

CLASS XII

SAMPLE PAPER

INFORMATICS PRACTICES

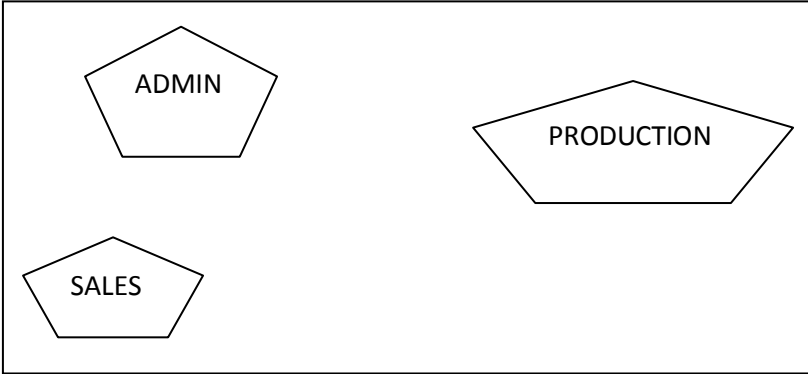
2019 – 2020

Time allowed : 3 Hours

Max. Marks : 70

General Instructions:

All questions are compulsory, however question number 2, 4 and 6 have internal choices.

1.	(a) Give one suitable example of each URL and Domain Name.	1
	(b) Name one open source software along with its application/use.	1
	(c) SRINJAY MAHADANI of PURULIA is an internet user. His password is accessed by someone in an unauthorized way. Is there any crime performed? If yes then name the crime. VITTHAL AGARWAL who is a friend of him, has suggested to implement one system so that this type of unauthorized access can be prevented. Name the system suggested by him.	2
	(d) YASITA AGARWAL and EKTA SAO have jointly started business of readymade garments. They have total three buildings containing computers, and all the three buildings are supposed to be connected to make a network of computers. The placement of buildings are shown below:	4
	 <p>The diagram shows three buildings represented by pentagons within a rectangular frame. The buildings are labeled 'ADMIN' (top left), 'SALES' (bottom left), and 'PRODUCTION' (right side).</p>	

	<p>The average distance between the buildings is approximately 70 meters. The distance between the sales and production buildings is maximum and is about 100 meters. Based on the case given above answer the questions given below:</p> <p>(i) Name the type of network, which will be formed in this case.</p> <p>(ii) Which topology and device should be used in this network so that only selected computers or all computers can communicate with each other, whatever is required?</p> <p>(iii) Communication between the sales and production buildings should be smooth. For that what action should be taken?</p> <p>(iv) Which communication media should be chosen to form the said network so that high data transfer rate can be maintained?</p>			
	<p>(e) The concept of Open Source Software is very familiar these days. KIRAN SINGHANIA is clearing her doubts about it. Help her by answering the following questions related to the above mentioned software category:</p> <p>(i) Name any one special feature of Open Source Software.</p> <p>(ii) Mention one RDBMS which is Open Source.</p> <p>(iii) Write the full form of FLOSS.</p> <p>(iv) Mention the name of Open Standard for audio compression.</p>	2		
2.	<p>(a) Why a class is known as composite or user-defined data type?</p>	2		
	OR			
	<p>(a) State one similarity and one dissimilarity between while loop and for loop.</p>			
	<p>(b) HARSH JALAN and SOUMYADIPTA BANERJEE has been told to print all the odd numbers from 25 to 50. For this they have separately written the following two codes, out of which one code is wrong. Identify the wrong code and also explain why it is wrong.</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>Code 1</p> <pre>for(int k=25; k<=50; k++) { k++; System.out.println(k); }</pre> </td> <td style="width: 50%; vertical-align: top;"> <p>Code 2</p> <pre>for(int k=25; k<=50; k++) { System.out.println(k); k++; }</pre> </td> </tr> </table>	<p>Code 1</p> <pre>for(int k=25; k<=50; k++) { k++; System.out.println(k); }</pre>	<p>Code 2</p> <pre>for(int k=25; k<=50; k++) { System.out.println(k); k++; }</pre>	2
<p>Code 1</p> <pre>for(int k=25; k<=50; k++) { k++; System.out.println(k); }</pre>	<p>Code 2</p> <pre>for(int k=25; k<=50; k++) { System.out.println(k); k++; }</pre>			
	OR			
	<p>(b) VANSITA JAIN and ADITI CHOURASIA has been given a task to rewrite the following code using while loop without changing the output.</p>			

```
for(int k=25;k<=50;k++)
```

```
{
```

```
    System.out.println(k);
```

```
}
```

