

SAMPLE PAPER - 2014
INFORMATICS PRACTICES
Class – XII

Time: 3Hrs.

M.M. 70

Instructions:

- (i) There are 30 questions contained in four sections A,B,C and D.
- (ii) All questions are compulsory to solve.
- (iii) Write answers of same section at one place only.
- (iv)

SECTION - A

1. Ms. Sunita has developed a Java application through which the students of her school can view their marks by entering their admission number. The marks are displayed in various text fields. What should she do so that the students are able to view but not change their marks in text fields? [1]
2. What is the purpose of default clause in a switch statement? [1]
3. What is the use of <CENTER> tag in an HTML document? [1]
4. What is XML? [1]
5. Which Command is used in MySQL to make the changes in database permanent? [1]
6. While Creating a table 'Customer' Simrita forget the set of primary key for the table. Give the statement which she should write now to set the column 'CustID' as the primary key of the table? [1]
7. What is the purpose of the following SQL query : [1]
SELECT MAX (SALARY) FORM EMP;
8. Define Inheritance with reference to Object Oriented Programming. [1]
9. Rewrite the following code using a for loop : [1]
int i=1, sum=0;
while (i<10)
{
sum+=i;
i+=2;
}
10. Differentiate between Container Tag and Empty Tag. [1]
11. Write HTML Code to display these Text : [1]
H₂SO₄
12. Rama is not able to change a value in a column to NULL. What constraint did she specify when she created the table. [1]

SECTION- B

13. What will be values of x and y after execution of the following code : [2]
- ```
int x, y = 0;
for(x= 1; x<=5; ++x)
y=x++;
--y;
```

14. Write a function in Java that accepts a value and check whether it is a prime number. [2]

15. Mention the purpose of each of the following HTML tags : [2]
- `<B>`, `<LI>`, `<HR>`, `<TABLE>`

16. In a student table, out of RollNumber, Name, Address which column can be set as Primary key and Why? [2]

17. The Item\_No and Cost columns of a table “*ITEMS*” are given below : [2]

| ITEM_NO | COST |
|---------|------|
| 101     | 5000 |
| 102     | NULL |
| 103     | 4000 |
| 104     | 6000 |
| 105     | NULL |

18. A table “*stock*” in a database has 5 columns and constraints 17 records. What is the degree and cardinality of this table. [2]

19. Create table “*Employee*” as per following table Instance Chart. [2]

|              |         |          |            |          |         |            |
|--------------|---------|----------|------------|----------|---------|------------|
| Column Name  | EmpID   | EmpName  | EmpAddress | EmpPhone | EmpSal  | DeptID     |
| Key Type     | Primary |          |            |          |         | Foreign    |
| Nulls/Unique |         | NOT NULL |            |          |         |            |
| Fk Table     |         |          |            |          |         | Department |
| Fk Column    |         |          |            |          |         | Dept_ID    |
| Data Typa    | NUMBER  | VARCHAR  | VARCHAR    | VARCHAR  | VARCHAR | VARCHAR    |
| Length       | 6       | 20       | 30         | 10       | 9,2     | 2          |

20. In a database Employee, Emp is a table which is having emp\_no, eName, job and deptno as column. Write MySQL statements for the following: [2]

- (i) Display the details of junior most employees working in the school.
- (ii) Display the average salary of each job types.

21. Write the sample code to extract 5<sup>th</sup> element from the list box and store it in a variable selectedItem? [2]

## SECTION – C

22. Define a class Book with the following specifications :

Data Members of the Book are :

BOOK\_NO INTEGER

BOOK\_TITLE STRING

NO\_OF\_BOOKS INTEGER

PROCE FLOAT(PRICE PER COPY)

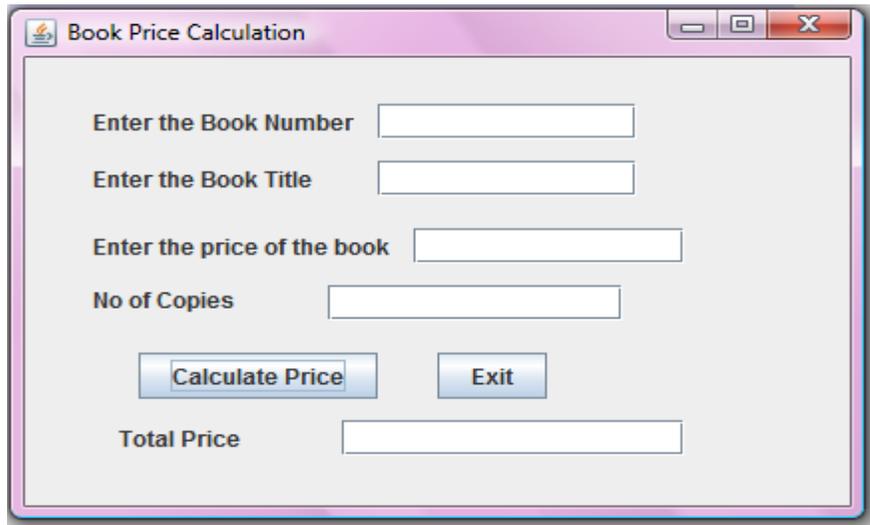
TOTAL\_COST()

A function to calculate the total cost for number of copies.

