

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 **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) Why is a switch called an intelligent hub ? 1
- (b) What was the objective behind developing UNICODE ? 1
- (c) Expand the following terms : 1
- (i) OSS
- (ii) ODF
- (d) What is the use of Repeater in a Network ? 1

- (e) Identify the following device : 2
- (i) A device that is used to connect different types of networks. It performs the necessary translation so that the connected networks can communicate properly.
- (ii) A device that converts data from digital bit stream into an analog signal and vice versa.
- (f) Write one advantage and one disadvantage of using Optical fibre cable. 2
- (g) Distinguish between Open Source Software and Proprietary Software. 2
2. (a) Is a string containing a single character same as a char ? 1
- (b) Write a statement in Java to declare a String type variable with a name City. 1
- (c) Distinguish between '/' and '%' operators. 1
- (d) Which tag/attributes of HTML are used to 1
- (i) Insert a picture in the web page.
- (ii) Insert an empty line in the web page.
- (e) What will be the values of variables `agg` and `agg1` after the execution of the following loops ? 2

<u>Loop 1</u>	<u>Loop 2</u>
<pre>int a=9,agg=9; while (a>10) { agg+=a; a-=2; }</pre>	<pre>int b=9,agg1=0; do { agg1+=b; b-=2; } while (b>10);</pre>

- (f) What will be displayed in `jTextArea1` after the execution of the following loop ? 2
- ```
for (int I=5;I>=2;I--)
 jTextArea1.setText(jTextArea1.getText()+
 " "+Integer.toString(I*I));
```
- (g) Give two attributes of Table element of HTML. 2
3. (a) Distinguish between ALTER TABLE and UPDATE commands of MySQL. 1
- (b) Mention two categories in which MySQL commands are broadly classified. 1
- (c) Give two characteristics of Primary Key. 1
- (d) A table FUNFOOD has 13 rows and 17 columns. What is the cardinality and degree of this table ? 1
- (e) A numeric column MONEY contains 34567.7896. Write a command to truncate MONEY 2
- (i) Up to 2 decimal places. (i.e. expected result 34567.78)
- (ii) Up to -3 places. (i.e. expected result 34000)
- (f) What happens when “ROLLBACK” command is issued in a transaction process ? 2
- (g) Shanya Khanna is using a table Employee. It has the following columns. 2
- Admno, Name, Agg, Stream
- [column Agg contains Aggregate marks]
- She wants to display highest Agg obtained in each Stream.
- She wrote the following statement :
- ```
SELECT Stream, MAX(Agg) FROM Employee;
```
- But she did not get the desired result. Rewrite the above query with necessary changes to help her get the desired output.

4. (a) Define Object Oriented Programming. 2
- (b) Rewrite the following Java code using a Switch Case statement : 2
- ```
int option=Integer.parseInt(jTextField1.getText());
if (option==1)
 jTextField2.setText("Regular employee");
else if (option==2)
 jTextField2.setText("On Probation");
else if (option==3)
 jTextField2.setText("Visiting faculty");
else if (option==4)
 jTextField2.setText("On Contract");
else
 jTextField2.setText("Invalid option!");
```
- (c) What will be the value X1 after the execution of the following code : 1
- ```
String X1="Spread",X2="PEACE";
X1=X2.concat(X1);
```
- (d) Write Java statement to make a **jTextField1** disabled. 1
- (e) What will be displayed in **jTextArea1** after the execution of the following code : 2
- ```
int G=1;
do
{
 jTextArea1.setText(Integer.toString(G++));
 G=G+1;
}while(G<=5);
```
- (f) Give the output of the following Java code : 2
- ```
String name="Chennai Express";
int TM=name.length(),TN;
TN=80-TM;
jTextField2.setText(Integer.toString(TM));
jTextField3.setText(Integer.toString(TN));
```

- (g) Mr. Rangaswami works at a Recreation Park as a system analyst. He has created the following GUI.

When a group arrives at the Recreation Park, the number of people in the group and whether the group wants to enjoy the Water Park or not is entered. Entry fees is ₹ 500 per person. The person can choose to play at Water Park by selecting the checkbox. Rides of Water Park will cost ₹ 250 extra per person.

