Roll No. ☐☐☐☐☐☐☐

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

- Please check that this question paper contains **8** 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 **7** questions.
- **Please write down the Serial Number of the question before attempting it.**
- 15 minutes 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.

INFORMATICS PRACTICES

Time allowed : 3 hours   *Maximum Marks : 70*

Instructions :

(i)   *All questions are compulsory.*

(ii)   *Answer the questions after carefully reading the text.*

1. (a)   Write the name of the most suitable wireless communication channels for each of the following situations.   1

    (i)   Communication between two offices in two different countries.

    (ii)   To transfer the data from one mobile phone to another.

    (b)   What is UNICODE ? Name one Indian language, which is supported by UNICODE.   1

    (c)   Expand the following terms :   1

    (i)   FLOSS

    (ii)   HTTP

    (d)   Mr. Chandervardhan is not able to identify the Domain Name in the given URL. Identify and write it for him.   1

    http://www.cbse nic.in/aboutus.htm

(e) What do you understand by Network Security ? Name two common threats to it.   *2*

(f) Write one advantage of Star Topology over Bus Topology and one advantage of Bus Topology over Star Topology.   *2*

(g) What is MAC address ? What is the difference between MAC address and an IP address ?   *2*

2. (a) Which property of palette ListBox is used to enter the list of items while working in NetBeans ?   *1*

(b) What is the difference between the use of JTextField and JPasswordField in a form ?   *1*

(c) "The variable/expression in the **switch** statement should either evaluate to an integer value or String value." State True or False.   *1*

(d) Name two attributes of **FONT** tag of HTML.   *1*

(e) How many times will the following loops execute ? Which one of them is Entry Control and which one is Exit Control ?   *2*

Loop 1	Loop 2
`int i=10, sum=0;`	`int i=10, sum=0;`
`while(i>1)`	`do`
`{`	`{`
`    sum+=i;`	`    sum+=i;`
`    i-=3;`	`    i-=3;`
`}`	`} while(i>1);`

(f) What will be displayed in jTextField1 and jTextField2 after the execution of the following loop ?   *2*

```
int Sum=0,Last=10;
for (int C=1;C<=Last;C+=2)
    Sum++;
    jTextField1.setText(Integer.toString(Sum));
    jTextField2.setText(Integer.toString(C));
```

(g) Differentiate between the <TR> and <TD> tags of HTML with the help of an appropriate example.   *2*

3. (a) Write a SQL command to view the constraints of EMP table.   *1*

(b) Mr. Krishnaswami is working on a database and has doubt about the concept of SAVEPOINT in a transaction. Write down the meaning of SAVEPOINT and provide a simple example considering yourself as an online web support executive.   *1*

(c) What is the difference between CURDATE() and DATE() functions ?   *1*

(d) Table STUDENT has 4 rows and 2 columns. Table MARKS has 2 rows and 3 columns. What will be the cardinality and degree of the Cartesian product of STUDENT and MARKS ?   *1*

(e) There is a column Salary in a Table EMPLOYEE. The following two statements are giving different outputs. What may be the possible reason ? *2*

```
SELECT COUNT(*) FROM EMPLOYEE;
SELECT COUNT(Salary) FROM EMPLOYEE;
```

(f) Mr. Kapoor is a programmer at Ekansh Enterprises. He created 5 digit password and stored in a string variable called strPassword. He wants to store the same password in an Integer type variable called intPassword. Write an appropriate Java statement to transfer the content from strPassword to intPassword. *2*

(g) Mrs. Kumar is using table STUDENTS with the following columns : *2*

RNO, ADMNO, NAME, AGGREGATE

She wants to display all information of students in descending order of name and within ascending order of aggregate. She wrote the following SQL query and she did not get the desired output :

```
SELECT * FROM STUDENTS
ORDER BY NAME, AGGREGATE DESC;
```

Rewrite the above query to get the desired output.

4. (a) What will be the content of jTextArea1 and jTextField1 after the execution of the following statements ? *2*

```
(i)   jTextArea1.setText("Just\tAnother\nDay");

(ii)  string Subject="Informatics Practices";
      jTextField1.setText((Subject.length()+10)+"");
```

Rewrite the following programme code using a if statement : *2*
```
 ring Remarks;
    ode=Integer.parseInt(jTextField1.getText());
      (Code)

         Remarks="100% Tax Exemption";
         break;
         Remarks="50% Tax Exemption";
         break;
         Remarks="30% Tax Exemption";
          reak;
             rks="!Invalid Entry";
```

(c) Observe the following code carefully and find which statement will never get executed in the code ? 1

```java
int t=1;                                         //Statement 1
do                                               //Statement 2
{                                                //Statement 3
    if  (t>13)                                   //Statement 4
        jTextField1.setText("Something");        //Statement 5
    else                                         //Statement 6
        jTextField1.setText("Pass");             //Statement 7
    t+=3;                                         //Statement 8
}                                                //Statement 9
while (t<=15);                                    //Statement 10
```
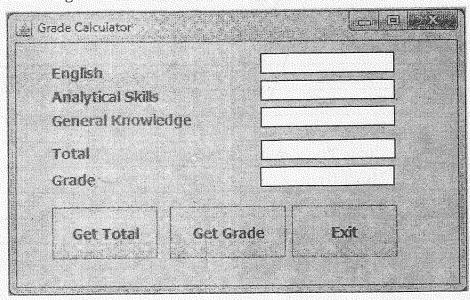
(d) Write a java statement to make the **jTextField1** non-editable. 1

(e) What will be displayed in jTextField1 and jTextField2 after the execution of the following code ?

```java
int Last,First=3,Second=5;
Last = First + Second++;
jTextField1.setText(Integer.toString(Last));
jTextField2.setText(Integer.toString(Second)
```

(f) What will be the contents of Str1 and Str2 after code is executed ?

```java
String Str2,Str1;
Str1= "Dear Friend";
Str2= "Hello";
Str1=Str2.concat(Str1);
```

4

(g) Aditya is a programmer at Edudel enterprises. He created the following GUI in NetBeans.

