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**BCA(Sem-IV) —
Database Mgt.
Syst. (403)**

2023

(Session : 2021-24)

Time : 3 hours

Full Marks : 70

*Candidates are required to give their answers in
their own words as far as practicable.*

The figures in the margin indicate full marks.

Answer from all the Sections as directed.

Section – A

(Compulsory)

1. Choose the correct answer of the following :

$2 \times 10 = 20$

(a) Who created the first DBMS ?

- (i) Edgar Frank Codd
- (ii) Charles Bachman
- (iii) Charles Babbage
- (iv) Sharon B. Codd

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- (b) Which type of data can be stored in database ?
- (i) Image oriented data
 - (ii) Text, file contained data
 - (iii) Data in the form of audio or video
 - (iv) All of these
- (c) In which of the following format data is stored in the database ?
- (i) Image
 - (ii) Text
 - (iii) Table
 - (iv) Graph
- (d) Which of the following is not a type of DBMS ?
- (i) My SQL
 - (ii) Microsoft Access
 - (iii) IBM DB2
 - (iv) Google
- (e) Which of the following is not a feature of database ?
- (i) No Backup for the datastore

- (ii) User Interface provided
- (iii) Lack of authentication
- (iv) Store data in multiple location

(f) What is information about data called ?

- (i) Hyperdata
- (ii) Teradata
- (iii) Metadata
- (iv) Relation

7 (g) _____ is a set of one or more attribute taken collectively to uniquely identify a record.

- (i) Primary key
- (ii) Foreign key
- (iii) Superkey
- (iv) Candidate key

8 (h) Which command is used to remove a relation from SQL ?

- (i) Drop Table
- (ii) Delete

(iii) Purge

(iv) Remove

(i) Which of the following is not a type of database ?

(i) Hierarchical

(ii) Network

(iii) Distributed

(iv) Decentralized

(j) Which of the following is not a function of DBMS ?

(i) Managing stored data

(ii) Manipulating data

(iii) Security for data store

(iv) Analyzing code

Section – B

Answer any four questions of the following :

5×4 = 20

2. Explain 2NF and 3NF with examples.

3. What is DBMS ? Explain the different keys in DBMS ?
4. Explain the different DDL commands with syntax and example.
5. Write short notes on Hierarchical and Network data models.
6. Explain five functions of DBMS.
7. Explain physical data independency and logical data independency.
8. Explain the different aggregate function in SQL with syntax and examples.

Section – C

Answer any **three** questions of the following :

10×3 = 30

9. Create table employee using following fields :

Field Name	Datatype
Emplo	Number

Field Name	Datatype
Ename	Char
DOB	Date
Dept	string
Salary	Real

- (a) Create the table *create table employe*
- (b) Insert at least 2 tuples according to the attribute
- (c) Find the sum of the salaries
- (d) Find the employees information in ascending order of their names

10. What is E. R diagram ? Explain various components of E-R diagram.

11. Write short notes on the following :

- (a) Primary key
- (b) Candidate key
- (c) Alternate key
- (d) Foreign key

12. Describe the term data models. Briefly define the different data models in DBMS.
13. Define Normalization. What are the steps in normalization ? What are the advantages of normalization over a normalized relation ?



salary =