(3)

Seat No. : _____

Date - 4/5/23

MD-104

May-2023

BCA, Sem.-II

CC-110 : Database Management System-I

Time : 2:30 Hours] [Max. Marks : 70

1. Answer the following :
   (1) What is DBMS ? Explain functions of DBMS. 7
   (2) Explain types of database based on number of users and location. 7

   OR

   (1) Explain distributed processing and distributed database. 7
   (2) Explain relational and ER model in detail. 7

2. Answer the following :
   (1) Explain UNION, INTERSECT, DIFFERENCE, PRODUCT, SELECT operator with example. 7
   (2) What is relationship ? Explain types of relationship with example. 7

   OR

   (1) Explain PRIMARY, FOREIGN, SECONDARY KEY with example. 7
   (2) Explain types of integrity rules. 7

3. Answer the following :
   (1) Explain identifying and non-identifying relationship with example. 7
   (2) Explain weak entities. Also discuss the concept of existence dependence. 7

   OR

   (1) What is relationship degree ? Explain its types. 7
   (2) Develop ER diagram using crow's foot notation for the given case. 7
   One college offers many courses. One course consists of many subjects. The student can enroll in many courses. Each course has many instructors. One instructor can teach many subjects.

4. Answer the following :
   (1) What is normalization ? What is the need of normalization ? 7
   (2) Explain conversion of 2NF with example. 7

   OR

   (1) Explain conversion of 1NF with example. 7
   (2) Draw dependency diagram for the given data and convert it up to 3NF. 7

V_id	V_name	Pro_id	Pro_name	Price	Qty	Amount

5. Answer the following : (Any Seven) 14

1. Data about data is called _____.
   (a) End-user data (b) Metadata
   (c) Information (d) None of these
2. The database that stores data about specific topic only is called _____.
   (a) Operational (b) General purpose
   (c) Discipline specific (d) Structured
3. Following are components of DDBMS.
   (a) Computer workstation (b) Transaction processor
   (c) Data processor (d) All of these
4. A minimal super key is called _____.
   (a) Primary key (b) Composite key
   (c) Candidate key (d) Foreign key
5. The ____ operator displays vertical subset of a table.
   (a) Union (b) Project
   (c) Select (d) Product
6. Optional participation is denoted by placing _____ at the side of optional entity.
   (a) Small circle (b) Small diamond
   (c) Small rectangle (d) None of these
7. Composite entity is also called _____ entity.
   (a) Associative (b) Bridge
   (c) Both (a) & (b) (d) None of these
8. _____ exists when different versions of the same data appear at different places.
   (a) Data redundancy (b) Data inconsistency
   (c) Data Anomalies (d) None of these
9. The data tables in 3NF remove _____.
   (a) Partial Dependency (b) Transitive Dependency
   (c) Fully-functional dependency (d) None of these
10. The ____ attributes require constant maintenance to ensure that the calculated value is current.
   (a) Composite (b) Derived
   (c) Multi valued (d) Required
11. _____ manages the DBMS and ensures that the database is functioning properly.
   (a) System administrator (b) Database designer
   (c) Database administrator (d) System analyst
12. A collection of related records is called _____.
   (a) Data (b) Field
   (c) Record (d) File