

**International Indian School-Dammam
Preliminary Examination -2015**

**Class : XII
Subject : Informatics Practices**

**Time: 3 Hrs
MM: 70**

SET A

- 1 (a) A network administrator wants to get IP address using URL of a website. How can this be achieved? [1]
- (b) Akash is planning in the office building to connect all computers, each spread over within distance of 45 Meters. Suggest [1]
- (i) The economical cable type having high speed data transfer which can be used to connect these computers.
- (ii) What type of network is formed by this kind of connectivity?
- (c) What is meant by communication channel ? Give examples of guided media and examples of unguided media [2]
- (d) Name any two network devices . What are their uses? [1]
- (e) Ms. Kiran has downloaded a software from internet. It can be distributed and freely used by any one but source code is not available and can not be modified. Name the software downloaded by her. [1]
- (f) Identify the type of Topology from the following: [1]
- if one node fails to pass data through itself, the entire networks fails and no traffic can flow.
- (g) What is the difference between TTF and OTF ? [2]
- (h) Identify [1]
- (i) The code which provides platform independence .
- (ii) The code which uses 7 bits to represent a character
- 2(a) While writing the code Mrs Ghosh wants to execute any statement even if condition is false at least once. Help her to choose appropriate loop out of do.....while (condition) and while().... [1]
- (b) Which method of text area is used to add specified text to the end of the Text area? Give an Example. [1]
- (c) Which tag /attributes of HTML are used to [1]
- i) Insert a picture in the web page
- ii) Insert an empty line in the web page.
- (d) How <TR> tag is Different from <TD> tag ? [1]
- (e) What will be displayed in JTextArea1 after the execution of the following code: [2]
- ```
int G = 1 ;
do
{
 JTextArea1.setText(Integer.toString(G++));
 G = G+1;
} while(G<=5);
```
- (f) Write advantages of XML over HTML . [1]
- (g) Define polymorphism. Give example [2]

3(a) Ranbeer has created a table namely Trial that has 7 columns and 3 test records. After testing Ranbeer added three more columns , fourteen more rows but deleted 3 test records. What is the degree and cardinality of the table now ? [1]

(b) The 'C\_Id' and 'Category' columns of a table Employee are given below : [2]

| C_ID | Category |
|------|----------|
| 101  | CLERK    |
| 102  | CASHIER  |
| 103  | MANAGER  |
| 104  | SALESMAN |

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

- SELECT mid (category , 2, 3) from Employee where category not like "%ER\_";
- SELECT instr ( category , 'NA') from Employee where C\_ID > 102;

(c) Saumya wants to remove all the rows from a table Employee except empid as A01 or designation manager . She writes the following query [2]

Drop table \* Employee where empid = A01 and Designation NOT = 'Manager';  
Write the correct query for her.

(d) Name a [1]

- date function that returns a string
- String function that returns a string

(e) While creating a table "Mobile", Karan forgot to set primary key for the table. Write the statement to set the column MobileNo as the primary key of the table. [2]

(f) Write the output of the following [2]

(i) Select round(123.467,1) + truncate(123.467,1)

(ii) Select round(56.235,-1)+ length("informatics");

4 (a) What will be the content of jTextField1 and jTextField2 after executing the following code? [2]

```
String Msg = "Information Technology ";
jTextField1.setText((Msg.length () +10)+ " ");
jTextField2.setText(Msg.substring(2,11);
```

(b) Write the following code segment using while loop without effecting the output of code: [2]

```
int Option , NOption = 0;
for(Option= 1 ; Option < 10; Option =Option +2)
 NOption= NOption + Option;
jTextField1.setText(" " + NOption);
```

(c) Identify the problem with the following code, Rewrite the corrected code after making the corrections [2]

```
Int k = 2 ; sum = 0 ; // Declaring k and sum as integer
{
 sum = k;
 k += 2;
}
while (k =< 20);
jTextField1.setText(Integer.toString(sum));
```

(d) Given a string object namely 'wing' having value as "4567" stored in it. what will be the result of the following? [1]

JOptionPane.showMessageDialog(null,"" + wing.length() + Integer.parseInt(wing) );

(e) (i) Differentiate between character data type and string data type [1]

(ii) Define Abstract class [1]

(f) Write a java code that accepts two numbers in FirstNumTF and SecondNumTF and display the sum of their squares in ThirdNumTF. [2]

(g) Dream Land Enterprises has computerized its billing. The following data entry screen is used to generate bill.