The screenshot shows a Java Swing window titled "Happy Fun and Food Park". The window has a yellow border and standard Windows-style title bar buttons (minimize, maximize, close). The main content area contains the following elements:

- Title:** "Happy Fun and Food Park" (centered)
- Labels and Fields:**
 - "No. of People" with a text input field.
 - "Entry Fees" with a text input field.
 - "Water Park Charges" with a text input field.
 - "Total Amount" with a text input field.
- Checkbox:** A checkbox labeled "Water Park" is located to the right of the "Entry Fees" field.
- Buttons:** Three buttons are located at the bottom: "Calculate", "Clear", and "Exit".

Help him to write code for the following :

- (i) On the click of command button 'Calculate', textfield for 'Entry Fees' should display Entry Fees per person \times Number of people. 3

If 'Water Park' checkbox is selected, textfield for 'Water Park Charges' should display Water Park Charges per person \times Number of people. Textfield for 'Total Amount' should display sum of Entry Fees and Water Park Charges for all the people in the group.

- (ii) Write Java code to clear all Textboxes on the click of 'Clear' button. 1

- (iii) Write Java code to close the application on the click of 'Exit' button. 1

5. (a) What is the difference between “%” and “_” wild card characters with reference to LIKE clause of MySQL ? 2
- (b) Name a function of MySQL used to give the first occurrence of a string2 in string1. 1
- (c) Consider the following table named “EXAM” with details of marks. Write command of MySQL for (i) to (iv) and output for (v) to (vii). 7

Table : EXAM

Adno	SName	Percentage	Clsection	Stream
R001	Sushant	90.2	12A	Science
R002	Vaidyanath	80.5	12B	Humanities
R003	Miara	68.9	12B	Science
R004	Niara	96.0	12A	Commerce
R005	Shinjini	88.9	12D	Commerce

- (i) To display all information of the students of humanities in descending order of percentage.
- (ii) To display Adno, Name, Percentage and Stream of those students whose name is less than 6 characters long.
- (iii) To add another column Bus_Fees with datatype and size as Decimal (8,2).
- (iv) To increase percentage by 2% of all the Humanities students.
- (v) `SELECT COUNT (*) FROM Exam;`
- (vi) `SELECT SName, Percentage FROM EXAM
WHERE Name LIKE "N%";`
- (vii) `SELECT ROUND(Percentage,0) FROM EXAM
WHERE Adno="R005";`

6. (a) Write MySQL command to create the table 'Toyz' with the following structure and constraint.

2

Table : TOYZ

Column_Name	DataType(size)	Constraint
Toy_no	Int(10)	Primary Key
Toy_name	Varchar(20)	
Type	Char(10)	
Price	Decimal(8,2)	
Colour	Varchar(15)	

- (b) In a Database – SAMS and VENDOR are two tables with the following information. Write MySQL queries for (i) to (iii), based on tables SAMS and VENDOR :

Table : SAMS

ICode	IName	Price	Colour	VCode
S001	Refrigerator	20000	Blue	P01
S002	Mobile Phone	45000	Black	P02
S003	LCD	60000	Silver	P03
S004	Washing Machine	12500	Smoke	P01
S005	Air Conditioner	16000	White	P03

Table : VENDOR

VCode	VName
P01	Satish
P02	Manoj
P03	Subodh
P04	Jacob

- (i) To display ICode, IName and VName of all the vendors, who manufacture “Refrigerator.” 2
- (ii) To display IName, ICode, VName and Price of all the products whose price is more than 20000. 2
- (iii) To display vendor names and names of all items manufactured by vendor whose code is “P03”. 2
- (c) With reference to SAMS table, which column should be set as the Primary key ? Which column is the foreign key ? Give reasons. 2
7. (a) Define e-Business. Name one popularly used e-Business website. 1
- (b) How does e-governance help in reducing corruption ? Write two points. 2
- (c) Suruchi works for a Shopping Mart. She wants to create controls on a form for the following operations : 2
- Choose most appropriate controls out of Text box, Label, Radio Button, List box, Combo box, Check box and Command button.

S.No.	Function
1.	Enter the Item Code
2.	Select Item Size (from a list of sizes)
3.	Enter Quantity
4.	Submit the Form