Reg. No. | | | | | | | | | |

BCACAC 384

Choice Based Credit System Sixth Semester B.C.A. Degree Examination, September 2022
(2021-2022 Batch Onwards)
E1 : PROGRAMMING FOR ANALYTICS

Time : 3 Hours Max. Marks : 80

***Note** : Answer **any ten** questions from Part – **A** and **one full** question from **each** Unit in Part – **B**.*

PART – A **(10×2=20)**

1. a) What is the purpose of typeof() function in R ? Give an example.
   b) Name the functions used to add additional row and column in a matrix ?
   c) What is the use of str() function in a data frame ?
   d) Define database and DBMS.
   e) Name any 4 types of database users.
   f) What is first normal form ?
   g) Name the four basic SQL operations.
   h) Expand DDL and DML.
   i) What is the use of COMMIT and ROLLBACK statements in SQL ?
   j) Mention two types of SAS variables.
   k) What is the purpose of WHERE statement in SAS ? Write its syntax.
   l) Mention any four comparison operators used in SAS.

PART – B

Unit – I

2. a) Explain applications of R Programming in the Real World.
   b) What is a matrix ? How do you add, remove rows and columns in a matrix ? Explain with an example.
   c) List and explain various Scales of Measurement in descriptive statistics. **(5+5+5)**

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3. a) Explain any two R objects.
   b) Briefly explain types of data in descriptive statistics.
   c) Explain stem and leaf plot with an example. **(4+6+5)**

Unit – II

4. a) Explain the characteristics of Database Management Software.
   b) Differentiate flat file database vs. relational database.
   c) Write a note on Database Security. **(5+5+5)**
5. a) Briefly explain hierarchical model.
   b) Explain the functions of Database Management System.
   c) Explain the features of MYSQL. **(5+5+5)**

Unit – III

6. a) Explain the steps involved in processing an SQL statement.
   b) Explain the statements with an example.
      i) UPDATE ii) DELETE
   c) Explain SQL Logical operators. **(5+5+5)**
7. a) Explain SELECT statement in SQL and its variations.
   b) Explain the concept of Primary Key and Foreign Key with the help of an example.
   c) Explain any five Aggregate functions. **(5+5+5)**

Unit – IV

8. a) Briefly explain SAS architecture with diagram.
   b) What are permanent and temporary SAS libraries ? Explain.
   c) Explain different mathematical functions in SAS, with an example. **(5+5+5)**
9. a) Explain the necessary steps required to write a SAS program with an example.
   b) How do you import an external file in SAS ? Explain with an example.
   c) With syntax and programming example explain DO statement in SAS. **(5+4+6)**

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