They have written following two versions of the answer:

Version 1

```
int k=25;
```

```
while(k<=50)
```

```
{
```

```
    k++;
```

```
    System.out.println(k);
```

```
}
```

Version 2

```
int k=25;
```

```
while(k<=50)
```

```
{
```

```
    System.out.println(k);
```

```
    k++;
```

```
}
```

Which version is incorrect and why?

(c) (i) Write down any two features of XML.

(ii) Name two attributes of Font tag of HTML.

(iii) Write HTML code to create a Text Area control with 8 rows and 24 columns.

3

OR

(c) (i) How is the purpose of XML different from HTML?

(ii) Write one point of difference between HTML and XML tags.

(iii) Is there any error(s) in the following HTML code? If yes, then rewrite the correct code.

```
<UL type = "A" start = "E">
```

(d) What will be displayed when the following code is executed?

```
a = 5;
```

```
b = 2;
```

```
while (b != 0)
```

```
{
```

```
    r = a%b;
```

```
    a = b;
```

```
    b = r;
```

```
}
```

```
System.out.println(" " + a);
```

2

OR

(d) How many times will the above loop execute?

(e) After the execution of the following code, **YASH AGARWAL** and **ADITYA SARAWGI** have

found different values for variables c and d. Write the correct values of the variables c & d.

1

```
int a = 1;
int b = 2 ;
int c;
int d;
c = ++b;
d = a++;
c++;
```

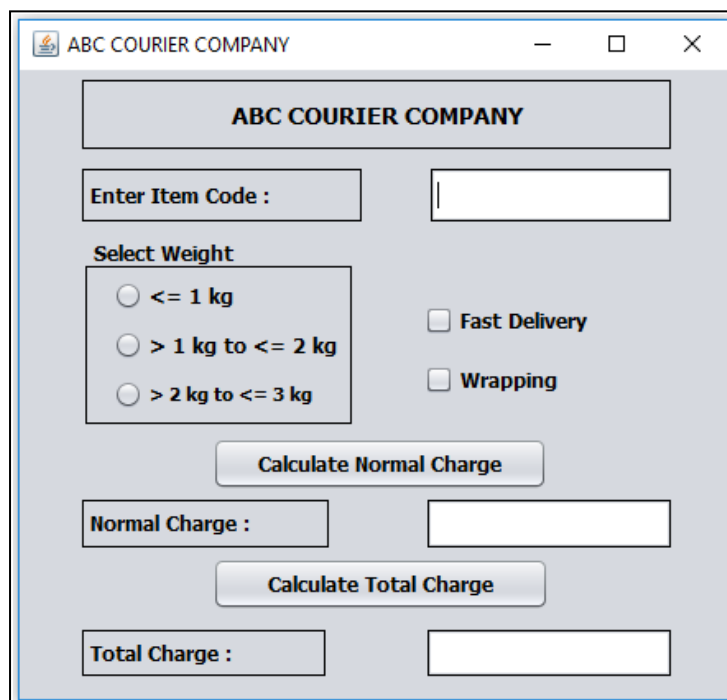
3.	(a) Write the similarity between CHAR and VARCHAR data types.	1															
	(b) Where from a foreign key derives its values?	1															
	(c) Write down SQL statement for creating table LIBRARY having following attributes: i. BOOK_ID – an integer, primary key of the table ii. BOOK_TITLE –a string iii. AUTHOR—a string iv. QTY – an integer v. PRICE – a fractional number	2															
	(d) SIDDHARTHA RAJGARIA wants to write the difference between Having and Where clauses. Help him by writing the answer.	1															
	(e) YASH CHURIWALA has created a table named Cricketer as given below: <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>CID</th> <th>CNAME</th> <th>CSALARY</th> </tr> </thead> <tbody> <tr> <td>101</td> <td>JATEEN KUMAR DUDHERIA</td> <td>56700</td> </tr> <tr> <td>102</td> <td>AYUSH AGARWAL</td> <td>61300</td> </tr> <tr> <td>103</td> <td>SHREYANSH AGARWAL</td> <td>59100</td> </tr> <tr> <td>104</td> <td>BISHNU PRASAD GUPTA</td> <td>57590</td> </tr> </tbody> </table> <p>What will be the output of the following MySQL queries? (i) SELECT Cname FROM Cricketer WHERE Csalary<58000; (ii) SELECT 'Cname' FROM Cricketer WHERE Csalary<58000;</p>	CID	CNAME	CSALARY	101	JATEEN KUMAR DUDHERIA	56700	102	AYUSH AGARWAL	61300	103	SHREYANSH AGARWAL	59100	104	BISHNU PRASAD GUPTA	57590	2
CID	CNAME	CSALARY															
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	(f) Name one Single Row Function and one Group Function.	1															
	(g) Below is the School table: <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>ID</th> <th>NAME</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>PRATHAM PODDAR</td> </tr> <tr> <td>2</td> <td>SHAKSHI CHANDAK</td> </tr> </tbody> </table>	ID	NAME	1	PRATHAM PODDAR	2	SHAKSHI CHANDAK	2									
ID	NAME																
1	PRATHAM PODDAR																
2	SHAKSHI CHANDAK																