The criteria for calculation of delivery and handling charges is as given below-

| Category of City | Charges  |
|------------------|----------|
| A Class          | Rs. 3500 |
| B Class          | Rs. 4000 |
| C Class          | Rs. 4500 |

I) Write the code to make the text fields Total (txtTotal) non editable and set the category of city as C class( RdC). [1]

II) Write the code for Calculate button to calculate and display Sub Total (txtSub), Tax(txtTax), Delivery & Handling Charges(txtDH) and Total(txtTotal) depending on the category of the city. [3]

- o Sub Total is calculated as **Unit Price \* Quantity**. ( txtUnit , txtQty)
- o Tax is calculated as 7.85% of Sub Total
- o Total is calculated as the sum of Sub Total, Tax and Delivery and Handling Charges. If Company Employee (Chk1) check box is checked then tax should be 2.5%.

III) Write the code for Clear button make all text fields clear and Close the application when Exit button is pressed. [1]

5. a) What is the purpose of ALTER TABLE command in My Sql ? How is it different from UPDATE command ? Give example [2]

b) Define the need of group by clause in SQL with example [2]

c) Consider the following table "GYM ". Write command in MySql for (i) to (iv) [4]  
and output for (v) to (vi) [2]

**Table : GYM**

| PrCode | PrName            | UnitPrice | Manufacturer |
|--------|-------------------|-----------|--------------|
| P101   | Cross Trainer     | 25000     | Avon Fitness |
| P102   | TreadMill         | 32000     | AG FitLine   |
| P103   | Massage Chair     | 20000     | Fit Express  |
| P104   | Vibration Trainer | 22000     | Avon Fitness |
| P105   | Bike              | 15000     | Fit Express  |

- I. Display the names of all the products with unit price less than Rs. 20000.00
- II. Display all the products by the manufacturer "Fit Express"
- III. Change the unit price data of all the rows by applying a 10% discount reduction on all the products.
- IV. Display the code of all the products with manufacturer name not starting with "A"
- V. Select PrName ,UnitPrice from GYM where PrCode in ('P101','P105');
- VI. Select PrCode , PrName from GYM order by unitprice

6. a) Write a SQL query to create the table "Bank" with the following structure-

[2]

| Field       | Type    | size | Constraint        |
|-------------|---------|------|-------------------|
| Acct Number | Integer | 4    | Primary Key       |
| First name  | Varchar | 10   |                   |
| Last Name   | Varchar | 10   |                   |
| BirthDate   | Date    |      | Must not be blank |
| Balance     | Integer | 4    |                   |

b) In a database there are two tables "ITEM" and "Customer" as shown below:

**Table : ITEM**

| ID   | ItemName      | Company | Price |
|------|---------------|---------|-------|
| 1001 | Moisturiser   | XYZ     | 40    |
| 1002 | Sanitizer     | LAC     | 35    |
| 1003 | Bath Soap     | COP     | 25    |
| 1004 | Shampoo       | TAP     | 95    |
| 1005 | Lens Solution | COP     | 350   |

**Table : Customer**

| C_ID | CustomerName | City      | ID   |
|------|--------------|-----------|------|
| 01   | Samridhh Ltd | New Delhi | 1002 |
| 02   | Big Line Inc | Mumbai    | 1005 |
| 12   | Suparna A    | New Delhi | 1001 |
| 15   | Tom C        | Banglore  | 1003 |

Write the commands in SQL queries for the following

- i) To display the details of item , whose company name contains 'A' and price is in the range of 40 and 95(Both values included) [1]
- ii) To display the customer name , city from table customer , and ItemName and price from table with their corresponding matching ID [2]
- iii) To add a new column DateofTransaction of date type in table ITEM [2]

c) In a database School there are two tables Employee and Dept as shown below:

**Table : Employee**

| EmpId | EmpName  | Sal   | EmpPhNo | Deptno |
|-------|----------|-------|---------|--------|
| T001  | Vishakha | 34000 | 8752412 | 10     |
| T002  | Mridul   | 32000 | 8775425 | 10     |
| T003  | Manish   | 45000 | 8345672 | 20     |

**Table :Dept**

| Deptno | DName      | LocationId |
|--------|------------|------------|
| 10     | Lights     | HH02       |
| 20     | Dance      | FF02       |
| 30     | Production | AB01       |

- i) Identify the primary key and foreign key in the table Employee (State reasons) [1]
- ii) Identify the attributes, which can be chosen as Candidate keys in the table Employee [1]
- iii) What output will you get when an equi join query is executed to get the Name from Employee table and corresponding DName from Dept Table ? [1]

**7 (a)**

- (i) How does e-governance help in reducing corruption ? Write two points. [1]
- (ii) Write the two important features of E Business [1]
- (b) What is the advantage of using IT applications over the manual operations ? [1]
- (c) Mr. Anurag wants to choose appropriate controls from a tool box . Help him to select proper controls for the following purpose: [2]
  - (i) To enter suggestion in the form of a paragraph
  - (ii) To choose zone (East , West , South , North)
  - (iii) To enter age between a range 20 to 25
  - (iv) To accept card type i.e Debit Card, Credit Card, Visa Card,.



