UNIVERSITY OF PETROLEUM & ENERGY STUDIES
DEHRADUN
End Semester Examination – May, 2017

Program/course: MBA(GM)	**Semester –** **II**
Subject: MIS	**Max. Marks** **: 100**
Code **: MBCG705**	**Duration** **: 3 Hrs**
No. of page/s: 5	

SECTION A

Q1) Select appropriate option from the following: **(20 x 2 = 40)**

1. In the relational modes, cardinality is termed as:
(A) Number of tuples. (B) Number of attributes.
(C) Number of tables. (D) Number of constraints.

2. The view of total database content is
(A) Conceptual view. (B) Internal view.
(C) External view. (D) Physical View.

3. DML is provided for
(A) Description of logical structure of database.
(B) Addition of new structures in the database system.
(C) Manipulation & processing of database.
(D) Definition of physical structure of database system.

4. Architecture of the database can be viewed as
(A) two levels. (B) four levels.
(C) three levels. (D) one level.

5. The database schema is written in
(A) HLL (B) DML
(C) DDL (D) DCL

6. In the architecture of a database system external level is the
(A) physical level. (B) logical level.
(C) conceptual level (D) view level.

7. In an E-R diagram attributes are represented by
(A) rectangle. (B) square.
(C) ellipse. (D) triangle.

8.In case of entity integrity, the primary key may be
(A) not Null (B) Null
(C) both Null & not Null. (D) any value.

9. Related fields in a database are grouped to form a
(A) data file. (B) data record.
(C) menu. (D) bank.

10. In an E-R diagram an entity set is represent by a
(A) rectangle. (B) ellipse.
(C) diamond box. (D) circle.

11. A relational database developer refers to a record as
(A) a criteria. (B) a relation.
(C) a tuple. (D) an attribute.

12. Count function in SQL returns the number of
(A) values. (B) distinct values.
(C) groups. (D) columns.

13. An advantage of the database management approach is
(A) data is dependent on programs.
(B) data redundancy increases.
(C) data is integrated and can be accessed by multiple programs.
(D) no

14. Key to represent relationship between tables is called
 (A) Primary key (B) Secondary Key
(C) Foreign Key (D) None of these

15. The conceptual model is
(A) dependent on hardware.
(B) dependent on software.
(C) dependent on both hardware and software .
(D) independent of both hardware and software.

16. What is a relationship called when it is maintained between two entities?
(A) Unary   (B) Binary
(C) Ternary (D) Quaternary

17. Which of the following is a legal expression in SQL?
(A) SELECT NULL FROM EMPLOYEE;
(B) SELECT NAME FROM EMPLOYEE;
(C) SELECT NAME FROM EMPLOYEE WHERE SALARY = NULL;
(D) None of the above

18. Which database level is closest to the users?

(A) External (B) Internal
(C) Physical (D) Conceptual

19. Which of the following is a comparison operator in SQL?
(A) =   (B) LIKE
(C) BETWEEN   (D) All of the above

20. NULL is
(A) the same as 0 for integer
(B) the same as blank for character
(C) the same as 0 for integer and blank for character
(D) not a value

Section – B

Attempt any 6 questions: **(6 x 5 = 30)**
   1) Differentiate between logical and physical schema.
   2) Write the different entities and their attributes in school database.
   3) Explain different types of cardinalities with examples.
   4) Differentiate between the following:
      a) Single value and multiple value attributes
      b) Simple attribute and composite attribute

