International Institute of Health Management Research
Term End Examination
Sub: HIT705 Managing Database

Max. Mark: 70   **Max Time: 03:00 Hrs**

Que 1: Attempt all Questions   **10*2 M**

1. What is the maximum length for a table or column name
   a) 50
   b) 40
   c) 30
   d) 10

2. The INSERT command falls into which category of the SQL command?.
   a) DDL
   b) DCL
   c) DML
   d) None of Above

3. DATE data type stores which of the following
   a) DATE
   b) TIME
   c) DATE + TIME

4. Which data type needs to be enclosed within single quotes?.
   a) CHAR
   b) VARCHAR2
   c) DATE
   d) All of the Above

5. SQL commands are
   a) Case sensitives
   b) Not case sensitive but data stored is case sensitive
   c) Case sensitive but data stored is not case sensitive
   d) All of the Above

6. select * from student where marks >50 and marks <90 is equivalent to
   a) where marks between 50 and 90
   b) where marks between 51 and 89
   c) where marks between 49 and 91
   d) None of Above

7. Select 2+3*4 from ABC will return
   a) 20
   b) 14
   c) 11
   d) None of above

8. A foreign key can refer to primary key of different table
   a) TRUE
   b) FALSE

9. Which command is used to add a column to an existing table?
   a) Create
   b) Update
   c) Alter
   d) None of these

10 delete command removes the records permanently
   a) TRUE
   b) FALSE

Que. 2: Solve Any Five   (5* 10) M

1. What is Database? What are the distinguishing features of a DBMS? Define the term (a) Table (b) Schema and Subschema (c) Attribute's (Primary and Foreign Key

2. Draw an Entity Relation diagram for the Hospital Management System. Consider the different types of Patients with respect to Disease and In Patient and Out-Patient Department in the design. Consider the availability of all well qualified Doctors. Consider various types of tests and operations to be conducted. Consider the patient consumes medicine and nurse provides medicine to patient.

3. Explain the concept of NULL values. Is it possible to compare the two NULL values? Draw and explain three level architecture of DBMS. Explain Different Data Model

4. For the following relation schema:
   employees(employeeId, employeeName, street, city)
   companies(companyId, companyName, city)
   works(employee, company, salary)
   manages(manager, employee)
   Write the SQL queries for following:
   a) Find the names, street, and cities of residence for all employees who work for 'First Bank Corporation' and earn more than $10,000.
   b) Find the names of all employees in the database who live in the same cities as the companies for which they work.
   c) Find the names of all employees in the database who live in the same cities and on the same streets as do their managers.
   d) Find the names of all employees in the database who earn more than every employee of 'Small Bank Corporation'.
   f) Assuming that the table employees had an email column with NULL values, write a query to update the email values.

5. For the following relation schema:
   Wards(wid, numBeds)
   Patients(pid, name, year, gender)
   PatientInWard(pid, wid)
   Tests(pid, testDate, testHour, temperature, heartRate)

   Write an SQL query that
   (a) finds the temperature and heart rate measured in each test carried out on patients born before 1950.
   b) Create a view FreeBeds(ward, numBeds) where ward is a ward number, and numBeds is the number of available beds in that ward
   (c) Find the name,gender, ward number of patient who are admitted
   (d) remove the patient whose name is " Ashok "
   (e) count the number of beds in a ward

6. For the following relation schema:
   Emp(eid, ename, age, salary)
   Works(eid, did, pct time)
   Dept(did, dname, budget, managerid)
   Write an SQL query that
   (a) Write the SQL statements required to create the above relations, including appropriate versions of all primary and foreign key integrity constraints.
   (b) Define the Dept relation in SQL so that every department is guaranteed to have a manager
   (c) Write an SQL statement to add 'John Doe' as an employee with eid = 101, age = 32 and salary = 15, 000.
   (d) Write an SQL statement to give every employee a 10% raise.
   (e) Write an SQL statement to delete the 'Toy' department. Given the referential integrity constraints you chose for this schema, explain what happens when this statement is executed.

7. Student(snum , sname, major, level, age)
   Class(name, meets at, room, fid)
   Enrolled(snum, cname)
   Faculty(fid, fname, deptid)
Write the following queries in SQL.
   (a) Find the names of all Juniors (Level = JR) who are enrolled in a class taught by I. Teach.
   (b) Find the age of the oldest student who is either a History major or is enrolled in a course taught by I. Teach.
   (c) Find the names of all classes that either meet in room R128 or have five or more students enrolled.
   (d) Find the names of faculty members who teach in every room in which some class is taught.
   (e) Find the names of faculty members for whom the combined enrollment of the courses that they teach is less than five