

**SECOND TERMINAL EXAMINATION, 2017**  
**INFORMATICS PRACTICES**

**Time : 3 hrs.**

**Class XI**

**M.M. : 70**

**Date - 25.02.2017 (Saturday)**

**Name of the student** \_\_\_\_\_ **Section** \_\_\_\_\_

**Important instructions:**

- All questions are compulsory.
- Answer the questions carefully.
- Do all the parts of a question together.
- **Please check that this question paper contains 05 printed pages.**

**Q.1 Answer the following questions:**

- (i) Explain Time Sharing OS. (1)
- (ii) What do you understand by Digital Signature? (1)
- (iii) What do you understand by PC intrusion? (1)
- (iv) What is Sweeper attack? (1)
- (v) What are the differences between hardware, software and firmware? (2)
- (vi) What is memory card? Discuss briefly its type. (2)
- (vii) Explain Analog Computers. (2)

**Q.2 Answer the following questions:**

- (i) What is the difference between a getText() and getPassword() methods? (1)
- (ii) What does a break statement do? (1)
- (iii) How would you set shortcut key or access key of letter **A** for a button? (1)
- (iv) What are the values of i and n after the code is executed? (1)  

```
int i = 10;  
int n = ++i%5;
```
- (v) Write the corresponding Java expression for the following mathematical expression: (2)  
$$\sqrt{a^2 + b^2 + c^2}$$
- (vi) What is JVM? (2)
- (vii) How is ordinary compilation process different from Java compilation? (2)

**Q.3 Answer the following questions:**

- (i) Explain IN and BETWEEN Operator with example. (1)
- (ii) Predict the output of the following query: (1)  

```
Select Round(32.76), Round(32.76,1);
```
- (iii) What is the following command doing? (1)  

```
ALTER TABLE Persons  
ADD CONSTRAINT chk_Person CHECK (P_ID > 0 AND City = 'Shimla');
```

(iv) Compare Char and Varchar datatypes. (1)

(v) Write a query to display name, job, salary and HireDate of employees who are hired between May 20, 1990 and December 31, 1991. Order the query in ascending order of HireDate. (Table Empl). (2)

(vi) What is the following query doing? (2)

ALTER TABLE Customers CHANGE First\_Name FirstName VARCHAR(20);

(vii) 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

Based on this information find the output of the following SQL statement:

i) SELECT COST FROM ITEMS;

ii) SELECT COST + 100 FROM ITEMS WHERE ITEM\_NO > 103;

**Q.4 Answer the following questions:**

a) Name the methods of JTextArea should be used in coding for: (1)

i) Inserting the specified text at the given position in the text area.

ii) Adding the specified text to the end of the text area.

b) Differentiate between a Combo box and a List. (2)

c) Give java code using nested loop for the following output: (2)

```
1
3 2
6 5 4
10 9 8 7
```

d) Rewrite the following program code using if-else-if ladder: (2)

```
switch(d){
case 1:
    Day="Monday";
break;
case 2:
    Day="Tuesday";
break;
case 3:
    Day="Wednesday";
break;
default:
    Day="-";
}
```

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

```
int Multiple=3;
```

```

Value=15;
for(intctr=1;ctr<=5;ctr++,Value -= 2)
{
if(Value%Multiple == 0{
    System.out.println(Value*Multiple);
    System.out.println();
else
    System.out.println(Value++Multiple);
}
}

```

f) Read the following case study and answer the questions that follows:

Prachar Store is a Magazine distributor for Bharat Today. It is offering heavy discounts on the subscription of Bharat Today. The distributor plans to computerize its billing system. A programmer is required to make the following GUI interface to calculate the Discount Amount & Bill Amount to be paid by the subscriber as shown below:

The annual subscription of Bharat Today for one year is Rs.1400/- without any discount. Under the current scheme, discounts are being offered as follows:

Subscription Period in years	Discount
One	10%
Two	15%
Four	25%

Control	Name	Description
(jTextField1)	txtName	To store Subscribers Name
(jTextField2)	txtAddress	To display the address
(jTextField3)	txtTot	To display Total Amount
(jTextField4)	txtDisc	To display Discount Amount
(jTextField5)	txtNet	To display Net Amount
jComboBox1	cmbPeriod	To choose "one"/ "Two" / "Four"
jCheckBox1	chkMember	To become a member
jButton1	btnCalTotDisc	To Calculate Total & Discount
jButton2	btnCalNet	To display Net Amount

An additional discount of Rs. 200/- is given to the subscriber who wants to become a member of the Prachaar store.

