CLASS XII
GUESS PAPER
INFORMATICS PRACTICES

Time Allowed : 3 hours   Maximum Marks : 70

General Instructions :
(i) All questions are compulsory.
(ii) Answer the questions after carefully reading the text.

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1. (a) **Sakchi Sah** of **Assembly of God Church School, Purulia** is confused about the given   (1)
two addresses:

(i) http://www.abc.com/index.htm

(ii) 182.68.9.165

Identify which one of the above is an **IP address** and which one is a **URL** to help her.

(b) **Expand** the following **terms**:   (1)

(i) ODF   (ii) GPRS

(c) How is a **Trojan Horse** harmful to a **network**?   (1)

(d) What do the following **top level domains** signify?   (1)

(i) .edu   (ii) .org

(e) What is the **difference** between **Video Conferencing** and **Chat**?   (1)

(f) **Saloni Saraogi** suggested her friend **Muskan Agarwal** to learn two **characteristics** of   (1)
Wi-Fi as an important question for the upcoming **Board Examination**. Help her by
writing two characteristics of **Wi-Fi**.

(g) Name one **open standard** for each of the following: (2)

(i) image   (ii) audio compression

(h) **Kousik Thakkar** of **AGPN School, Purulia** is learning about the **category** of software. In   (2)
this process he is not sure that what is **common** in all of the following software(s):
MySQL, Java NetBeans, OpenOffice.org, GNU/LINUX
Write the **commonality** between the software(s) and also write one **feature** of the above
category of software.

2. (a) Write **code** in Java to **lock** a text field named **dateTF** so that no **entry** can be done in it   (1)
during the **run time**.

(b) Write the **value** of variable **z** after execution of following Java **code**:   (1)

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int j;

int z;

j = 4;

z = (4 * ++j) % 3;

(c) Write a **for loop** to print all the **odd numbers** falling between 100 & 50 in **reverse order**. (1)

(d) What will be the **result** of the following **Java statements**, if the variable **marks** contains **85** initially? (1)

    (i) System.out.println(marks = 97);

    (ii) System.out.println(marks == 97);

(e) When is if-else if statement preferred over switch statement? (1)

(f) Name the **import** required for **Database Connectivity**. (1)

(g) Write the corrected **HTML** statements after identifying the **error(s)** in the following **HTML** statements: (2)

    (i) <BODY BACKGROUND= "RED">   (ii) <FONT TYPE= "ARIAL">

(h) **Differentiate** between the tags of **HTML** and **XML**. (2)

3. (a) **Harsh Vardhan Sultania** wants to know the **difference** between the **CHAR** data type and **VARCHAR** data type of MySQL. Help him by doing so. (1)

(b) Write two **examples** of DML **commands** of SQL. (1)

(c) **Karishma Agarwal** is working in MySQL and she has created a table **EXAM** with the following columns: (2)

Roll, Name, Total, Average, Grade

She wants to **show** all the information from the **EXAM** table in **descending order** of name. For this she has **written** the following SQL **command**:

SELECT * FROM Exam WHERE ORDER BY Name DESC;

But she is not getting the **desired** output. **Rewrite** the command to get the **desired** output.

(d) Write down the **difference** between the **wildcard** characters **%** and **_** used along with the **LIKE** keyword of MySQL for **pattern matching**. (2)

(e) **Vasumita Mall** of **B. B. Das Road, Ward No-14, Purulia** wants to **delete** a column named Code from an existing table PURULIA and for that she has written the following **command** in MySQL: (2)

DELETE Code FROM Purulia;

But she is not getting the **correct** result. Identify the **problem** and write the **alternate** and appropriate command so that **Vasumita** can achieve her **goal**.

(f) **Piyush Banka** of **Balarampur** is learning MySQL and in this process he has created the following AGCS table: (2)

Table : AGCS

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Roll	Name	Stream	English	Maths	IP
22	Koninika Mitra	Com	92	88	98
25	Debopriyo Dey	Sc	89	87	95
36	Anuj Mohta	Com	90	96	100
18	Nisha Shukla	Com	85	93	96
29	Debangshu Dasgupta	Sc	94	85	95
21	Purnima Besra	Com	91	92	99

Observe the table **AGCS** given above and write the **output** of the following SQL **queries**:

(i) SELECT ROUND(AVG(English)), TRUNCATE(AVG(IP)) FROM Agcs WHERE Stream='Com';

(ii) SELECT SUBSTR(Name, INSTR(Name, 'm')) FROM Agcs WHERE IP>98;

4. (a) Define **Polymorphism** with reference to the **Object Oriented Programming**. How (2) **Polymorphism** is implemented in **Java**?