   5) Differentiate between super, candidate and primary key.
         a. Describe the mapping process of given ER diagram:
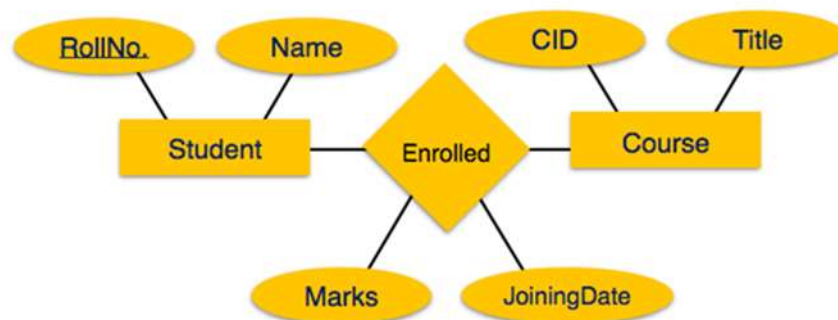
   6) Explain the different steps of SDLC.
   7) Describe the following ER diagram:
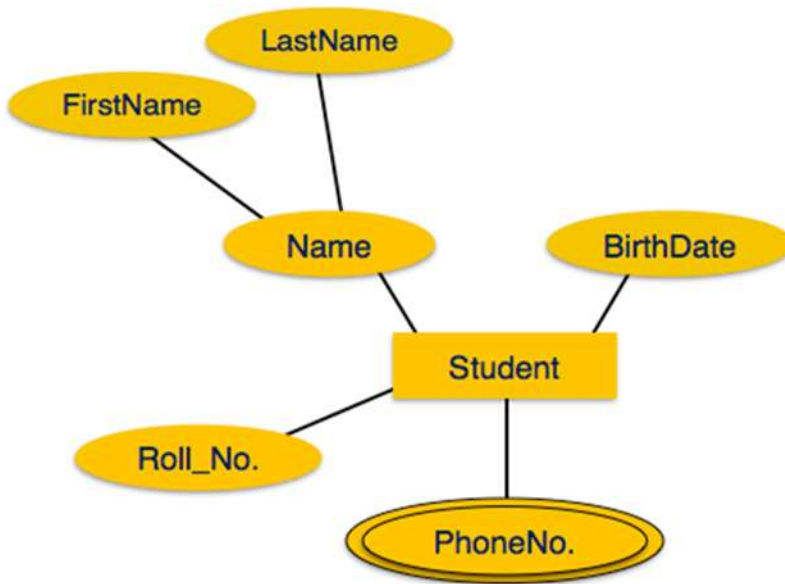
Section C

Attempt following questions: (10+10+10=30)

1. Solve following problem:

    Consider the CUSTOMERS table having the following records:

```
+----+----------+-----+-----------+----------+
| ID | NAME     | AGE | ADDRESS   | SALARY   |
+----+----------+-----+-----------+----------+
|  1 | Ramesh   |  32 | Ahmedabad |  2000.00 |
|  2 | Khilan   |  25 | Delhi     |  1500.00 |
|  3 | kaushik  |  23 | Kota      |  2000.00 |
|  4 | Chaitali |  25 | Mumbai    |  6500.00 |
|  5 | Hardik   |  27 | Bhopal    |  8500.00 |
|  6 | Komal    |  22 | MP        |  4500.00 |
|  7 | Muffy    |  24 | Indore    | 10000.00 |
+----+----------+-----+-----------+----------+
```

a) Write the SQL to display following output:
    i)   Fetch ID, Name and Address fields from the CUSTOMERS table where salary
            is greater than 3000 AND age is less than 35 years.
    ii)   Update ADDRESS to Pune for a customer whose ID is 4.
    iii)   DELETE a customer record, whose ID is 5.
    iv)   Sort the result in descending order by NAME.

v) Insert two records in a table.

b) Write output for following SQL:
   i) SELECT ID, NAME, AGE FROM CUSTOMERS;
   ii) UPDATE CUSTOMERS SET ADDRESS = 'Kota', SALARY = 5000.00;
   iii) DELETE FROM CUSTOMERS;
   iv) SELECT ID, SUM(SALARY) FROM CUSTOMERS GROUP BY NAME;
   v) SELECT DISTINCT ADDRESS FROM CUSTOMERS ORDER BY SALARY;

c) Construct an E-R diagram for a car-insurance company whose customers own one or more cars each. Each car has associated with it zero to any number of recorded accidents.