ?

    (4) Using ____ you can turn your analyses into high quality documents, reports, presentations and dashboards.

(b) Explain qualitative and quantitative data. **2**

(c) Explain role of Analysis in R. **3**

(d) Explain report generation using R. **5**

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