(b) The following Java **code** has some **error(s)**. Rewrite the correct code **underlining** all (2) the **corrections** made:

pin int;

pin = 723101;

do;

pin = pin + 1;

System.out.printline(Pin);

} while pin <= 723105;

(c) Rewrite the following program **code** using **if else if** statement without changing (2) the **output**:

String notice;

int AQI = Integer.parseInt(jTextField1.getText( ));

switch(AQI)   // AQI is Air Quality Index

{

      case 100 : notice = "Pollution is under control.";

      break;

      case 250 : notice = "Pollution is over danger mark.";

      break;

      case 400 : notice = "Pollution is alarming.";

      break;

      default : notice = "Keep Earth Pollution Free.";

}

(d) While **solving** a sample paper of Informatics Practices, **Ananya Chourasia** and   (1)
Ishika Sarawogi have written different **outputs** for the given Java **code segment**:

int m, n = 40;

m = 75 % 5;

n = n + m;

System.out.println(m);

System.out.println(n);

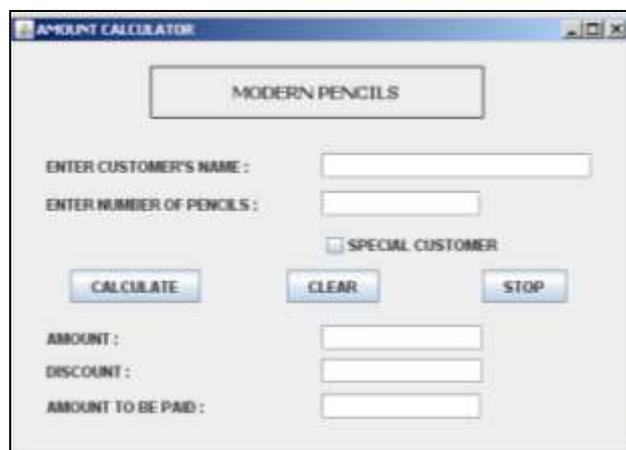Write the correct **output** of the **code segment** given above.

(e) How many **times** will the following **loop** get executed and what will be the **final value**   (2)
of the variable **P** when the execution of the loop is **over**?

int P = 3;

do

{

       P += 5;

       System.out.println("P = " + P);

       P = P – 1;

} while(P <= 7);

(f) Write the value of **TOTAL** after execution of the following while **loop**:   (1)

int COUNT = 1, TOTAL = 0;

while(COUNT < 10)

{

       TOTAL = TOTAL + COUNT;

       COUNT = COUNT + 2;

}

(g) **Nishu Agarwal** and **Sujata Chandak** live in the **Purulia** district of **West Bengal** and they
jointly run a company named '**Modern Pencils**'. The company makes quality pencils for
the students and others. The company sells each pencil at the cost of Rs. 5.00. They have
hired a programmer to develop a **GUI application** for their company and the programmer
has developed that as shown below:

- The number of pencils bought is entered by the user.
- The amount to be calculated is number of pencils * 5.00
- If a person who is buying pencils is a 'Special Customer' then a discount of 5% is given on the amount, otherwise no discount is given.
- Amount to be paid = Amount – Discount
  Write **code** in Java to do the followings:
  (i) When Calculate button is clicked the Amount, Discount and Amount to be Paid are (2) calculated and should be displayed in appropriate text fields.
  (ii) When Clear button is clicked, all the Textfields and Checkbox are cleared. (2)
  (iii) When Stop button is clicked, the application is closed. (1)

5. (a) **Ishita Dutta** studies in class XII in **'The Assembly of God Church School, Purulia'**. She (2) is learning **Informatics Practices** for the upcoming **Board Examination**. She has got the given question in a book. She has answered it also. But she is not sure about the correctness of her answer. For her, write the correct answer for the question given below based on the table **EDUCATION**:

Table : EDUCATION

SRoll	SName
1	Divyam Rathi
2	Niraj Lohia

With respect to the above table, following MySQL **statements** are executed:

SET AUTOCOMMIT = 0;

INSERT INTO Education VALUES(5, 'Abhishek Kejriwal');

COMMIT;

UPDATE Education SET SName = 'Anish Mohta' WHERE SRoll = 5;

SAVEPOINT A;

INSERT INTO Education VALUES(6, 'Smriti Agarwal');

SAVEPOINT B;

INSERT INTO Education VALUES(7, 'Tanushree Mitra');

SAVEPOINT C;

ROLLBACK TO B;

Now what will be the **output** of the following **statement**:

SELECT * FROM Education ;

(b) Write the **output** of the following SQL **queries**: (2)

    (i) SELECT UCASE(LEFT('purulia', 4);

    (ii) SELECT INSTR('united nations', 'nat');

    (iii) SELECT DAYOFMONTH('2014-03-01');

    (iv) SELECT ROUND(CONCAT(38.682, 2);

(c) Consider the following **Proprietor** table and write SQL **queries** for (i) to (iv) and find **outputs** for SQL queries (v) to (viii) :