Member methods of the class book are :

INPUT() Function to read No of Books, Book\_title, price.

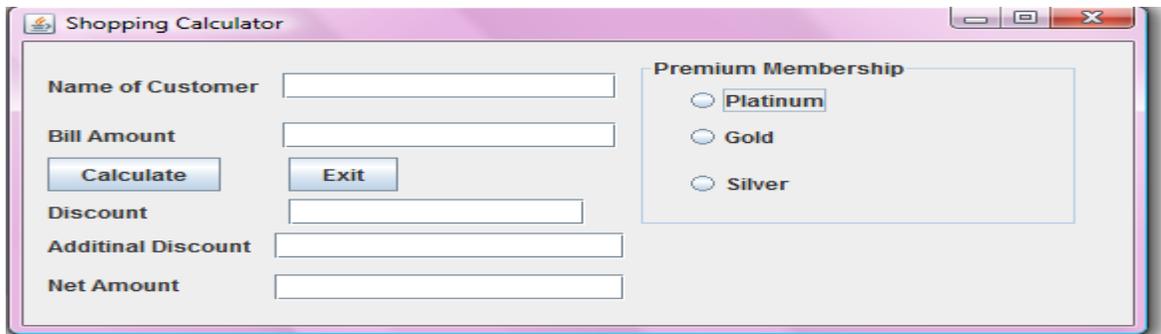
The following is the screen used to declare class to calculate total cost :



- (i) Define a class Book with required specification. [2]
- (ii) Write the code for calculate Price buttons click event procedure to operate the class Book's method. [1½]
- (iii) Write the code for Exit Button to exit application. [½]

23. Read the following case study and answer the questions that follow :

The Shop n Store has developed the following data entry screen for its operations. The store offers three different types of membership discount schemes for its regular customers. Platinum members get a discount of 10% on all their purchases, Gold members get 5% and Silver members get 3% discount.



The list of controls for above interface is as follows:

| Object Type   | Object Name                                                     | Description                                                                                                                                                                                                                          |
|---------------|-----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Text Field    | ProductTF<br>QtyTF<br>RateTF<br>AmountTF<br>DiscountTF<br>NetTF | To enter name of the product<br>To enter quantity Sold<br>To enter rate per unit<br>To display total amount as quantity *rate<br>To display the discount amount based on membership type<br>To display net amount as amount-discount |
| Radio Buttons | PlatinumRB GoldRB<br>SilverRB                                   | To Specify the Member Ship Type                                                                                                                                                                                                      |
| Button        | CalcBTN<br>ExitBTN                                              | To Calculate the amount, discount and net amount<br>To Close the Application                                                                                                                                                         |

- (i) Write the code to disable the text fields AmountTF, DiscountTF and NetTF. [0.5]
- (ii) Write the code for CalcBTN to calculate the amount, discount and net amount as per given [2.0] descriptions and conditions.
- (iii) Write the code for ExitBTN to close the application, but before the application is closed it [1.5] should check the net amount and if the net amount > 10,000 the membership of the customer should be upgraded and displayed. For example, if the customer already has Silver membership it should be upgraded Gold membership (similarly from gold to platinum) and he informed of the same using a message box.

24. Study the following tables Doctor and Salary and write SQL Commands. [1×4=4]

**Table : DOCTOR**

| ID  | NAME     | DEPT       | SEX | EXPERIENCE |
|-----|----------|------------|-----|------------|
| 101 | John     | ENT        | M   | 12         |
| 104 | Smith    | ORRHEDIC   | M   | 5          |
| 107 | George   | CARDIOLOGY | M   | 10         |
| 114 | Lara     | SKIN       | F   | 3          |
| 109 | K George | MEDICINE   | F   | 9          |
| 105 | Johnson  | ORRHEDIC   | M   | 10         |
| 117 | Lucy     | ENT        | F   | 3          |
| 111 | Bill     | MEDICINE   | F   | 12         |
| 130 | Morphy   | ORRHEDIC   | M   | 15         |