- i) Give code to set the Total Amount (txtTot), Discount Amount(txtDisc) and Net Amount(txtNet) as uneditable. (2)
  - ii) When “Calculate Total & Discount” button(btnCalTotDisc) is clicked, calculate and display the Total amount and discount in their corresponding textfields(txtTot&txtDisc) (2)
  - iii) When “Calculate Net” button (btnCalNet) is clicked display the Net amount in the textFieldtxtNet. (2)
- Q.5** a) Identify Primary Key, Alternate Key, Candidate Keys in each table & Foreign Key from the following two tables: (2)

**Table: Employee**

Eno	Name	Designation	Salary	Deptno
45	Ramanuj Singh	Director	90000	10
32	Gareema Seth	Manager	78000	20
12	John Brooke	Accountant	25000	20
9	Ahmed Abdul	Manager	78000	30

**Table: Department**

Deptno	Dname	City
10	Research	Delhi
20	HRD	Delhi
30	Marketing	Kolkata

- b) Write the output of the following SQL queries: (2)
- i) SELECT CURDATE() + 10;
  - ii) SELECT MONTH('2009-02-03');
  - iii) SELECT SIGN(-15) "Sign";
  - iv) SELECT RIGHT('USS/23/67/09',2);

*NOTE* : Write SQL commands for (c) to (f) and write the outputs for (g) on the basis of table STORE.

**Table : Store**

ItemNo	Item	Scode	Qty	Rate	LastBuy
2005	Sharpener Classic	23	60	8	2009-06-31
2003	Ball Pen 0.25	22	50	25	2010-02-01
2002	Gel Pen Premium	21	150	12	2010-02-24
2006	Gel Pen Classic	21	250	20	2011-03-09
2001	Eraser Small	22	220	6	2009-01-19
2004	Eraser Big	22	110	8	2009-12-02
2009	Ball Pen 0.5	21	180	18	2009-11-03

**Note: ItemNo is the Primary Key.**

- c) Delete those records whose last buy is before 2003 (1)
- d) Add another column Category of type character in the table. (1)
- e) To show unique Scodes in the table. (1)
- f) To list names of all items with their LastBuy in descending order. (1)
- g) Give the output of the following SQL statements: (2)
  - i. SELECT LCASE(Item) FROM Store;
  - ii. SELECT MOD(Qty,5) FROM Store WHERE Rate>20;
  - iii. SELECT POWER(3,2) FROM Store WHERE Item='Eraser Small';
  - iv. SELECT SUBSTR(Item, 1, 2) FROM Store WHERE LastBuy>'2010-02-24';

**Q.6 Write SQL commands for the statements (a) to (h) and give outputs of the (1×10=10) SQL Queries (i) & (j) on the basis of TABLE CLASSTD.**

S_no	Name	Stipend	Stream	Avg_marks	Grade	DOB	Sex
1	Karan	1400	Medical	78.5	B	1999-02-19	M
2	Arun	NULL	Humanities	73.4	B	1998-01-11	M
3	John	1590	Medical	75.9	A	1999-02-04	M
4	Vikas	1630	Non-Medical	92.0	A	1998-02-21	M
5	Ankita	NULL	Non-Medical	62.5	C	1998-05-12	F
6	Zareen	1090	Medical	40.0	C	1999-01-13	F
7	Kush	1200	Medical	44.5	B	1998-04-22	M

- a) To list the names of students with their date of birth in ascending order.
- b) To list the students who are born after 1998 May 31 and stipend is more than 1400.
- c) To display female students name with their avg. marks where stipend is null.
- d) To list the students having 4 letter name.
- e) To list the different streams available.
- f) Update the stipend to Rs. 2000 where stream is Medical.
- g) To show the students born in 1999.
- h) To list the students who are not in Humanities stream.
- i) Select \* from CLASSTD where Grade='B' order by stipend.
- j) Select name,stream,dob from CLASSTD where sex='F' and grade='C'.

- Q.7**
- a) What is the web address of national portal of INDIA? (1)
  - b) What are the societal impacts of e-learning? (2)
  - c) Differentiate between Internet vs Non-Internet E-Business. (2)

