

PRE BOARD EXAM 2010-11
Sub:Informatics Practices (065)
Class:XII

Max Marks:-70

Time :3 Hrs.

- 1.**
- (a)** Two doctors in the same room have connected their Palm Tops using Bluetooth for working on a Group presentation. Out of the following, what kind of Network they have formed? 1
LAN, MAN, PAN, WAN
- (b)** Define any two threats to network Security. 1
- (c)** Devika says that the following numbers indicate an address 1
192.154.12.23
What is the above address called?to which object/device it is assigned
- (d)** Distinguish between open source software and Proprietary software with reference to customizability of the software. 1
- (e)** Name any four Indian Scripts included in Unicode. 2
- (f)** Which of the following are open standards? 2
(i) .OGG (ii) .DOC (iii) .TTF (iv) .JPEG
- (g)** Write the difference between static font and dynamic font. 2
- 2. (a)** What is the purpose of Default clause in switch statement. 1
- (b)** What is XML? How it is different from HTML. 2
- (c)** Mention the purpose of each of the following tag in HTML. 1
<TABLE>,<TD>,,

- (d)** Write a method in java reverse_digit of type int which calculate the reverse of digit of a number passed as an argument. 2
- (e)** Write the purpose of the following statement 1
jTextField1.setText("Computer".substring(2,5))
- (f)** How many times will each of the following loops execute ? Which one of these is an entry controlled loop and which one is an exit controlled loop. 2

| Loop1 | Loop2 |
|------------------------|------------------------|
| int s=0,a=4; | int s=0,a=4; |
| While(a<=10) | do |
| { | { |
| s=s+a; | s=s+a; |
| a=a+2; | a=a+2; |
| System.out.println(s); | System.out.println(s); |
| } | } while(a<=10); |

(g) Which HTML tag and corresponding attributes are used to include an image as the background of an HTML document. 1

3.(a) Distinguish between primary key and foreign key. 2

(b) Prateek is not clear about the difference between the following two statements 2

(i) Select (9-4)*3;

(ii) Select (9-4)*3 from emp;(if emp table have 3 rows).

Help him to understand the difference between these two.

(c) Write the output of the following query. 2

sales

| Cust_no | Cust_name | sale | comm |
|---------|-----------|------|------|
| 3 | Raghav | 2000 | 100 |
| 2 | Mohit | 3000 | 120 |
| 4 | Sumit | 1000 | NULL |
| 5 | Ram | 2300 | NULL |

Select cust_no,sale+comm. From sales;

(d) Can a table have multiple primary keys? Can it have multiple foreign keys? 1

(e) While creating a table customer Rafiq forget to set the primary key for the table.Give the statement which he should write now to set the column 'CUSTID' as the primary key of the table? 1

(f) A table adm have 4 rows and 4 column and another table exam have 3 rows 5 column. Find the no of rows and column in the cross join of adm to exam. 1

(g) A table 'customers' in a database has 5 column and no row in it. What is its cardinality What will be cardinality if 4 rows are added in this table. 1

4 (a) What is Inheritance? How many types of Inheritance and which inheritance is not supported by java. 2

(b) What will be the content of jTextField1 after executing the following code: 1

```
int Num = 6;
Num = Num + 1;
if ( Num > 5)
jTextField1.setText(Integer.toString(Num));
else
jTextField1.setText(Integer.toString(Num+5));
```

(c) What will be the contents of jTextArea1 after executing the following statement: 1
jTextArea1.setText("Pure\n\nObject\nOriented\tProgramming");

(d) Rewrite the following program code using switch statement: 2

```
if(ch=='E')
Eastern++;
else if(ch=='W')
Western++;
else if(ch=='N')
Northern++;
else if(ch=='S')
Southern++;
else
Nowhere++;
```

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

```
int i=2; j=5;
while j>i
{jTextField1.getText("j is greater");
j--;++i;}
JOptionPane.showMessageDialog("Hello");
```

(f) What will be the contents of jTextField1 and jTextField2 after executing the following code: 1

```
String s = "PQR Micro Systems";
jTextField1.setText(s.length()+" ");
jTextField2.setText(s.toLowerCase());
```

(g) AVON tools has computerized its billing. The following is the data entry screen in NET Beans IDE used by them.

The screenshot shows a Java Swing window with a light beige background. It contains several text labels on the left side, each followed by a text input field on the right. The labels are: 'PRODUCT ID', 'PRODUCT DISCIPTION', 'QUANTITY', 'UNIT PRICE', 'CATEGORY OF CITY', 'SUB TOTAL', 'TAX 6.5%', 'DELIVERY & HANDLING CHARGE', and 'TOTAL'. The 'CATEGORY OF CITY' label is followed by three radio buttons labeled 'A', 'B', and 'C'. At the bottom of the window, there are three buttons: 'CALCULATE', 'CLEAR', and 'EXIT'.

Sub total is calculated by multiplying quantity and unit price.

Tax is calculated as 6.5% of sub total

The criterion for calculation of delivery and handling charges is as given below:

| Category of city | Charges |
|------------------|----------|
| A | Rs. 2000 |
| B | Rs. 3000 |
| C | Rs. 3500 |

Total is calculated as the sum of subtotal,tax,delivery and handling charges.