	<p>The following statements are entered in MySQL:</p> <pre> SET AUTOCOMMIT = 0; INSERT INTO School VALUES(4, 'MUSKAN KHAITAN'); COMMIT; UPDATE School SET Name = 'PRIYAL AGARWAL' WHERE Id = 4; SAVEPOINT A; INSERT INTO School VALUES(7, 'SUBH SINGHANIA'); SAVEPOINT B; INSERT INTO School VALUES(8, 'SHRADDHA BHAGAT'); SAVEPOINT C; ROLLBACK TO B; Now what will be the output of the following MySQL statement? SELECT * FROM School; </pre>					
4.	<p>(a) Mention two different styles of expressing a comment in a Java program.</p>	1				
OR						
<p>(a) Detect error(s) if any in the below given statement and rewrite it correctly: If(2x + 5 = 10 && x>0)</p>						
<p>(b) Find the output of the following statements:</p>						
<pre> String s1="I LOVE"; String s2 = "JAVA FOR SCHOOL"; (i) System.out.println(s1.substring(0).concat(s2.substring(0,4))); (ii) System.out.println(s2.substring(2,10)); </pre>						
OR						
<p>(b) OJASWINI SOMANI has stored some value in an integer type variable named var. Now she wants to print the value of the variable var. Which of the following expressions can be used by her for that purpose?</p> <pre> (i) jTextField1.setText("var = " + var); (ii) jTextField1.setText ("var = " + "var"); (iii) jTextField1.setText ("var = " + Integer.toString(var)); (iv) jTextField1.setText (var = + "var"); </pre>						
<p>(c) Identify the following as valid or invalid identifier names. State the reasons.</p>						
<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">(i) <code>_123</code></td> <td style="width: 50%;">(ii) <code>break</code></td> </tr> <tr> <td>(iii) <code>T\$</code></td> <td>(iv) <code>var.1</code></td> </tr> </table>			(i) <code>_123</code>	(ii) <code>break</code>	(iii) <code>T\$</code>	(iv) <code>var.1</code>
(i) <code>_123</code>	(ii) <code>break</code>					
(iii) <code>T\$</code>	(iv) <code>var.1</code>					
OR						
<p>(c) Name the Java keyword that:</p>						

