



# INFOTECH Computer Education

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## QA Answer the following questions:

- A.1 Which protocol is used for transfer of hyper text documents on the internet? 1
- A.2 Which of the following is not a characteristic of open source software? 1
- Its source code is available for modification
  - Its owned by a company or an individual
  - It can be downloaded by Internet
- A.3 Akhil is transferring songs from his mobile to his friend's mobile via Bluetooth connection. Name the network used by Akhil. 1
- A.4 Navneet is using software, which has been downloaded from internet and is available for one month. After one month he has to pay license fee for further use. What software Navneet is using? 1
- A.5 What is the difference between IP address and MAC address? 2
- A.6 Differentiate between a hub and a switch. 2
- A.7 What are the following software used for? 2
- A.7.1 Apache
  - A.7.2 Tomcat
  - A.7.3 PHP
  - A.7.4 Python

## QB Answer the following questions:

- B.1 While working in netbeans ,ranjeeta included a listbox in the form. Now she wants the list of her friend's names to be displayed in it . Which property of listbox control should she use to do this?1
- B.2 What will be the contents of jTextArea1 after executing the following code: 1
- ```
jTextArea1.setText("INFOTECH\n Computer\tKishangarh");
```
- B.3 Rewrite the following code fragment using switch : 2
- ```
if(ch == 'E')
    east++;
if(ch == 'W')
    west++;
```

```

if(ch == 'N')
    north++;
if(ch == 'S')
    south++;
else
    JOptionPane.showMessageDialog(null, "unknown");

```

B.4 Convert the following code into while loop. 2

```

int m,n;
m=5; n=9;
for ( int j=0; j<=10; j+=2 )
{
    System.out.println( m + " " + n );
    m = m + 10;
    n = n + 5;
}

```

B.5 Write two differences between a listbox and combobox. 2

B.6 The following code has some error(s). Rewrite the correct code and underlining all the corrections made: 2

```

int sum; value; inct;
int I;
for(i = 0, i <= 10, i++)
    sum += i;
    inct ++;

```

B.7 What will be the contents of jTextField1 and jTextField2 after executing the following code: 1

```

String s="INFOTECH Computer Education"
jTextField1.setText(s.Length()+" ");
jTextField2.setText(Math.pow(2,3)+"");

```

B.8 What will be the value of x and y after execution of the following code: 3

```

int x , y = 0;
for(x = 1; x <= 5 ; x ++ )
    y = x ++ ;
    - y;
System.out.println( x + " " + y );

```

B.9 Write a method in JAVA that takes a number as parameter and returns its reverse 3

B.10 Read the following case study and answer the questions that follow.

TeachWell Public School wants to computerize the employee salary section. The School is having two categories of employees: Teaching and Non Teaching. The Teaching employees are further categorized into PGTs, TGTs and PRTs having different Basic Salary. The School gives addition pay of 3000 for employees who are working for more than 10 years.

Employee Type	Basic Salary	DA (% of Basic Sal)	HRA (% of Basic Sal)	Deductions (% of Basic sal)
Non Teaching	12500	31	30	12
PGT	14500	30	30	12
TGT	12500	21	30	12
PRT	11500	20	25	12

Object Type	Object Name	Description
Text Field	basicTF	To show basic salary
	dedTF	To show deductions
	grossTF	To show gross salary
	netTF	To show net salary
Radio Button	nonRB	To select Non-Teaching as a selection of Employee Category
	pgtRB	To select PGT as a selection of Employee Category
	tgtRB	To select TGT as a selection of Employee Category
	prtRB	To select PRT as a selection of Employee Category
Check Box	tenyearsCB	Check for the employee who is working for more than 10 years.
Command Button	calculateBTN	To calculate the basic salary, deductions, gross salary and net salary
	clearBTN	To clear text fields, uncheck check box and radio buttons

- B.10.1 Write the code to calculate the Basic salary, deductions, gross salary and net salary based on the given specification. 3  
**Add 3000 to net salary if employee is working for more than 10 years.**  
**Gross salary=Basic salary + DA + HRA**  
**Net salary = Gross salary – deductions**
- B.10.2 Write the code to clear all TextFields, uncheck checkbox and set non-teaching as the default category. 1
- B.10.3 Write the code to exit the application. Also display a message “Thank you” before exiting the application. 1
- B.11 What is the output of the following code, if the value of variable k is 10? 1  

```
int result = ++k + k++ + k ;
System.out.println ( result ) ;
```
- B.12 Write a program in JAVA to input a number in jTextField1 and calculate its factorial. 2
- B.13 What are expressions? How many types of expressions are there? Name them. 2
- B.14 Differentiate between Entry-Controlled Loop and Exit-Controlled Loop. 2
- B.15 Write the code for the following : 2  

```
2
1
1 2
1 2 3
1 2 3 4
```
- B.16 Differentiate between Call By Value and Call By Reference. 1
- QC Answer the following questions:**
- C.1 Define a class Resort in Java with the following description: 3  
Private Members:  
Room\_no To store room number  
Name To store customer name  
Charges To store per day charges  
Days To store number of days of stay  
compute() A function to calculate and return amount as days \* charges and if the value of day\*charges is more than 11000 then as 1.02\*days\*charges  
Public Members:  
getInfo() A function to enter the content as Room number, name, charges and days.  
dispInfo() A function to display Room number, Name, Charges, Days and Amount

( Amount to be displayed by calling function compute ( ) )

C.2 Define a class TravelPlan in Java with the following specification: 3

**Private Member:**

Plain\_Code            long type  
Place                    string type  
No\_of\_travelers        integer type  
No\_of\_bus               integer type

**Public member**

A **constructor** to assign initial values of Plain\_Code as 101, Place as 'Delhi', No of travelers as 5, No of buses as 1.

A function **newPlan()** which allows used to enter Plan Code, Place and No of travelers and No of buses as following condition:

Number of Travelers	Number of Buses
Less Than 20	1
Equal to and more than 20 and less than 40	2
Equal to and more than 40	3

A function **showPlan()** to display the content of all the data member.

C.3 Write a code to print current date/time using Date class. 2

C.4 Write any two packages using in Netbeans IDE. 1

C.5 Make a base class **Employee** which contains the details of an employee and a derived class **Salary** which calculates the employee's net salary . The details of two classes are given below:

**Class Employee** 3

**Data Members:**

Empno            :        stores the employee number  
Name             :        stores the employee name  
Desig            :        stores the employee's designation

**Member Function:**

Employee()       :        parameterized constructor to assign values of employee number, name and designation  
Display()         :        displays the employee's details

**Class Salary**

**Data Member:**

Basic            :        to store the basic salary

**Member Function:**

Salary () : parameterized constructor to assign the values of data members  
 Calculate() : calculate the employee's net salary according to the following rules:  
 DA 10% of the basic  
 HRA 15% of basic  
 Salary = basic + DA + HRA  
 PF 8% of Salary  
 Net Salary = Salary – PF  
 And display the employee's details and net salary.

C.6 Consider the following class definitions and determine the output that would be generated by the code segment. 3

```
public class A {
    public void method() { System.out.println("A"); }
}
public class B extends A {
    public void method() { System.out.println("B"); }
}
A a = new A();
a.method();
a = new B();
a.method();
B b = new B();
b.method();
```

- C.7 What is a table-model? What is its significance? 2
- C.8 Write the code to add and remove a specific row from the table. 2
- C.9 Explain the following terms: (i) URL (ii) Web Browser 2
- C.10 What is Client/Server computing? 2
- C.11 Difference between Font and Basefont tags. 2
- C.12 Differentiate between Model and Modeless Dialog Boxes. 2