Program: BBA(Computer Application)   Semester: I
Program (Specific): BBACA07   **Course Type: CC**
Class: FYBBACA   **Max.Marks: 70**
Name of the Course: Database Management System
Course Code:22-BBACA114   **Time: 3Hrs.**
Paper: -

Instructions to the candidate:

1) *There are 4 sections in the question paper. Write each section on separate page.*
2) *All Sections are compulsory.*
3) *Figures to the right indicate full marks.*
4) *Draw a well labelled diagram wherever necessary.*

Section A

Q1) Answer the following. (Any 5)   **[5 x 3=15 M]**

1) Explain index file organization.
2) Define following terms:
     i) super key   ii) primary key   iii) composite key
3) Enlist DDL commands with syntax.
4) Explain advantages of Database Management System.
5)Write set membership operation in sql with an example.
6) Differentiate Data and Information.

Section B

Q2) Answer the Following. (Any 3)   **[3 x5=15 M]**

1) Illustrate difference and intersection operation with an example.
2)Write a short note on dense index.
3) Differentiate generalization and aggregation.
4) Explain referential integrity with example.

Section C

Q3) Answer the following. (Any 4)   **[4 x 5=20 M]**

1) Explain hierarchical model in detail.
2) Write a short note on 3NF.
3) Consider a trucking company which is responsible for picking up shipments for warehouse of a retail chain and deliver the shipments to the individual store location. A truck may carry several shipments in a single trip and deliver it to multiple stores.

   A database should provide the following details.

   i)   identify all entities.
   ii)   Identifies all relationship.
   iii)   Draw an E-R diagram.
4) Consider the database and write relational algebraic expression
   Patient Master (patientNo, PatientName,Gender,Address,City,Allergy, Chief Complaints)
   i)Display all patient whose Allergy is "Sinusitis".
   ii)Display all male patients from "Pune" city.
   iii)Update all patients whose gender is "M" with "Male".
   iv) List patients who are from "Nashik" city.
   v)List all patients whose chief complaints is "Cough".

5) Explain having and where clause with example.

Section D

Q4) Answer the Following (Any 4).   **[4x5=20M]**

1)Consider the following entities and their relationship:

   Item (item_no, name, quantity)

   Sup (no, name, addr, city, phone_no)

Item and Sup are related with many-to-many relationship with descriptive attributes rate, discount.

Constraints: Primary key, item qty > 5 and rate > 0

Create RDB in 3NF and writ equerries in sql:

i)Find the rate and discount of the item mouse.

ii)Count the number of items supplied by "Mr. Nathe".

iii)Display the details of all suppliers from "Pune" city.

iv) Display item details.

v) Display supplier name in descending order.

2)Normalize the following data to 3NF using appropriate relation.

Invoice

Cust Code:101	Inv No.: 011	Inv Date:05/03/22
Cust_name: Raahi.Ltd	Po. No.: 005	Po. date:05/03/22
Cust_address: Camp	Ch. No: 003	Ch_date:50/03/22

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| tem no | Desc | Quantity | Rate | Amount |

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| A105 | | | [Discount] | - |
| | | | Inv.Value | - |

3)What is attribute? Explain with its type.
4)Explain select and project operation in relational algebra.
5) What is file organization? Explain Sequential file organization.