INTERNATIONAL INDIAN SCHOOL, DAMMAM
II Term Examination- December 2015
Informatics Practices - Class XII

Time: 3 Hrs
Marks: 70

Set A

(a) Draw a network layout of star topology to connect 5 client computers and 1 server computer. *(1)*

(b) Companies X, Y, and Z do business with each other and therefore they want to interconnect their computer networks. Which device would you suggest to be installed for communication between them? *(1)*

(c) Which of the following software do not come under open source category? *(1)*
- (i) Windows 8
- (ii) Google Chrome OS
- (iii) Apache Web Server
- (iv) Internet Explorer

(d) What is NRCFOSS? *(1)*

(e) Identify the type of medium: *(2)*
- (i) It is a short range unguided medium which can connect up to 8 devices.
- (ii) It is a long range line-of-sight medium.
- (iii) It is an omnidirectional long range medium used both indoors and outdoors
- (iv) It is a short range unguided medium that does not cross solid objects

(f) Explain the terms: a) SMS b)Video conferencing *(2)*

(g) Distinguish True Type Font and Open Type Font. *(2)*

(a) While designing an online order form for a shoe company, Shyam wants to display a list of shoe sizes from where the user can choose his size. Which control (List/Combo Box) should he use for this? *(1)*

(b) What will be the values of x and y after execution of the following code: *(1)*

```
int x,y=50;
for(x=15;x>=5;x-=3)
{
  y-=x;
}
```

(c) An integer variable **ageval** contains age of an applicant. It has to be saved in String type variable **agestr** for display purposes. Write statement(s) in java to do so. *(1)*

(d) What is the result of absence of break statement in a switch-case construct?

(e) What will be the contents of jtextField1 after the following code is executed? (2

```
int num1=10,num2=7;
int sum = num1 + num2--;
int diff = ++num1 - num2;
if ((sum>16)&&(diff>=4))
jTextField1.setText("Code Worked");
else if((num2==7)||(num1>10)
jTextField1.setText("Code MightWork");
else
jTextField1.setText("Code will not Work");
```

(f) *While working on NetBeans, Ayesha included a button* **submitBtn** *which is disabled* (2)
at design time. It should be enabled only at runtime only if the checkbox **confirmCB** *has been selected. Write the statement to do the same.*

(g) *Write the java code that takes the cost price of an item in a text field* **cpTF** *and profit* (2)
percent in a text field **percTF**, and calculates its selling price (using the formula sp=cp+cp*profitpercent) and displays it in a text field **spTF**.

3. (a) Before entering data into a table 'Applicants', Mr. Sudheer wants to view the (1)
constraints which are imposed on the table at the time of creation. Write the MySQL command he can do for that.

(b) Lata wants to see the names of all tables in the database 'Restaurant'. Write the MySQL (1)
command to do so.

(c) While creating a table 'Books', Abhishek forgot to set the Primary Key. Write the (1)
MySQL statement to set the column 'BookId' as the Primary Key.

(d) Mr. Ramesh wants to delete the table 'Stationery' from the database. Write the MySQL (1)
command to do so.

(e) Consider the columns taken from the table 'Scores': (2

PId	Points
1	500
2	400
3	0
4	110
5	NULL
6	130
7	260

Based on this information, find the output of the following queries:

```
(i)   SELECT AVG(Points) FROM Scores WHERE Points<150;
ii)   SELECT  COUNT(PId) FROM Scores WHERE Points != 0;
```

(f) Explain Referential Integrity with example. *(2)*

(g) Correct the MySQL statement: *(2)*

```
SELECT Ename, Sal*12 AS Annual Salary FROM Emp Where Comm IS
'NULL' & Age IS BETWEEN 30 AND 40;
```

(a) How many times will the following loop be executed? *(1)*

```
int j=2;
while(j<8)
{
  System.out.println(j--);
  j+=3;
}
```

(b) What will be displayed in the Text Area msgTA after executing the following statement: *(1)*

```
msgTA.setText("Step\tOn\nNo\tPets.");
```

(c) What will be the contents of the text field jTF1 and jTF2after the following code is executed? *(1)*

```
int p=25, q=10;
jTF1.setext(""+p+q);
jTT2.setText(p+q+"");
```

(d) Find output of the following java code snippet: *(2)*

```
String txt="India Today",snip;
String newTxt = txt.trim();
for (int i=6; i<newTxt.length(); i+=3)
{
  snip = newTxt.substring(i);
  jTextArea1.append(snip+"\n");
}
```

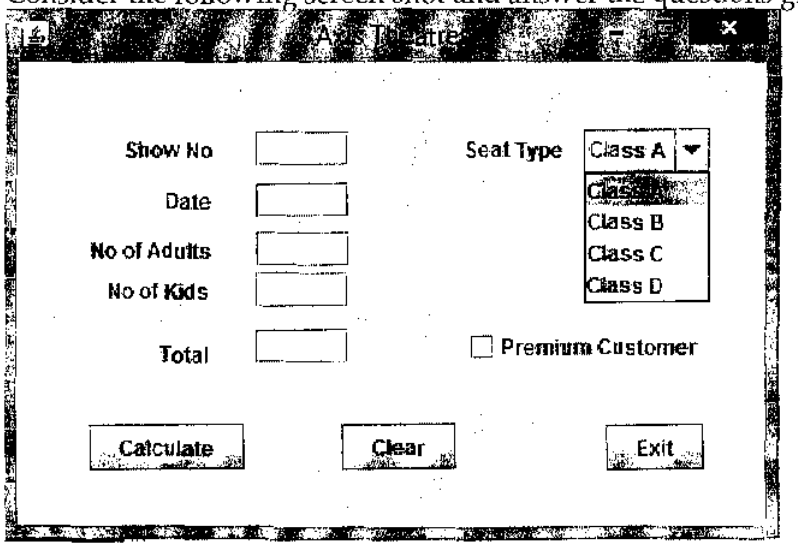
(e) Rewrite the following code using switch statement: *(2)*

```
char ch;
if(ch=='A' ||ch=='a')
  JOptionPane.showMessageDialog(null,"First Grade");
  else if(ch=='B'||ch=='b')
         JOptionPane.showMessageDialog(null,"Second Grade");
else if(ch=='C'||ch=='c')
         JOptionPane.showMessageDialog(null,"Third Grade");
  else JOptionPane.showMessageDialog(null,"Wrong response";
```

