MH-P-1040   Seat No. _____

M. C. A. (Sem. I) (CBCS) Examination

January - 2018

P-1040 : Database Concepts and Tools

Time : $2\frac{1}{2}$ Hours]   [Total Marks : **70**

Instruction :   Write answers of all the questions in main answer sheet.

1   (a)   Attempt the following objective questions :   **4**
   (1)   What is Data?
   (2)   What is super key?
   (3)   What is tuple?
   (4)   What do you mean by Query processor?

   (b)   Attempt any **one** of the following :   **2**
   (1)   Explain advantages of database management system over filesystem.
   (2)   Explain logical and physical datamodel.

   (c)   Attempt any **one** of the following :   **3**
   (1)   What is attribute ? List out types of attributes.
   (2)   Explain types of entities.

   (d)   Attempt any **one** of the following :   **5**
   (1)   What is DBMS? Explain various components of DBMS.
   (2)   Explain entity integrity constraints and referential integrity constraints.

2   (a)   Attempt the following objective questions :   **4**
   (1)   _____ is defined as the set of all unique values permitted for an attribute.
   (2)   What is candidate key?
   (3)   What is attribute?
   (4)   What is relational structure?

(b) Attempt any **one** of the following : 2

(1) Explain 4NF in multi value dependency.

(2) Explain BCNF.

(c) Attempt any **one** of the following : 3

(1) What is database? Explain database design process.

(2) Explain concept of closure set of FD (Functional Dependency).

(d) Attempt any **one** of the following : 5

(1) What is Normalization? Explain 1NF, 2NF and 3NF.

(2) Explain anomalies in a database.

3 (a) Attempt the following objective questions : 4

(1) What is password file?

(2) Define data blocks.

(3) Full form of DDL.

(4) Inner join is also known as _____.

(b) Attempt any **one** of the following : 2

(1) Explain Control file.

(2) Explain PMON and SMON process.

(c) Attempt any **one** of the following : 3

(1) Explain following functions:

(i) LENGTH( )

(ii) FLOOR( )

(iii) TRUNC( )

(2) What is constraint? Explain foreign key constraint with example.

(d) Attempt any **one** of the following : 5

(1) What is join? Explain Types of join.

(2) Explain subquery with example.

4   (a)   Attempt the following objective questions :   **4**

         (1)   Exclusive locks are placed on a resources whenever _____ operations are performed.

         (2)   Which exception raised when a select statement returns zero rows?

         (3)   What is exception?

         (4)   What is lock?

   (b)   Attempt any **one** of the following :   **2**

         (1)   Explain datatypes for PL/SQL

         (2)   How to declare variable in PL/SQL block ?

   (c)   Attempt any **one** of the following :   **3**

         (1)   Explain parameterized cursor.

         (2)   Explain implicit locking.

   (d)   Attempt any **one** of the following :   **5**

         (1)   Explain concept of Explicit cursor.

         (2)   Discuss advantages of PL/SQL. Also explain Generic PL/SQL block.

5   (a)   Attempt the following objective questions :   **4**

         (1)   What is function?

         (2)   What is package?

         (3)   What is role?

         (4)   In procedure, _____ keyword indicates that the parameter will accept a value from the user.

   (b)   Attempt any **one** of the following :   **2**

         (1)   Write a note on GRANT command.

         (2)   What is trigger? List out types of trigger.

   (c)   Attempt any **one** of the following :   **3**

         (1)   Briefly explain concept of package.

         (2)   Explain stored procedure with example.

   (d)   Attempt any **one** of the following :   **5**

         (1)   Write a note on CREATE USER and DELETE USER statement.

         (2)   Write a note on create, grant and delete roles.