Roll No. 6.2[redacted].....

Total No. of Questions : **9**] [Total No. of Printed Pages : **8**

(2042)

BCA (CBCS) RUSA IInd Semester Examination

3747

DATABASE MANAGEMENT SYSTEM

Paper : BCA-0205

Time : 3 Hours] **[Maximum Marks : 70**

Note :– Attempt *five* questions in all. Part–A is compulsory. Attempt *one* question each from Parts–B, C, D and E.

Part–A

(Compulsory Question)

1. (A) Choose the correct answer :

(i) What is the full form of DBMS ?

(a) Data of Binary Management System

(b) Database Management System

(c) Database Management Service

(d) Data Backup Management System

(ii) Which of the following is not an example of DBMS ?

(a) MySQL

(b) Microsoft Access

(c) IBM DB2

(d) Google

(iii) The values appearing in given attributes of any tuple in the referencing relation must likewise occur in specified attributes of at least one tuple in the referenced relation, according to ..... integrity constraint.

(a) Referential

(b) Primary

(c) Referencing

(d) Specific

(iv) Why the following statement is erroneous ?

SELECT *dept_name, ID, avg (salary)*

FROM *instructor*

GROUP *BY dept_name*;

(a) Dept_id should not be used in group by clause

(b) Group by clause is not valid in this query

(c) Avg(salary) should not be selected

(d) None of these

(v) Which of the following key is required into handle the data when the encryption is applied to the data so that the unauthorised user cannot access the data ?

(a) Primary key

(b) Authorised key

(c) Encryption key

(d) Decryption key

(vi) A ..... in a table represents a relationship among a set of values.

(a) Column

(b) Key

(c) Row

(d) Entry

(vii) Department (dept_name, building, budget) and Employee (employee_id, name, dept_name, salary)

Here the dept_name attribute appears in both the relations. Here using common attributes in relation schema is one way of relating ..... relations.

(a) Attributes of common

(b) Tuple of common

(c) Tuple of distinct

(d) Attributes of distinct

(viii) Which of the following is a fundamental operation in relational algebra ?

(a) Set intersection

(b) Natural join

(c) Assignment

(d) None of these mentioned

(ix) In precedence of set operators, the expression is evaluated from :

(a) Left to left

(b) Left to right

(c) Right to left

(d) From user specification

(x) What is an Instance of a Database ?

(a) The logical design of the database system

(b) The entire set of attributes of the Database put together in a single relation

(c) The state of the database system at any given point of time

(d) The initial values inserted into the Database immediately after its creation

1×10=10

(B) Write short notes for the following :

(i) Records and Files

(ii) Direct Files

(iii) Third Normal Forms

(iv) Foreign Keys

(v) Advantages of DBMS 4×5=20

Part–B

(Unit–I) 10 each

Note :– Attempt any *one* question.

2. State *five* main advantages of using a DBMS.

3. Discuss the main categories of data models. What are the basic differences between relational model and object model ?

Part–C

(Unit–II) 10 each

Note :– Attempt any *one* question.

4. Define the following terms :

Disk, disk pack, track, block, cylinder, sector, interblock gap, read/write head.

5. What are the relational algebraic operations developed specifically for a relational database ?

Part–D

(Unit–III) 10 each

Note :– Attempt any *one* question.

6. Explain the First Normal form and Second Normal form in detail.

7. What is multivalued dependency ? What type of constraint does it specify ? When does it arise ?

Part–E

(Unit–IV)

10 each

Note :– Attempt any *one* question.

8. What are the various advantages of using MS-Access ?

9. Explain the following terms with respect to Tables :

   (a) Creation

   (b) Design Structure

   (c) Data Entry