

Roll No.

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Candidates must write the Code on the title page of the answer-book.

- Please check that this question paper contains **7** printed pages.
- Code number given on the right hand side of the question paper should be written on the title page of the answer-book by the candidate.
- Please check that this question paper contains **4** questions.
- **Please write down the Serial Number of the question before attempting it.**
- 15 minute time has been allotted to read this question paper. The question paper will be distributed at 10.15 a.m. From 10.15 a.m. to 10.30 a.m., the students will read the question paper only and will not write any answer on the answer-book during this period.

DATABASE MANAGEMENT APPLICATIONS

Time allowed : $2\frac{1}{2}$ hours

Maximum Marks : 50

SECTION A

1. Multiple Choice Questions (Choose the most appropriate option) : $1 \times 14 = 14$

- (i) In a relational model, relations are termed as
- Tuples
 - Attributes
 - Tables
 - Rows

- (ii) Count function in SQL returns the number of
 - (a) Values
 - (b) Distinct values
 - (c) Groups
 - (d) Columns

- (iii) The statement in SQL which allows to change the definition of a table is
 - (a) Alter
 - (b) Update
 - (c) Create
 - (d) Select

- (iv) While there are obvious e-business advantages and opportunities, there are also risks and barriers. These include
 - (a) Contravention of customer privacy
 - (b) Spikes causing websites to fail at peak times
 - (c) Internet hackers penetrating company security
 - (d) All of the above

- (v) The telephone banking service includes
 - 1. Automatic balance voice out
 - 2. Inquiry all term deposit account
 - 3. Direct cash withdraw
 - 4. Utility bill payments
 - 5. Voice out last five transactions
 - (a) 1, 2, 3 and 5 only
 - (b) 1, 2, 4 and 5 only
 - (c) 2, 3, 4 and 5 only
 - (d) All 1, 2, 3, 4 and 5

- (vi) Which of the following is the largest community in the classification of e-commerce ?
- (a) Business to Business (B to B)
 - (b) Business to Consumer (B to C)
 - (c) Business to Government (B to G)
 - (d) Government to Government (G to G)
- (vii) Java programs are
- (a) Faster than others
 - (b) Platform independent
 - (c) Not reusable
 - (d) Not scalable
- (viii) Java has its origin in
- (a) C programming language
 - (b) PEARL
 - (c) COBOL
 - (d) Oak programming language
- (ix) Which one of the following statements is true for Java ?
- (a) Java is object oriented and interpreted.
 - (b) Java is efficient and faster than C.
 - (c) Java is the choice of everyone.
 - (d) Java is not robust.
- (x) Break statement is used to
1. Get out of a method
 2. End a program
 3. Get out of a loop
 4. Get out of the system
- (a) 1 and 2 only
 - (b) 1, 2 and 3 only
 - (c) 1 and 3 only
 - (d) 3 only

- (xi) OOP features are
1. Increasing productivity
 2. Reusability
 3. Decreasing maintenance cost
 4. High vulnerability
- (a) 1, 2 and 4 only
(b) 1, 2 and 3 only
(c) 2, 3 and 4 only
(d) None of the above
- (xii) The relational model is based on the concept that data is organized and stored in two-dimensional tables called
- (a) Fields
(b) Records
(c) Relations
(d) Keys
- (xiii) Which of the syntax is correct for insert statement ?
1. insert into <table_name> values <list of values>
 2. insert into <table_name> (column list) values <list of values>
- (a) 1 only
(b) 2 only
(c) Both of them
(d) None of them
- (xiv) Which of the following is **not** a comparison operator ?
- (a) <>
(b) <
(c) =<
(d) >=

SECTION B

2. Very Short Answer Questions (Attempt any **seven** questions) : $2 \times 7 = 14$
- (i) What do you understand by Database Normalization ?
 - (ii) What is the difference between DELETE and TRUNCATE commands ?
 - (iii) What are the advantages of DBMS ?
 - (iv) What is meant by e-Governance ?
 - (v) 'Bachpan Toys' is a small company manufacturing toys. They have decided that it would be beneficial to the company to create a website which would allow customers to order toys on-line. State how 'Bachpan Toys' would benefit from the website.
 - (vi) Name any two e-reservation sites.
 - (vii) What do you mean by a constructor ?
 - (viii) Why is string class considered immutable ?
 - (ix) What are the desirable attributes of an employee to work ?

SECTION C

3. Short Answer Questions (Attempt any **four** questions) : $3 \times 4 = 12$
- (i) Consider the following table Teacher and answer the questions that follow :

Table : Teacher

TeacherId	Department	Periods
T101	SCIENCE	32
T102	NULL	30
T103	MATHEMATICS	34

What will be the output of the following queries on the basis of the above table ?

- (a) Select count(Department) from Teacher;
- (b) Select count(*) from Teacher;
- (c) Write query to display TeacherId;

(ii) Consider the following table Emp and answer the questions that follow :

Table : Emp

ID	NAME	AGE	ADDRESS	SALARY	PHONE
1	Siddharth	25	A-4, Ashok Vihar, Delhi	62000	98110766656
2	Chavi	23	B-21, Model Town, Mumbai	71000	99113423989
3	Karan	26	KC-24, North Avenue, Bhopal	65000	98105393578
4	Raunaq	22	A-152, Gomti Nagar, Lucknow	89000	99101393576
5	Kunal	27	B-5/45, Uday Park, Delhi	80000	97653455654

Write the commands in SQL :

- (a) To display the list of all employees below 25 years old.
 - (b) To list the names and respective salaries in descending order of salary.
 - (c) To count the number of employees with names starting with 'K'.
- (iii) What are the possible reactions of employees when they are asked to change or adapt to incorporate new technology in a system of working ?
- (iv) What things should be kept in mind while creating your own exceptions in Java ?

(v) Write the output of the following code :

```
public class TestArray {
public static void main(String[] args) {
double[] myList = {1.9, 2.9, 3.4, 3.5};
for (int i = 0; i < myList.length; i++)
{
System.out.println(myList[i] + " ");
}
for (int i = 0; i < myList.length; i++)
{
total += myList[i];
}
System.out.println("Total is " + total);
double total = 0;
double max = myList[0];
for (int i = 1; i < myList.length; i++)
{
if (myList[i] > max) max = myList[i];
}
System.out.println("Max is " + max);
}}
```

(vi) What is the benefit of Work Integrated Learning ?

SECTION D

4. Long Answer Questions (Attempt any *two* questions) : 5×2=10

- (i) What are the challenges in implementing e-Governance ?
- (ii) Write the applications of e-Commerce.
- (iii) What are the benefits of Work Integrated Learning to students ?
- (iv) What are the advantages of e-Governance ?