

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2022
(Sixth Semester)

Branch – MATHEMATICS WITH COMPUTER APPLICATIONS

DISCIPLINE SPECIFIC ELECTIVE-II
DATA ANALYTICS AND R PROGRAMMING

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (10 x 1 = 10)

1. What package to be installed for reading in R?
(i) Read_excel (ii) Readxl
(iii) Readcsv (iv) read_csv
2. Table() is used for _____
(i) to convert data into data frame
(ii) to convert data frame into database table format
(iii) to find out categorical data with count
(iv) none of the above
3. Accessing elements is achieved through a process called _____
(i) Indexing (ii) Outdexing
(iii) Highlighting (iv) Scrapping
4. To bind a row onto an already existing matrix, the _____ function can be used
(i) Rbind (ii) Sbind
(iii) Gbind (iv) Sbind
5. Which of the following function is used to view the dataset in spreadsheet like format?
(i) disp() (ii) View()
(iii) seq() (iv) All of the Above
6. Which of the following commands will produce the desired output?
(i) format(df,"%d %A %b %y") (ii) format(df,"%D %A %b %y")
(iii) format(df,"%D %a %B %Y") (iv) None of above
7. Which are indexed by either row or column using a specific name or number?
table() is used for
(i) Datasets (ii) Data frames
(iii) Data (iv) none of the above
8. What is the meaning of the following R function?
x <- c(4, 5, 1, 2, 3, 3, 4, 4, 5, 6)
x <- as.factor(x)
(i) x becomes a factor (ii) x is a factor
(iii) x does not exist (iv) x is not a vector
9. What will be the output of the following R function?
d <- date()
d
(i) Prints today's date (ii) Prints some date
(iii) Prints exact present time and date (iv) Error
10. Which level plotting commands generate figures?
(i) Low (ii) High
(iii) Both high and low (iv) No levels

SECTION - B (25 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks (5 x 5 = 25)

- 11 a What is meant by Obtaining the Length of a Vector?
OR
b Explain about the Higher-Dimensional Arrays.
- 12 a Classify the Steps involved in Adding and Deleting List Elements in R classes.
OR
b Write short notes on Extracting Subdata Frames.
- 13 a Write about The cut() Function?
OR
b Tell about the loops function in R programming.
- 14 a What is Cumulative Sums and Products?
OR
b Write about the Printing Function to the Screen.
- 15 a Write short notes about edtdbg Debugging Tool.
OR
b Write short notes on New Graph While Keeping the Old Ones.

SECTION -C (40 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks (5 x 8 = 40)

- 16 a Discuss about the Functions of R Programming.
OR
b Explain about all() and any() Functions in detail.
- 17 a Elaborate about the Accessing List Components and Values with examples.
OR
b Elaborate about the Merging Data Frames in R.
- 18 a Discuss about tapply() Function.
OR
b Elaborate about the Arithmetic and Boolean Operators Suitable example.
- 19 a Elaborate about the Functions for Statistical Distributions in R.
OR
b Elaborate about the Printing Function to the Screen.
- 20 a Explain about the Regular Expressions in string Manipulation in detail.
OR
b Explain the Workhorse of R Base Graphics The plot() Function.

Z-Z-Z

END