

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 **31** 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

- (i) This question paper contains **31** questions, out of which the candidate needs to attempt only **23** questions.
- (ii) Question paper is divided into two sections.

SECTION A

- Multiple choice questions / Fill in the blanks/Direct questions : contains total **12** questions of **1** mark each. Answer any **10** questions.
- Very short answer type questions : contains total **7** questions of **2** marks each. Answer any **5** questions.
- Short answer type questions : contains total **7** questions of **3** marks each. Answer any **5** questions.

SECTION B

Long answer / Essay type questions : contains total **5** questions of **5** marks each. Answer any **3** questions.

SECTION A

*Multiple Choice Questions (Choose the most appropriate option). Attempt any **ten** questions from the following :* *1×10=10*

1. The set of all possible values that an attribute may contain is called the _____ of an attribute. 1
 - (a) Domain
 - (b) Relation
 - (c) Set
 - (d) Schema

2. If $x = 20$, $y = 10$, what will be the value of x , if we write the statement $x += y$? 1
 - (a) 30
 - (b) 20
 - (c) 10
 - (d) 21

3. Identify the operator that performs pattern searching in MYSQL. 1
 - (a) EXISTS operator
 - (b) BETWEEN operator
 - (c) LIKE operator
 - (d) SEARCH operator

4. Which of the following is **not** a DDL statement ? 1
 - (a) CREATE
 - (b) SELECT
 - (c) ALTER
 - (d) DROP

5. The term used to describe the information, systems and applications that support and drive business processes, most often using web technologies, is called 1
 - (a) E-education
 - (b) E-governance
 - (c) E-commerce
 - (d) E-business

6. Which one of the following is **not** a search engine ? 1
- (a) Bing
 - (b) Yahoo
 - (c) Google
 - (d) Windows
7. Which of the following is an SQL aggregate function ? 1
- (a) Max
 - (b) Avg
 - (c) Sum
 - (d) Count
8. Which SQL statement is used to update data in a database ? 1
- (a) Save
 - (b) Update
 - (c) Saveas
 - (d) Modify
9. An expression involving byte, int and literal numbers is promoted to which of these ? 1
- (a) int
 - (b) long
 - (c) byte
 - (d) bloat
10. Which of these is an **incorrect** statement ? 1
- (a) It is necessary to use new operator to initialize an array.
 - (b) Array can be initialized using comma separated expressions surrounded by curly braces.
 - (c) Array can be initialized when it is declared.
 - (d) None of the above
11. What is the output of relational operators ? 1
- (a) Integer
 - (b) Boolean
 - (c) Characters
 - (d) Double
12. An example of broadcasting model of E-governance is _____. 1
- (a) Online cheque transfer
 - (b) Online judgements
 - (c) Online cash transfer
 - (d) None of the above

13. Write any two characteristics of Database Management Systems. 2

14. Consider the following code. What will be the output of following program and why? 2

```
public class SwitchDemo {
    public static void main (String[] args)
    {
        int day = 6;
        String dayname = “ ”;
        switch (day)
        {
            case 1 : dayname = “Monday”;
                break;
            case 2 : dayname = “Tuesday”;
                break;
            case 3 : dayname = “Wednesday”;
                break;
            case 4 : dayname = “Thursday”;
                break;
            case 5 : dayname = “Friday”;
                break;
            case 6 : dayname = “Saturday”;
                break;
            case 7 : dayname = “Sunday”;
                break;
            default : dayname = “Invalid day”;
        }
        System.out.println(dayname);
    }
}
```

15. What is Datatype ? Name the datatype used for storing fractional value in any variable in JAVA ? 2
16. Ms Prabha has mistakenly entered “Mridul” instead of “Mridula” in ‘name’ field of table ‘student’. Help her to write the correct SQL command to make the desired changes in the table. 2
17. What is the purpose of Work Integrated Learning ? 2
18. Is Java a case sensitive language ? Justify your answer. 2
19. Online learning though gaining popularity among the young generation cannot replace Classroom teaching completely. Justify this statement by giving any two disadvantages of Online learning. 2

Short Answer Questions (Attempt any five questions) 3×5=15

20. Underline and Correct the errors in the following MYSQL queries : 3
- (a) Select * from student where Marks=NULL;
 - (b) Select Name, Marks Order by Marks desc from student;
 - (c) Alter table student delete marks;

21. (a) Find the output of the following code : 3

```
public class WhileDemo
{
    public static void main (String [ ] args)
    {
        int number = 1;
        while(number <= 5) {
            System.out.print(“Square of ” + number);
            System.out.println(“=” + number*number);
            ++number;
        }
    }
}
```

- (b) What is use of ++ operator in the above code ?

22. (a) Define Arrays. Sagar has declared an array whose last element is having an index/position as 10. What would be the size of this array and why ? 3
- (b) Identify the property of an array which is used to find its size.
23. State any three precautions that should be kept in mind while doing online transactions. 3
24. What is Open Source Software ? Give example of any one open source frontend programming tool and backend database tool. 3
25. Sumiti wants to book her tickets online but she is not technology savvy. State any two advantages of e-reservation to convince her for the same and name any one popular website from where she can book her train ticket. 3
26. Enlist three ways in which database management applications can be used in Government Sector. 3

SECTION B

*Long Answer Questions (Attempt any **three** questions)* *5×3=15*

27. Explain how the use of ICT tools in classrooms helps in promoting education. 5
28. Define the following terms related to JAVA : 5
- (a) JVM
 - (b) Classes
 - (c) Objects
 - (d) Constructors
 - (e) Access Modifiers

29. What are String Class Methods in Java ? Consider the statement
String name = "Welcome Akshita Singhal".

5

Write a single line Java code using String methods to perform the following :

- (a) Convert the name to Uppercase.
- (b) Replace "Welcome" by "Hello" in the given string.
- (c) Check whether the name contains "Sin" in it or not
- (d) Add a new string "You have won the jackpot" at the end of original string.

30. Define the term 'Online Reservation Systems'. Write the procedure to do online reservations.

5

31. Consider the following table SHOP and answer the following queries in SQL.

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Table : SHOP

ID	INAME	PRICE	QUANTITY
I01	Pencil	5	20
I02	Pen	10	15
I03	Sharpener	12	24
I04	Ink	20	12
I05	Scale	10	30

- (a) To display all items of the given table.
- (b) To display Iname and Price in descending orders of quantity.
- (c) To count total number of items whose price is 10.
- (d) To add a new value in SHOP table.
- (e) To display Item name and Quantity whose price is more than 10.