<p>(i) is used to finish the execution of a method. (ii) is used to implement the concept of inheritance.</p>	
<p>(d) Rewrite the given code by using for loop without changing the output.</p> <pre>int T1 = 0, N1 = - 2; do { T1 = T1 + N1; N1++; } while (N1 < 1);</pre>	2
OR	
<p>(d) PRACHI CHANDAK wants to rewrite the given code by using switch statement. Help her by doing so.</p> <pre>int House_code = Integer.parseInt(codeTF.getText()); if(House_code == 'B') houseTF.setText("JANNAT ANSARI is in BUNTAIN HOUSE"); else if(House_code == 'K') houseTF.setText("VIDHI MOHTA is in KETCHAM HOUSE"); else if(House_code == 'O') houseTF.setText("AISWARYA DAS is in OLSON HOUSE"); else if(House_code == 'S') houseTF.setText("SOUMILI CHANDRA is in SIMPSON HOUSE"); else houseTF.setText("Wrong Code Entered.");</pre>	
<p>(e) The following code has error(s). Rewrite the correct code underlining all the corrections made:</p> <pre>int n = 5, int i = 1, f = 1; do; { f = f * i; i++; while(i <= n) jTextField1.Textset(" " + f);</pre>	2
<p>(f) ABC Courier Company owned by VANSHITA MALL and SHREYA SARAWGI provides courier facilities across the country. The normal delivery charges are according to the weight of the item as given below:</p>	6

<u>Weight</u>	<u>Charge in Rs.</u>
<= 1 kg	250
> 1 kg to <= 2 kg	450
> 2 kg to <= 3 kg	600

The company also provides fast delivery and wrapping facility of the item and for that it charges extra Rs. 150 and Rs. 50 respectively. The GUI developed is as follows:



Write answer for the following questions:

- What arrangement should be done so that out of three radio buttons only one can be selected?
- Write code to calculate and display the normal charge according to the weight chosen, when 'Calculate Normal Charge' button is clicked.
- Write code to calculate and display the total charge (normal charge + fast delivery charge (if any) + wrapping charge (if any)), when 'Calculate Total Charge' button is clicked.
- To close the application, when the 'Exit' button is clicked.

5. (a) Consider the table Games, created by **MAHIMA LOHARIWAL** of **BALARAMPUR**. Write MySQL commands for (i) to (iv) and output for (v) to (vi) based on the given table.

6

GID	GNAME	PLAYER	GDATE	PRIZE
G01	Cricket	RUPESH AGARWAL	2019-12-10	5000
G03	Basketball	SOUMILI BOSE	2020-01-21	2000
G05	Table Tennis	ANSH JAISWAL	2019-06-30	4500
G06	Kabaddi	MOUPRIYA CHAKRABORTY	2020-07-19	3500
G08	Football	RISHIKANT KHEDIA	2019-04-02	4000
G09	Badminton	ELIZA CHATTERJEE	2020-01-15	2500

- To display the name of the players and their respective games who have "is" anywhere in their name.
- To show the game's name, player's name and game date for those players whose name and game have equal number of characters.
- To list the name of the players and game date whose game date contains greater value of month number than the day number.
- To increase the prize money by 500 for the games Basketball and Football.
- SELECT Gname, Prize, Player FROM Games WHERE Gid IN ('G07', 'G03', 'G08') OR Gdate>='2020-01-15';
- SELECT Gdate, Prize FROM Games WHERE YEAR(Gdate)>Prize;

(b) Based on the above table Games, answer the following questions:

- Identify the Primary key in the table. Justify your answer.
- How to show the structure and details of the constraints of the given table?
- What result will be produced, when following commands are executed?
 - SELECT 31+5;
 - SELECT 31+5 FROM Games;
- What will be the data type of the columns GID and GDATE?

6. (a) ANISH RATHI has created the following IP_Marks table. Observe the table carefully and write the answers of the questions that follows:

STU_ID	NAME	MARKS_SCORED
S001	ARNAB MAHANTY	96
S002	SOUMALI DAS	NULL
S005	AANCHAL SHRIVASTAVA	91
S008	ABHIK GOSWAMI	99
S009	PRIYANSU BISSA	95

- What is the difference between Degree and Cardinality of a table? What is the Degree and Cardinality of the above table?

