

SET-4

Roll No.

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- Please check that this question paper contains **11** 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 in the answer-book 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.

Maximum Marks : 70

- (i) **All** questions are compulsory, however questions no. 2, 4 and 6 have internal choices.
- (ii) Answer the questions after carefully reading the text.
- (iii) Q2 and Q4 are to be answered using Java Programming Language and Q3, Q5, Q6 are to be answered using MySQL.

1. (a) Write two advantages of networking computers over having stand-alone computers. 2
- (b) Write the purpose of using Repeater in a computer network. 2
- (c) Suchitra works for a company. She often says 2
 “I can’t access social networking website because my company does not let me use it.”
 How does her company examine content entering or leaving their network ? Explain in brief the hardware/software used by the company.
- (d) “Open Source Software is not the same as free of cost software.” Is this statement true ? Give reason(s). 2
- (e) Explain in brief any two threats to data travelling over a computer network. 2

2. (a) What value will be stored in m ? 1

$$m = 6 + 19 \% 3 - 6/2$$
- (b) Identify invalid variable names. State reason(s) if invalid. 1
 - (i) Product_1
 - (ii) 1Sales
 - (iii) Sales January
 - (iv) Amount11
- (c) Name the loop of Java that always executes at least one time. 1
- (d) The following code has error(s). Rewrite the correct code underlining corrections done. 1

```

int x;
int i=1;
do while (i<5)
{
    x = i+4;
    i+1= i;
}

```

OR



Write the output of the following code that will be displayed in jTextField1 and jTextField2 :

1

```
int sum=1,i;
for(i=1;i<=3;i++)
{
    sum = sum *i;
}
jTextField1.setText(""+sum);
jTextField2.setText(""+i);
```

- (e) Distinguish between Java and Netbeans. 2
- (f) Distinguish between HTML and XML. Write two points. 2

OR

Identify Root element and Child elements in the following code :

2

```
<bookstore>
  <book category="COOKING">
    <author>Sabreena</author>
    <year>2005</year>
  </book>
  <book category="CHILDREN">
    <author>J K. Rowling</author>
    <year>2005</year>
  </book>
</bookstore>
```



- (g) Write the following code using 'switch' instead of 'if else if' :

2

```
if (marks==10)
{
    grade = 'A';
}
else if (score==9)
{
    grade = 'B';
}
else if (score==8)
{
    grade = 'C';
}
else
    grade = 'F';
```

3. (a) Ms. Saloni wants to assign the value 700 as value in Fee Column for all the students in table named "STUDENT". She has entered the following SQL statement :

2

```
UPDATE STUDENT;

ASSIGN Fee= 700;
```

Rewrite the correct statement if there is any error.

- (b) Chaya wanted to add a column "Hobbies" in an already created table "Person". She wrote the following SQL statement :

2

```
ALTER TABLE Person ADD Hobbies columnsize 50;
```

Rewrite the correct statement if there is any error.

- (c) Given below is a Table named 'Company' :

CODE	FIRSTNAME	GENDER
101	Advaita	F
102	Feroze	M
103	Samay	M
104	Sasha	F

Write output of SQL statement given below :

2

SELECT FIRSTNAME, CODE

FROM Company

WHERE GENDER = 'F' and FIRSTNAME LIKE 'S%';

- (d) Name any two Single Row functions and any two Group (Aggregate) functions used in MySQL.

2

- (e) The 'Book' table has the following columns and presently has no Rows.

2

BCODE	BNAME	POINTS
-------	-------	--------

The following SQL statements are entered.

SET AUTOCOMMIT = 0;

INSERT INTO Book VALUES('B101', 'Spirituality', 7);

INSERT INTO Book VALUES('B102', 'Meditation', 6);

SAVEPOINT abc;

UPDATE Book SET POINTS =POINTS+2 WHERE BName = 'Spirituality';

UPDATE Book SET POINTS =POINTS+3 WHERE BName = 'Meditation';

SELECT sum(POINTS) FROM Book;

ROLLBACK To SAVEPOINT abc;

SELECT sum(POINTS) FROM Book;

What will be the output of the above given SELECT statements ?



4. (a) Write the value of p after execution of the following code :

1

Suppose p = 7 initially

```
q=2;
```

```
if (p>q)
```

```
    p=p+2;
```

```
    p=p+1;
```

OR

Mention one advantage of JTextArea over JTextField control.

1

- (b) What values will be displayed in jTextField1 and jTextField2 ?

2

```
int i = 3;
```

```
int j = 7;
```

```
while (i < j)
```

```
{
```

```
    i = i * 2;
```

```
    j--;
```

```
}
```

```
jTextField1.setText(""+i);
```

```
jTextField2.setText(""+j);
```



- (c) What will be the value of p after the following code is executed ? 2

```
int p = 5, q = 1;
do
{
    p = p+q;
    q = q+5;
}
while {p <20};
```

OR

Write the difference between while and 'do..while' loops of Java. 2

- (d) The following code has error(s). Rewrite the correct code underlining all the corrections made : 2

```
switch marks
{
    case 5:    grade == 'A' ;
    case 4:    grade == 'B' ;
               break;
    otherwise : grade=='N' ;
               break;
}
```

OR

What is the purpose of 'break' statement in switch statement used in a Java program ? 2

