

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2022
(Sixth Semester)

Branch – COMPUTER TECHNOLOGY

R PROGRAMMING

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

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

- Which of the following will start the R program?
(i) \$ R (ii) > R (iii) * R (iv) @ R
- Elementary commands in R consist of either _____ or assignments.
(i) utilstats (ii) language (iii) expressions (iv) packages
- _____ create a complete ggplot appropriate to a particular data type.
(i) autoplot (ii) is.ggplot (iii) printplot (iv) qplot_ggplot
- _____ describe the type of plot you will produce.
(i) geoms (ii) ggplot (iii) fplot (iv) gplot
- _____ evaluate the cumulative distribution function for a Normal distribution.
(i) dnorm (ii) rnorm (iii) pnorm (iv) rpois
- The _____ parameter influences the spread of the distribution about its median.
(i) Scale (ii) Mode (iii) Mean (iv) Variance
- _____ generate random Poisson variates with a given rate.
(i) dnorm (ii) rnorm (iii) pnorm (iv) rpois
- Which of the following is used to plot multiple histograms?
(i) multi.plot() (ii) multi.hist (iii) xyplot.multi() (iv) poly()
- _____ is an incredibly powerful tool for analyzing data.
(i) Linear regression (ii) Logistic regression
(iii) Gradient Descent (iv) Greedy algorithms
- Grouping Customers based on their purchasing habits can be done using which algorithm?
(i) Classification (ii) Clustering
(iii) Regression (iv) Classification or Regression

SECTION - B (25 Marks)

Answer ALL questions

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

11 a Explain in brief about Installing and Updating R packages.

OR

b Describe in short about Matrices.

Cont...

- 12 a How excel data is read in R?
OR
b Summarise Group Manipulation
- 13 a State any ten Statistical Distributions and their functions.
OR
b Describe Summary Statistics.
- 14 a Explain in brief about Logistic Regression.
OR
b Summarize in short about Survival analysis.
- 15 a Narrate the differences between Hartigan's rule and Gapstatic.
OR
b Write a short note Random forest in R.

SECTION -C (40 Marks)

Answer ALL questions

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

- 16 a Explain about Data types in detail.
OR
b Discuss in detail about i) Data.Frames ii) Lists
- 17 a Elucidate in detail about Reading CSVs
OR
b Explain Base Graphics and different types of Graphs in detail.
- 18 a Explain in detail about Normal Distribution.
OR
b Discuss in detail about correlation and covariance in R programming.
- 19 a Explain Simple Linear Regression in detail.
OR
b Elucidate on Poisson Distribution.
- 20 a Explain in detail about Non Linear Least Square model.
OR
b Point out the features of Hierarchical Clustering.

Z-Z-Z

END