(f) Rewrite the following code after correcting the errors(if any):

```
int SUM=0;Step=5;
int i;
For(i=0;i=<5;++i)
{
  Step+=5;
  Sum+=Step;
}
jTextField1.getText(Double.toString(SUM));
```

(g) Consider the following screen shot and answer the questions given below:



Variable Name	Control Type	Remarks
snoTF	JTextField	To enter the show number
dateTF	JTextField	To enter the date
typeCmb	JComboBox	To select the seat
adultTF	JTextField	To enter the number of adults
kidsTF	JTextField	To enter the number of kids
premiumCB	JCheckBox	To select Premium Customer option
totTF	JTextField	To Display the total amount
calcBtn	JButton	To calculate the total amount
clearBtn	JButton	To clear the textfields, reset typeCmb and premium CB
exitBtn	JButton	To exit the application.

The rates are as follows:

Seat Type	Price/Adult	Price/Child
A	500	250
B	300	150
C	150	75
D	50	25

Write the event handler codes for:

i) calcBtn to calculate and display the total amount (Eg. If seat type A is selected total = noOfAdults * 500 + noOfKids * 250) *(3)*

ii)clear Btn to clear textfields and checkbox and reset typeCmb so that no item is displayed. *(2)*

iii) exitBtn to display a message "Thank you" in a dialog box and exit the application. *(1)*

(a) What do you mean by Cartesian Product of two tables? Illustrate with example. *(2)*

(b) Differentiate the WHERE clause and HAVING Clause. *(2)*

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

```
 i.   SELECT INSTR('Margaret March, 'ar');
ii.   SELECT LENGTH(CONCAT('Clip Art','shapes'));
iii.  SELECT TRUNC(1674,-3);
iv.   SELECT DAYOFYEAR('2013-03-10');
```

(d) Consider the table given below and write MySQL queries for questions (i) to (v) and outputs for queries (vi) to (viii) *(8)*

SOFTDRINK

DRINKCODE	DNAME	PRICE	CALORIES
101	Lime and Lemon	20.00	120
102	Apple Drink	18.00	120
103	Nature Nectar	15.00	115
104	Green Mango	15.00	140
105	Aam Panna	20.00	135
106	Mango Juice Bahaar	12.00	150

i. To display names and drink codes of those drinks those have less than 120 calories.

ii. To display drink codes, names and price of all drinks, in ascending order of price.

iii. To display names and calories of drinks that have calories in the range 120 to 140 (both 120 and 140 included).

iv. Decrease the price of all drinks in the given table by 5%.

v. Delete the row of Green Mango from the Table

```
 vi.  SELECT COUNT(DISTINCT CALORIES) FROM SOFTDRINK;
vii.  SELECT MIN (PRICE) FROM SOFTDRINK;
viii. SELECT DNAME FROM SOFTDRINK WHERE DNAMELIKE "%Mango%";
```

(c

6. (a) Write the MySQL command to create the table 'Student' with the given constraints: (2

TABLE: BILLS

Column Name	Data type	Constraint
BillNo	Decimal (6,2)	Together forms the Primary Key
BillDate	Date	
NoofItems	Integer(2)	
Amount	Decimal (8,2)	
Cashier	String (size 25)	No null values

(b) Consider the tables given below and write SQL queries for questions (i) to (ii) *[2marks each]* and output for *(iii)[one mark]* (5

TABLE: SALESMEN

SALESMANID	NAME	SALES	LOCATIONID
S1	ANITA SINGH ARORA	250000	102
S2	Y.P. SINGH	1300000	101
S3	TINA JAISWAL	1400000	103
S4	GURDEEP SINGH	1250000	102
S5	SIMI FAIZAL	1450000	103

TABLE: LOCATION

LOCATIONID	LOCATIONNAME
101	Delhi
102	Mumbai
103	Kolkata
104	Chennai

i. To display SalesmanID, names of salesmen, LocationID with corresponding location names.

ii. To display names of salesmen, sales and corresponding location names who have achieved Sales more than 1300000.

iii. `SELECT Name, Sales FROM Salesman S, Location L WHERE S.Lacationid=L.Locationid a && Lacationname LIKE "%ai";`

(c) Based on the above tables SALESMAN and LOCATION Answer the following: (2

i. Suggest the Primary keys and Foreign key (if any) for the above tables.

ii. *Write the MySQL command to add the not null constraint to the* SALES *column* of SALESMAN table.

(d) Answer the following with reasons; (

i. Is it possible for a table to have both Primary Key and Foreign key?

ii. How many Primary keys and Foreign keys can a table have?