Help him to write code in java for the following :

(i)   To calculate Total marks obtained and display in jTextField4 on the click of command button "Get Total".   2

(ii) To calculate Grade obtained and display in jTextField5 on the click of command button "Get Grade". Criteria for Grade calculation is given below :   2

Marks	Grade
Above 80	A
Above 65 and <=55	B
Above 50 and <=65	C
<=50	D

(iii) To stop execution and exit from the application on the click of command button "Exit".   1

 (a) What is the use of COMMIT statement in SQL ? How is it different from ROLLBACK statement ?   2

 (b) Mr. James created a table CLIENT with 2 rows and 4 columns. He added 2 more rows to it and deleted one column. What is the Cardinality and Degree of the Table CLIENT ?   1

(c) Consider the following table **FITNESS** with details about fitness products being sold in the store. Write command of SQL for (i) to (iv) and output for (v) to (vii). 7

Table : **FITNESS**

PCODE	PNAME	PRICE	MANUFACTURER
P1	Treadmill	21000	Coscore
P2	Bike	20000	Aone
P3	Cross Trainer	14000	Reliable
P4	Multi Gym	34000	Coscore
P5	Massage Chair	5500	Regrosene
P6	Belly Vibrator Belt	6500	Ambaway

(i) To display the names of all the products with price more than 20000.

(ii) To display the names of all products by the manufacturer "Aone".

(iii) To change the price data of all the products by applying 25% discount reduction.

(iv) To add a new row for product with the details: "P7", "Vibro Exerciser", 28000, "Aone".

(v) SELECT * FROM FITNESS
WHERE MANUFACTURER NAME LIKE "%e";

(vi) SELECT COUNT(DISTINCT(MANUFACTURER)) FROM FITNESS;

(vii) SELECT MAX(PRICE) FROM FITNESS;

6. (a) Write SQL command to create the table VEHICLE with given constraint. 2

Table : **VEHICLE**

COLUMN_NAME	DATATYPE(SIZE)	CONSTRAINT
RegNo	CHAR (10)	Primary Key
Regdate	DATE	
Owner	VARCHAR (30)	
Address	VARCHAR (40)	

(b) In a Database BANK, there are two tables with a sample data given below :

Table : **EMPLOYEE**

ENO	ENAME	SALARY	ZONE	AGE	GRADE	DEPT
1	Mona	70000	East	40	A	10
2	Muktar	71000	West	45	B	20
3	Nalini	60000	East	26	A	10
4	Sanaj	65000	South	36	A	20
5	Surya	58000	North	30	B	30

Table : **DEPARTMENT**

DEPT	DNAME	HOD
10	Computers	1
20	Economics	2
30	English	5

Note :

- ENAME refers to Employee Name
- DNAME refers to Department Name
- DEPT refers to Department Code
- HOD refers to Employee number (ENO) of the Head of the Department

Write SQL queries for the following :

(i) To display ENO, ENAME, SALARY and corresponding DNAME of all the employees whose age is between 25 and 35 (both values inclusive). 2

(ii) To display DNAME and corresponding ENAME from the tables DEPARTMENT and EMPLOYEE. Hint : HOD of the DEPARTMENT table should be matched with ENO of the EMPLOYEE table for getting the desired result. 2

(iii) To display ENAME, SALARY, ZONE and INCOME TAX (Note : Income Tax to be calculated as 30% of salary) of all the employees with appropriate column headings. 2

(c) In a database STUDENT, there is a Table RESULT with the following contents :

Table : **RESULT**

REGNO	NAME	MARKS	SECTION	CLASSTEACHER	ADMNO
10004	Mohit	90	A	Ms Nathani	Z101
10211	Mukta	85	B	Mr. Gokhle	Z109
10923	Mohit	92	B	Mr. Gokhle	Z120
10313	Sana	80	A	Ms Nathani	Z234

    (i) Identify the attributes, which can be chosen as Candidate Keys in the table RESULT.   *1*

    (ii) Write SQL Query to change the Marks of Mukta to 95 in the table RESULT.   *1*

7. (a) How has popularity of e-Business benefited a common man ? Write domain name of one popular e-Business site as an example.   *2*

(b) Give domain names of two most commonly used e-Commerce site.   *1*

(c) Shobhit is creating a form for his company. Help her to choose most appropriate controls from ListBox, ComboBox, TextField, TextArea, RadioButton, CheckBox, Label and Command Button for the following entries :   *2*

SNo	Function
1	To enter NATIONALITY from all the nationalities given as options
2	To enter AGE between a range 20 to 25
3	To allow to select one or more FAVORITE SPORTS out of the given 6 options
4	To enter SUGGESTION in the form of a paragraph