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**SET B**

- 1 (a) A network administrator wants to know the difference between IP address and MAC address of a computer. Write it for him [1]
- (b) Akash is planning to connect all the computers of different office buildings spread over within a city. Suggest [1]
- (i) Communication channel for it.
- (ii) What type of network is formed by this kind of connectivity?
- (c) Write one advantage of star topology over bus topology and one advantage of bus topology over star topology. [2]
- (d) Expand the following [1]  
ASCII, BOSS
- (e) Define Open source software. Justify that free software is not open source software. [1]
- (f) Name the following [1]
- (i) It regenerates the received signal at the destination .
- (ii) It redirects the received information only to the intended node(s).
- (g) What are the advantages of Unicode ? Name two Indian language, which is supported by Unicode. [2]
- (h) Identify [1]
- (i) Communication channel in a hilly area
- (ii) Installing some software(spyware) in the target computer.
- 2(a) List different selection modes of list . [1]
- (b) Name the class which contains methods for basic numerical operations like rounding off the number. [1]
- (c) Which tag /attributes of HTML are used to [1]
- i) Specify the items in a list
- ii) Insert a row in a table
- (d) How <P> tag is Different from <BR> tag ? [1]
- (e) What will be displayed in JTextArea1 after the execution of the following code: [2]
- ```
int G = 1 ;  
do  
{  
    JTextArea1.setText(Integer.toString(++G));  
    G = G+1;  
} while(G<=5);
```
- (f) Write advantages of XML over HTML . [1]
- (g) Define operator overloading and method overloading with example. [2]
- 3(a) Ranbeer has created a table namely Trial that has 5 columns and 5 test records. After testing Ranbeer added two more columns, fourteen more rows but deleted 3 test records. What is the degree and cardinality of the table now ? [1]

- (b) The 'C_Id' and 'Category' columns of a table Employee are given below : [2]

C_ID	Category
101	CLERK
102	CASHIER
103	MANAGER
104	SALESMAN

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

- SELECT mid (category , 2, 3) from Employee where category like "%ER_";
- SELECT instr (category , 'MA') from Employee where C_ID > 102;

- (c) Saumya is using a table Employee. It has the following columns. [2]

Admno , Name , Agg , Stream

She wants to display the highest Agg obtained in each stream.

She wrote the following statement :

```
SELECT Stream , Max(Agg) From Employee;
```

But she did not get the result. Rewrite the above query for desired result

- (d) Name a [1]

- date function that returns a date
- String function that returns a number

- (e) While creating a table "Sales", Amit forgot to change the size of a column Custname. Write the statement to change the size of column Custname from 20 to 30 [2]

- (f) Write the output of the followings [2]

- Select round(242.55) + truncate(242.55)
- Select round(54.23,-1)+ length("HTML");

- 4 (a) What will be the content of jTextField1 and jTextField2 after executing the following code? [2]

```
String Msg = "Information Technology ";  
jTextField1.setText( (Msg.length ( ) +5) + " ");  
jTextField2.setText( Msg.substring(2,6);
```

- (b) Write the following code segment using do while loop without effecting the output of code: [2]

```
int Option , NOption = 0;  
for( Option= 1 ; Option < 10; Option =Option +2)  
    Noption= NOption + Option;  
jTextField1.setText(" " + Noption);
```

- (c) Identify the problem with the following code, Rewrite the corrected code after making the corrections [2]

```
string Remarks;  
int Code= Integer.parseInt(jTextField1.setText( ));  
switch (Code)  
{  
    case '0' : Remarks = "100% Tax exemption" ; break ;  
    case 1 : Remarks = "50% Tax exemption" ; break ;  
    default : Remarks = "Invalid Entry";
```

- (d) Given a string object namely 'wing' having value as "456" stored in it. what will be the result of the following? [1]

```
JOptionPane.showMessageDialog(null," " + (wing.length( ) + Integer.parseInt(wing )));
```


- (e) (i) Differentiate between `getSelectedIndex()` and `getSelectedItem()` [1]
(ii) Define inheritance [1]

(f) Write a java code that accepts a number in a text field `FirstTf` and display the sum of digits present in it in a textfield `SecondTf`. [2]

(g) Glamour Garments has developed a GUI application for their company as shown below:

The company accepts payments in 3 modes – Cash , Cheque , Credit Card. The discount given as per mode of payment is as follows.

