Code No: 07A4EC14 **R07** **Set No. 2**

II B.Tech II Semester Examinations,APRIL 2011
DATABASE MANAGEMENT SYSTEMS
Common to Information Technology, Computer Science And Engineering
Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

⋆ ⋆ ⋆ ⋆ ⋆

1. Draw an ER diagram for Railway Reservation database. Identify entities, attributes for each entity, relationship among entities. Represent necessary constraints in this database design process in detail. [16]

2. Consider the following Schema:
Suppliers ($\underline{sid : integer}$, sname: string, address: string)
Parts ($\underline{pid : integer}$, pname: string, color: string)
Catalog ($\underline{sid : integer, pid : integer}$, cost: real)
The key fields are underlined. The catalog relation lists the price changes for parts by supplies. Write the following Queries in Relational Algebra and domain relational calculus.
   (a) Find the sids of suppliees who supply every red part
   (b) Find the sids of suppliees who supply every red part or supply every green part.
   (c) Find the names of suppliees who supply some red part.
   (d) Find parts of sids such that the supplies with the first sid changes more. [16]

3. (a) Explain Recoverable schedule with example?
   (b) Explain cascade less schedule with example? [8+8]

4. (a) Define DBMS? List Database system Applications.
   (b) Explain Database Administrator's responsibilities. [8+8]

5. (a) What is redundancy?
   (b) What are the different problems encountered by redundancy? Explain them [4+12]

6. Explain Database Buffering in detail? [16]

7. (a) Consider the following Relations
   Student (snum: integer, sname: string, major: string, level: string, age: integer)
   Class (name: string, meets_at: time, room: string, fid: integer)
   Enrolled (snum: integer, cname: string)
   Faculty (fid: integer, fname: string, deptid: integer)
   Write the following queries in SQL.
      i. Find the names of students not enrolled in any class.

ii. Find the names of students enrolled in the maximum number of classes.

iii. Print the level and the average age of students for that level, for each level.

iv. Print the level and the average age of the students for that level, for all levels except JR.

(b) Explain following in brief

i. Triggers

ii. Assertions [12+4]

8. Explain indexed sequential access method (ISAM)? [16]

⋆ ⋆ ⋆ ⋆ ⋆

Code No: 07A4EC14 **R07** **Set No. 4**

II B.Tech II Semester Examinations,APRIL 2011
DATABASE MANAGEMENT SYSTEMS
Common to Information Technology, Computer Science And Engineering
Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

⋆ ⋆ ⋆ ⋆ ⋆

1. Explain indexed sequential access method (ISAM)? [16]

2. (a) Explain Recoverable schedule with example?
   (b) Explain cascade less schedule with example? [8+8]

3. (a) Define DBMS? List Database system Applications.
   (b) Explain Database Administrator's responsibilities. [8+8]

4. Draw an ER diagram for Railway Reservation database. Identify entities, attributes for each entity, relationship among entities. Represent necessary constraints in this database design process in detail. [16]

5. Consider the following Schema:
   Suppliers (*sid* : *integer*, sname: string, address: string)
   Parts (*pid* : *integer*, pname: string, color: string)
   Catalog (*sid* : *integer*, *pid* : *integer*, cost: real)
   The key fields are underlined. The catalog relation lists the price changes for parts by supplies. Write the following Queries in Relational Algebra and domain relational calculus.
   (a) Find the sids of suppliees who supply every red part
   (b) Find the sids of suppliees who supply every red part or supply every green part.
   (c) Find the names of suppliees who supply some red part.
   (d) Find parts of sids such that the supplies with the first sid changes more. [16]

6. Explain Database Buffering in detail? [16]

7. (a) What is redundancy?
   (b) What are the different problems encountered by redundancy? Explain them [4+12]

8. (a) Consider the following Relations
   Student (snum: integer, sname: string, major: string, level: string, age: integer)
   Class (name: string, meets_at: time, room: string, fid: integer)
   Enrolled (snum: integer, cname: string)
   Faculty (fid: integer, fname: string, deptid: integer)
   Write the following queries in SQL.

i. Find the names of students not enrolled in any class.
ii. Find the names of students enrolled in the maximum number of classes.
iii. Print the level and the average age of students for that level, for each level.
iv. Print the level and the average age of the students for that level, for all levels except JR.