**Table : SALARY**

| ID  | BASIC | ALLOWANCE | CONSULTATION |
|-----|-------|-----------|--------------|
| 101 | 12000 | 1000      | 300          |
| 104 | 23000 | 2300      | 500          |
| 107 | 32000 | 4000      | 500          |
| 114 | 12000 | 5200      | 100          |
| 109 | 42000 | 1700      | 200          |
| 105 | 18900 | 1690      | 300          |
| 130 | 21700 | 2600      | 300          |

- (a). Display NAME of all doctors who are in “MEDICINE” having more than 10 years experience and basic more than 10000.
- (b). Display the average of all doctors working in “ENT” department using the DOCTOR and where as salary=basic + allowance.
- (c). Display the minimum ALLOWANCE of female doctors.
- (d). Display the highest consultation fee among all male doctors.

25. Differentiate the following: [2×2 = 4]

- (i) List Box Control and Combo Box Control.
- (ii) String and String-Buffer objects.

26. Discuss in detail the ACID properties. [4]

27. Identify the error/s from the following Netbeans coding: [2×2 = 4]

- (a) What is wrong with the following code?  
(assuming that connection con is available)

```
String qry="Select* from empl ;" ;
Statement stmt = con .getConnection();
ResultSet rs = stmt.executeUpdate(qry);
```

- (b) Find out the errors if any :

```
m = 1;
n = 0;
for(; m+n <10 ; ++n)
system.out.print(" Hello \n");
m = m +10;
```

28. Refer the following table structure and answer the following:

[4×1 =4]

| <u>EMPL</u> | <u>DEPT</u> | <u>SALGRADE</u> |
|-------------|-------------|-----------------|
| Empno       | Deptno      | Grade           |
| Ename       | Dname       | LSal            |
| Sal         | Loc         | HSal            |
| Comm        |             |                 |
| MgrNo       |             |                 |
| HDate       |             |                 |
| Deptno      |             |                 |

Now write MySQL statements for the following:

- Display the Ename, Dname and Grade of all the employees getting salary more than Rs. 3000.
- Display the Ename, Dname, Loc and Grade of all the employees who are working in New Delhi.
- Display the total salary, highest salary, minimum salary and average salary deptno wise.
- Display the number of employees working in each department.

### SECTION - D

29. Write SQL Commands for (a) to (e) and write the outputs for (f) on the basis of table :

Table : FURNITURE

| NO | ITEM NAME       | TYPE          | DATEOFSTOCK | PRICE | DISCOUNT |
|----|-----------------|---------------|-------------|-------|----------|
| 1  | White Lotus     | Double Bed    | 2002-02-23  | 3000  | 25       |
| 2  | Pink feathers   | Baby Cot      | 2002-01-29  | 7000  | 20       |
| 3  | Dolphin         | Baby Cot      | 2002-02-19  | 9500  | 20       |
| 4  | Decent          | Office Table  | 2002-02-01  | 25000 | 30       |
| 5  | Comfort zone    | Double Bed    | 2002-02-12  | 25000 | 30       |
| 6  | Donald          | Baby cot      | 2002-02-24  | 6500  | 15       |
| 7  | Royal Finish    | Office Table  | 2002-02-20  | 18000 | 30       |
| 8  | Royal tiger     | Sofa          | 2002-02-22  | 31000 | 30       |
| 9  | Econo sitting   | Sofa          | 2001-12-13  | 9500  | 25       |
| 10 | Eating Paradise | Dinning Table | 2002-12-19  | 11500 | 25       |

- To list the itemname which are priced at more than 15000 from the furniture table. [1]
- To list itemname and type of those items, in which dateofstock is before 2002-02-01 from the furniture table in descending order of itemname. [1]
- To display itemname and dateofstock of those items, in which the discount percentage is more than 25 from the furniture table. [1]
- To count the number of items, whose TYPE is "Sofa" from the furniture table. [1]

(e) Give the output of following SQL statement.

[4×0.5 = 2]

(i) Select count (distinct type) from furniture;

(ii). Select max(discount) from furniture;

(iii). Select avg(discount) from furniture where type="Baby Cot";

(iv). Select sum(price) from furniture where dateofstock < '2002-02-12';

30. Write the resulting output of the following :

[6]

(a). Select SUBSTR('NetBeans IDE Programmer', 10,3);

(b). select INSTR(TRIM(' ABS Public School ')5);

(c). select 200 + SQRT(144);

(d).select MOD ( ROUND ( 125.60,1) , 5 );

(e). select LEFT('RAMESH SHARMA' , 5);

(f). select ROUND(1045.439 , 2) + MOD (12.12 , 3)

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