Table : Proprietor

PNO	NAME	COMPANY	DOS	GENDER	CCODE
1001	Ishika Agarwal	2013-09-02	1991-09-01	MALE	C01
1002	Prakhar Mohta	2012-12-11	1990-12-15	FEMALE	C03
1003	Sourav Kuiry	2013-02-03	1987-09-04	MALE	C05
1007	Hrishikesh Mukherjee	2014-01-17	1984-10-19	MALE	C02
1004	Harsh Jaiswal	2012-12-09	1986-11-14	FEMALE	C01
1005	Divyansh Rathi	2013-11-18	1987-03-31	MALE	C05
1006	Abhishek Gupta	2014-06-09	1985-06-23	FEMALE	C06

Note : DOS refers to date of starting of the company.

(i) To show Pno, Name & Gender from the table Proprietor in descending order of Pno. (1)

(ii) To display the Name, Company, Dos, Gender of all the Proprietors from the table (1) Proprietor whose name is less than 14 characters long.

(iii) To display the Pno and Name of those Proprietors from the table Proprietor who (1) started their company between '1987-01-01' and '1991-12-01'.

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(iv) To count and display male Proprietors who have launched their company after '1986-01-01'. (1)

(v) SELECT COUNT(*), Ccode FROM Proprietor GROUP BY Ccode HAVING COUNT(*)>1; (½)

(vi) SELECT DISTINCT Company FROM Proprietor; (½)

(vii) SELECT Name, Company, Ccode FROM Proprietor WHERE Name LIKE '%p%'; (½)

(viii) SELECT MAX(Dos), MIN(Dos) FROM Proprietor; (½)

6. (a) **Ronak Sarawagi** has created the following **Purchase** table:

Table : Purchase

Column Name	Constraint
PurchaseId	Primary Key
PurchaseDate	Not Null
PurchaseAmount	
ShopId	

One of the rows inserted is as follows:

PurchaseId	PurchaseDate	PurchaseAmount	ShopId
O101	2015-02-12	34000	S104

Based on the above table answer the following questions:

(i) What is the **data type** of columns PurchaseId and PurchaseDate in the above table? (1)

(ii) **Ronak** is now trying to **insert** a row with the following **data**: (1)

PurchaseId	PurchaseDate	PurchaseAmount	ShopId
O102	NULL	59000	S105

Will he be able to **successfully** insert it? Give **reason**.

(b) Consider the following tables **ACTIVITY** and **COACH** and write the answers for the questions that follow:

Table : ACTIVITY

ACode	ActivityName	ParticipantsNum	PrizeMoney	ScheduleDate
1001	Relay 100x4	16	10000	2018-01-23
1002	High Jump	10	12000	2018-02-12
1003	Shot Put	12	8000	2018-02-14
1005	Long Jump	12	9000	2018-03-01
1008	Discuss Throw	10	15000	2018-03-19

Table : COACH

PCode	CoachName	ACode
1	Md. Talha Rahmani	1001
2	Sailesh Mall	1008

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3	Radhika Saraf	1001
4	Kunal Chakraborty	1003

(i) Write SQL **command** to display the name of all activities and coach names with their Acodes in descending order. (2)

(ii) Write SQL **query** to show the activity name, prize money and player's code from the tables activity and coach for those records where the number of participants are more than 11. (2)

(iii) Write the **output** of the following SQL **command**: (2)

SELECT ActivityName, PrizeMoney, PCode FROM Activity, Coach WHERE
Activity.ACode=Coach.ACode AND CoachName LIKE '%n%';

(c) Observe the following **Stationary** table carefully and write the **names** of the most appropriate **columns**, which can be considered as: (2)

appropriate **columns**, which can be considered as:

(i) candidate keys and   (ii) primary key.

Id	Product	Qty	Price	Transaction_Date
101	Plastic Folder 12	100	3400	2014-12-14
104	Pen Stand Standard	200	4500	2015-01-31
105	Stapler Medium	205	1200	2015-02-28
109	Punching Machine Big	200	1400	2015-03-12
103	Stapler Mini	100	1500	2015-02-02

7. (a) **Prerna Jain** is a social worker and she works for the common people through a NGO. She tries to bring awareness towards the **e-Governance** among them. Write the name of two e-Governance **websites** which can be suggested by her to the common people so that they can easily access few **governmental services**. (1)

(b) **Priya Agarwal** runs a large Textile Business in a traditional manner. How is **e-business** beneficial to her? Write **two points**. (2)

(c) **Akansha Sarawagi** works for a hospital. She wishes to create controls on a form for the following functions. **Suggest** controls to her. Choose appropriate controls from Text box, Label, Radio button, Check box, List box, Combo box, Command button. (2)

SNo	Control used to :	Control
1	Enter Patient name	
2	Choose Gender (out of Male/Female)	
3	Choose Department from a list of available departments	
4	Submit Form	

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