- (e) How many times will the following loop execute ? 2

```
int sum = 0;
for (int i= 1; i<=7;i=i+3)
{
    sum = sum+i;
}
```

- (f) Ms. Suchitra works as a programmer in a School. She has designed a software to compute amount to be paid by students when they buy food items in the School Canteen. A screenshot of the same is shown below :

Good Health Canteen

☐ Masala Oats
☐ Vegetable Pasta
☐ Raagi Chips

Amount

Calculate Grand Total

Clear

Exit

Grand Total Amount

- (i) Help Ms. Suchitra in writing the code to do the following :

- When a checkbox for a food item is clicked, Amount for that food item should be displayed in front of that food item. The Amount for each food item is as follows :

Food Item	Amount
Masala Oats	20.00
Vegetable Pasta	25.00
Raagi Chips	15.00

- After selecting appropriate checkbox(es), when 'Calculate Grand Total' button is clicked, 'Grand Total Amount' should be calculated and displayed in the respective text field. This will be the sum of amounts depending on food items selected.

For example if Masala Oats and Raagi Chips are selected, 20.00 and 15.00 will be displayed in front of selected food items and Grand Total Amount will be 35.00.

(ii) When 'CLEAR' button is clicked, all the textfields and checkboxes should be cleared. 1

(iii) When 'Exit' button is clicked, the application should close. 1

5. Consider the following Table "Shop" shown below. Write SQL statements for (i) to (viii) and output for (ix) and (x).

Table : Shop

Id	Item	Category	CP	SP	DtManuf
101	Oats Biscuits	A	25.00	35.00	2018-10-19
102	Ragi Chips	B	50.00	65.00	2018-11-14
103	Oats	A	90.00	100.00	2019-03-30
104	Honey Biscuits		50.00	80.00	2018-10-23
105	Pumpkin Seeds	C	75.00	85.00	2018-12-25

Columns CP and SP denote Cost Price and Selling Price respectively.

Column DtManuf stores Dates of Manufacturing.

(i) To display Id, Item, CP in descending order of CP. 1

(ii) To display the Names of all the items with category as 'A'. 1

(iii) To list names of Items and their date of manufacturing of those items that were manufactured after 1st October 2018. 1

(iv) To count and display the category and number of Items of each Category. 1

(v) To display the Category of Items. (Duplicate Categories should not be displayed) 1

(vi) To display the maximum and minimum Selling Price. 1

(vii) To display Item names that have 'Biscuit' anywhere in names. 1

(viii) To display Id, Item name of those items that have Category as NULL. 1

(ix) **SELECT MAX(DtManuf) , MIN(DtManuf) FROM Shop;** 1

(x) **SELECT AVG(CP) FROM Shop**
WHERE Category = 'A' or Category = 'B'; 1

6. (a) Write the SQL query to create a table **'Vehicle'** with the following structure :

2

Field	Type	Constraint
VehicleId	Varchar (5)	Primary key
Model	Varchar (50)	Not Null
DateManufacture	Date	
Price	Decimal (9,2)	

OR

What is the purpose of "NOT NULL" constraint applied on Column of a table ? Explain with the help of example.

2

- (b) Consider the following tables **Stationery** and **Supplier** and answer the questions that follow :

Table : Stationery

ItemNo	IName	SCode	Qty	UnitPrice	DtPurchase
101	Gum Tube	702	100	15	30-Mar-2019
102	Double Stick Tape	702	150	20	01-Jan-2019
103	Pencil	701	125	5	14-Feb-2019
104	Colour Pencils	701	200	10	01-Jan-2019
105	Crayons Box	702	210	50	19-Dec-2018
106	Eraser	702	60	10	12-Dec-2018
107	Sharpener	705	160	10	23-Jan-2019

Note : DtPurchase column holds Date of Purchase

SCode column holds Supplier Code

Table : Supplier

SCode	Sname
701	Gupta Stationers
702	Study Stationers
705	Avon & Company

- (i) Can we set SCode as the Primary key of Stationery table ?
State reason. 1

OR

Identify the Primary key of Stationery table. Write reason for your choice. 1

- (ii) What should be the data type of 'DtPurchase' column ? 1
- (c) With reference to the above given tables (in Q6 b), write SQL statements for (i), (ii) and (iii) given below :
- (i) To display ItemNo, Name of Item, Supplier Code and Supplier Name of all items in ascending order of Date of Purchase. 2
- (ii) To display Name of Item, Date of Purchase, Supplier Code and Supplier Name of all items that were purchased between '01-Dec-2018' and '31-Jan-2019' (Both dates inclusive) 2
- (iii) To add ₹ 10.00 to UnitPrice of all items that have unit price less than 10.00 in Stationery table. 2

OR

Write SQL statement to delete rows with SCode greater than 701 in Supplier table. 2

7. (a) How does e-governance reduce corruption ? Write one point. 2
- (b) Write two advantages of Online shopping over traditional shopping. 1
- (c) Mr. Gagan is creating a form for his Company. Help him choose most appropriate controls from ListBox, ComboBox, TextField, TextArea, RadioButton, CheckBox, Label and Command Button for the following entries : 2

S.No.	Function
1	To enter CUSTOMER CODE
2	To enter CUSTOMER NAME
3	To allow user to enter a brief description about the Customer
4	To choose Type of Items bought by customer (out of Snacks, Groceries, Healthcare, Beauty Products)
	Note : More than one Type may be chosen.