(ii) Write the output of the following command based on the above table:
 SELECT TRUNCATE(Marks_Scored, 1), ROUND(Marks_Scored, 1) FROM IP_Marks;

(b) While learning MySQL, **KIRTIKA AGARWAL** of **AGCS, PURULIA** has created the tables HOUSE and STUDENT as given below. Write queries or outputs for the given questions based on the mentioned tables:

Table : HOUSE

HCODE	HNAME	HCAPTAIN
H01	BUNTAIN	PRIYA MAHATO
H02	KETCHAM	MANJUSHA MAHATO
H03	OLSON	MUSKAN SARAWGI
H04	SIMPSON	PRAKRITI TIBREWAL

Table : STUDENT

ROLL	NAME	ACTIVITY	ACTIVITY_DATE	HCODE
11	TARANG LATH	Debate	2019-10-13	H01
12	RAJKUMAR LILHA	Quiz	2019-05-26	H03
14	SNEHANJALI MAHATO	Fancy Dress	2019-11-17	H02
16	ANKITA CHAKRABORTY	Extempore	2018-09-30	H02
27	AYUSH SARKAR	Essay Writing	2019-10-19	H04
34	ANKUSH CHURIWALA	Drama	2018-02-23	H03
35	SHILPA SARAWGI	Group Discussion	2019-08-09	H02

(i) To display the name and their respective house of the students who have taken part in any activity in the year 2018.

2

OR

(i) To show Name, House code and Roll of those students who have taken part in any activity in the month of October.

(ii) To list the type of activity, date of activity and name of the corresponding house captains.

2

OR

(ii) To show Roll, Hname, Activity of those students who have 're' in their activity name.

(iii) Find the output of the given query:

SELECT Roll, Hname FROM House, Student WHERE House.Hcode=Student.Hcode AND Acitivity_Date BETWEEN '2018-01-01' AND '2018-12-31';

2

OR																	
(iii) Write the output of the following: SELECT Activity, Hcaptain FROM House, Student WHERE House.Hcode=Student.Hcode AND Hname IN ('BUNTAIN', 'OLSON');																	
(c) Based on the tables HOUSE and STUDENT given above, answer the following questions: (i) Identify the Primary key and Foreign key column along with their table name. (ii) Can you delete the second row from the table House?		2															
OR																	
(c) Based on the tables HOUSE and STUDENT given above, answer the following questions: (i) How many rows and columns will be there in the Equi-Join of both the tables? (ii) Can you add a row in the table Student with the following data? Justify. INSERT INTO Student VALUES(41, 'MEHUL JAIN', 'Drawing', '2018-04-26', 'H07');																	
7. (a) How people can save their time and money by using e-Business?		2															
(b) Write one advantage and one URL of e-Learning.		1															
(c) VISHESH KATARUKA and his friend PRATIK JALAN jointly have a medicine shop and for that they have planned to computerize their stock. They are trying to create the GUI for that. Help them to choose most appropriate controls from ListBox, ComboBox, TextField, TextArea, RadioButton, CheckBox, Label and Command Button for the following functions:		2															
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">SL NO</th> <th style="width: 60%;">FUNCTION</th> <th style="width: 30%;">CONTROL</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>To select a medicine name from a list of medicines</td> <td></td> </tr> <tr> <td style="text-align: center;">2</td> <td>To enter medicine code</td> <td></td> </tr> <tr> <td style="text-align: center;">3</td> <td>To select the names of retailers from available retailers</td> <td></td> </tr> <tr> <td style="text-align: center;">4</td> <td>To show the complete description of the selected medicine</td> <td></td> </tr> </tbody> </table>			SL NO	FUNCTION	CONTROL	1	To select a medicine name from a list of medicines		2	To enter medicine code		3	To select the names of retailers from available retailers		4	To show the complete description of the selected medicine	
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Sample paper submitted by :

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