(i) What should be done so that only one of the radio buttons of category of city can be selected at a time. 1

(ii) Write code to the following

- (a) Calculate and display the subtotal,tax,delivery & handling charge and total amount. 3
- (b) Clear all the text fields. 1
- (c) Close the application when click on Exit button. 1

(5) (a) Explain the purpose of DDL and DML commands used in SQL. Also give two examples of each. 2

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

- a) SELECT ROUND(-6.5675, 2);
- b) SELECT TRUNCATE(5.3456, 1);
- c) SELECT DAYOFMONTH('2009-08-23');
- d) SELECT MID('Mathematics 12', 2,3);

(c) Consider the table TEACHER given below. Write commands in SQL for (i) to (iv) and output for (v) to (viii)

TEACHER

| ID | Name | Department | Hiredate | Category | Gender | Salary |
|----|------------------|---------------|------------|----------|--------|--------|
| 1 | Tanya Nanda | SocialStudies | 1994-03-17 | TGT | F | 25000 |
| 2 | Saurabh Sharma | Art | 1990-02-12 | PRT | M | 20000 |
| 3 | Nandita Arora | English | 1980-05-16 | PGT | F | 30000 |
| 4 | James Jacob | English | 1989-10-16 | TGT | M | 25000 |
| 5 | Jaspreet Kaur | Hindi | 1990-08-01 | PRT | F | 22000 |
| 6 | Disha Sehgal | Math | 1980-03-17 | PRT | F | 21000 |
| 7 | Siddharth Kapoor | Science | 1994-09-02 | TGT | M | 27000 |
| 8 | Sonali Mukherjee | Math | 1980-11-17 | TGT | F | 24500 |

- i. To display all information about teachers of PGT category. 1
- ii. To list the names of female teachers of Hindi department. 1
- iii. To list names, departments and date of hiring of all the teachers in ascending order of Hiredate. 1
- iv. To count the number of teachers in English department. 1
- v. SELECT MAX(Hiredate) FROM Teacher; 1/2
- vi. SELECT DISTINCT(category) FROM teacher; 1/2
- vii. SELECT COUNT(*) FROM TEACHER WHERE Category = "PGT" 1/2
- viii. SELECT Gender,AVG(Salary) FROM TEACHER group by Gender; 1/2

6 (a) Write a sql query to create the table BOOKS with following structure. 2

- Book_id int not null primary key
- BookName varchar(20)
- AuthorName varchar(15)
- Publisher char(3)
- Price int
- Qty int

(b) In a database there are two table BOOKS and ISSUES.

Table: BOOKS

| Book_ID | BookName | AuthorName | Publisher | Price | Qty |
|---------|----------|------------|-----------|-------|-----|
| L01 | Maths | Raman | ABC | 70 | 20 |
| L02 | Science | Agarkar | DEF | 90 | 15 |
| L03 | Social | Suresh | XYZ | 85 | 30 |
| L04 | Computer | Sumita | ABC | 75 | 7 |
| L05 | Telugu | Nannayya | DEF | 60 | 25 |
| L06 | English | Wordsworth | DEF | 55 | 12 |

Table: ISSUES

| ISSUE_ID | Book_ID | Qty_Issued |
|----------|---------|------------|
| 14 | L02 | 13 |
| 19 | L04 | 5 |
| 3 | L05 | 21 |

(i) How many rows and how many columns will be there in the Cartesian product of these two tables? 1

(ii) Which column in the 'ISSUES' table is the foreign key?

1

(c)

Consider the table staff and salary given below

Table:staff

| ID | NAME | DEPT | SEX | DATE_OF_JOINING |
|-----|-----------|----------|-----|-----------------|
| 101 | Siddharth | SALES | M | 2001-01-01 |
| 104 | Raghav | FINANCE | M | 2006-02-14 |
| 107 | Prateek | RESEARCH | M | 2002-07-02 |
| 114 | Dilip | SALES | M | 2003-05-15 |
| 109 | Nupur | FINANCE | F | 2004-11-11 |
| 105 | Binoy | RESEARCH | F | 2002-10-10 |
| 117 | Vaibhav | SALES | M | 2005-08-11 |
| 111 | Rama | FINANCE | F | 2004-02-23 |
| 130 | Janvi | SALES | F | 2003-06-15 |

Table:Salary

| ID | BASIC | ALLOWANCE | COMM |
|-----|-------|-----------|------|
| 101 | 12000 | 1000 | 3 |
| 104 | 23000 | 2300 | 5 |
| 107 | 32000 | 4000 | 5 |
| 114 | 12000 | 5200 | 10 |
| 109 | 42000 | 1700 | 20 |
| 105 | 18900 | 1690 | 3 |
| 130 | 21700 | 2600 | 30 |

With reference to these tables, Write commands in SQL for (i) and (ii) and output for (iii) below:

- (i) Display NAME,BASIC,ALLOWANCE of all staff who are in "SALES" having DATE_OF_JOINING after 1-MAY-03. 2
- (ii) Display the average salary of all the staff working in "FINANCE" department using the table staff and salary. SALARY=BASIC+ALLOWANCE. 2
- (iii) SELECT NAME,DEPT,COMM FROM staff,salary where (staff.ID=salary.ID); 2

7. (a) How does e-business improve customer satisfaction- Write one point. 1

(b) How has our society benefited from e-governance? Write 2 points. 2

(c) Vijayan works for the Customs Department. He wishes to create controls on a form for the following functions. Choose appropriate controls from Text box, Label, Option button, Check box, List box, Combo box, Command button and write in the third column. 2

| SNo | Control used to | Control |
|-----|------------------------------------|---------|
| 1 | Enter last name | |
| 2 | Enter Gender | |
| 3 | Choose city from a list of cities. | |
| 4 | Submit form | |

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