(b) Explain following in brief

i. Triggers
ii. Assertions [12+4]

⋆ ⋆ ⋆ ⋆ ⋆

Code No: 07A4EC14 **R07** **Set No. 1**

II B.Tech II Semester Examinations,APRIL 2011
DATABASE MANAGEMENT SYSTEMS
Common to Information Technology, Computer Science And Engineering
Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

⋆ ⋆ ⋆ ⋆ ⋆

1. (a) Explain Recoverable schedule with example?
   (b) Explain cascade less schedule with example? [8+8]

2. Consider the following Schema:
   Suppliers ($\underline{sid : integer}$, sname: string, address: string)
   Parts ($\underline{pid : integer}$, pname: string, color: string)
   Catalog ($\underline{sid : integer, pid : integer}$, cost: real)
   The key fields are underlined. The catalog relation lists the price changes for parts by supplies. Write the following Queries in Relational Algebra and domain relational calculus.
   (a) Find the sids of suppliees who supply every red part
   (b) Find the sids of suppliees who supply every red part or supply every green part.
   (c) Find the names of suppliees who supply some red part.
   (d) Find parts of sids such that the supplies with the first sid changes more. [16]

3. Draw an ER diagram for Railway Reservation database. Identify entities, attributes for each entity, relationship among entities. Represent necessary constraints in this database design process in detail. [16]

4. (a) Define DBMS? List Database system Applications.
   (b) Explain Database Administrator's responsibilities. [8+8]

5. Explain Database Buffering in detail? [16]

6. (a) What is redundancy?
   (b) What are the different problems encountered by redundancy? Explain them [4+12]

7. (a) Consider the following Relations
   Student (snum: integer, sname: string, major: string, level: string, age: integer)
   Class (name: string, meets_at: time, room: string, fid: integer)
   Enrolled (snum: integer, cname: string)
   Faculty (fid: integer, fname: string, deptid: integer)
   Write the following queries in SQL.
      i. Find the names of students not enrolled in any class.

ii. Find the names of students enrolled in the maximum number of classes.

iii. Print the level and the average age of students for that level, for each level.

iv. Print the level and the average age of the students for that level, for all levels except JR.

(b) Explain following in brief

i. Triggers

ii. Assertions [12+4]

8. Explain indexed sequential access method (ISAM)? [16]

⋆ ⋆ ⋆ ⋆ ⋆

Code No: 07A4EC14 **R07** **Set No. 3**

II B.Tech II Semester Examinations,APRIL 2011
DATABASE MANAGEMENT SYSTEMS
Common to Information Technology, Computer Science And Engineering
Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

⋆ ⋆ ⋆ ⋆ ⋆

1. Draw an ER diagram for Railway Reservation database. Identify entities, attributes for each entity, relationship among entities. Represent necessary constraints in this database design process in detail. [16]

2. (a) What is redundancy?
   (b) What are the different problems encountered by redundancy? Explain them [4+12]

3. Explain Database Buffering in detail? [16]

4. (a) Consider the following Relations
   Student (snum: integer, sname: string, major: string, level: string, age: integer)
   Class (name: string, meets_at: time, room: string, fid: integer)
   Enrolled (snum: integer, cname: string)
   Faculty (fid: integer, fname: string, deptid: integer)
   Write the following queries in SQL.
      i. Find the names of students not enrolled in any class.
      ii. Find the names of students enrolled in the maximum number of classes.
      iii. Print the level and the average age of students for that level, for each level.
      iv. Print the level and the average age of the students for that level, for all levels except JR.
   (b) Explain following in brief
      i. Triggers
      ii. Assertions [12+4]

5. (a) Explain Recoverable schedule with example?
   (b) Explain cascade less schedule with example? [8+8]

6. Explain indexed sequential access method (ISAM)? [16]

7. Consider the following Schema:
   Suppliers ($\underline{sid : integer}$, sname: string, address: string)
   Parts ($\underline{pid : integer}$, pname: string, color: string)
   Catalog ($\underline{sid : integer, pid : integer}$, cost: real)
   The key fields are underlined. The catalog relation lists the price changes for parts by supplies. Write the following Queries in Relational Algebra and domain relational calculus.

(a) Find the sids of suppliees who supply every red part

(b) Find the sids of suppliees who supply every red part or supply every green part.

(c) Find the names of suppliees who supply some red part.

(d) Find parts of sids such that the supplies with the first sid changes more. [16]

8. (a) Define DBMS? List Database system Applications.

(b) Explain Database Administrator's responsibilities. [8+8]

⋆ ⋆ ⋆ ⋆ ⋆