Mode of Payment	Discount
Cash	8%
Cheque	7%
Credit Card	Nil

If the bill amount (`txtBamt`) is more than 15000 then the customer gets an additional discount of 10 % on Bill amount. Write the code

- (i) To clear the textfields `Discount (txtDisc)` and `NetAmount (txtNetAmt)` [1]
(ii) To calculate and display the discount and net amount as per given criteria ,when “Calculate” button is clicked [3]
(iii) To close the application after displaying a message “ Application Over “ [1]

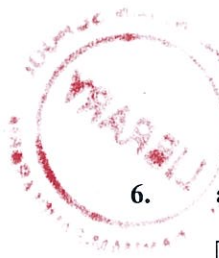
5. a) What is the purpose of `DROP TABLE` command in My Sql ? How is it different from `DELETE` command ? [2]

b) Define the need of `Alter table` in SQL with example [2]

(c) Consider the following table “**GYM**”. Write command in MySql for (i) to (iv) [4]
and output for (v) to (vi) [2]

Table : GYM

PrCode	PrName	UnitPrice	Manufacturer
P101	Cross Trainer	25000	Avon Fitness
P102	TreadMill	32000	AG FitLine
P103	Massage Chair	20000	Fit Express
P104	Vibration Trainer	22000	Avon Fitness
P105	Bike	15000	Fit Express



- I. Display the manufacturer of all the products with unit price more than Rs. 10000.00
- II. Display all the products by the manufacturer "Avon Fitness"
- III. Display all the products in decreasing order of their name.
- IV. Display the unitprice of all the products with manufacturer name ending with "e"
- V. Select * from GYM where PrCode NOT IN ('P101', 'P104');
- VI. Select PrCode, PrName where unitprice > 20000 and unitprice < 25000

6.

a) Write a SQL query to create the table "Customer" with the following structure-

[2]

Field	Type	size	Constraint
CustNo	Integer	4	Primary Key
CustName	Char	20	
DateofOpen	Date		Not Null
Address	Varchar	30	
Gender	char	1	

b) In a database there are two tables "ITEM" and "Customer" as shown below:

Table : ITEM

ID	ItemName	Company	Price
1001	Moisturiser	XYZ	40
1002	Sanitizer	LAC	35
1003	Bath Soap	COP	25
1004	Shampoo	TAP	95
1005	Lens Solution	COP	350

Table : Customer

C_ID	CustomerName	City	ID
01	Samridhh Ltd	New Delhi	1002
02	Big Line Inc	Mumbai	1005
12	Suparna A	New Delhi	1001
15	Tom C	Banglore	1003

Write the commands in SQL queries for the following

- i) To display the details of item, whose company name does not contain 'C' and price is not in the range of 40 and 95(Both values included) [1]
- ii) To display the customer id, customer name from table customer, and ItemName and company name from ITEM table with their corresponding matching ID [2]
- iii) To display customer name and item name of all the items whose itemcode is more than 1002 [2]

c) In a database School there are two tables Employee and Dept as shown below:

Table : Employee

EmpId	EmpName	Sal	EmpPhNo	Deptno
T001	Vishakha	34000	8752412	10
T002	Mridul	32000	8775425	10
T003	Manish	45000	8345672	20
T004	Akhil	40000	8768451	30

Table :Dept

Deptno	DName	LocationId
10	Lights	HH02
20	Dance	FF02
30	Production	AB01

- i) Identify the primary key and foreign key in the table Dept [1]
- ii) Identify the attributes, which can be chosen as Candidate keys in the table Employee [1]
- iii) What output will you get when an equi join query is executed to get the EmpId from Dept table and corresponding LocationId from Dept Table ? [1]

7 (a)

- (i) How does e-business help a common man in society? Write two points. [1]
- (ii) Write the two important features of E Learning [1]
- (b) What is the advantage of using IT applications over the manual operations? [1]
- (c) Mr. Anurag wants to choose appropriate controls from a tool box. Help him to select proper controls for the following purpose: [2]
 - (i) To enter mode of payment (cash / credit card /other)
 - (ii) To choose hobbies
 - (iii) To enter nationality of a citizen
 - (iv) To save the details of a student

