

## 1 Mark Questions/Answers

1. Identify the odd one out of the following statements. State reason for your choice.

- i) switch
- ii) do while
- iii) while
- iv) for

**Ans** ( i) switch

switch is a selection statement but others are looping / iteration statements.

2. What is the difference between setVisible() and setEnabled() methods?

**Ans** setVisible() sets the visibility of a component i.e. whether the component will be visible or hidden on form. setEnabled() sets whether the component can trigger an event or not.

3. What is the difference between the following statements i) and (ii)

- i) a = 5;
- ii) if (a == 5)  
x = 3;

**Ans** In i) variable a is being assigned the value 5 whereas in ii) a is being checked for equality with 5 OR In i) assignment operator is used and in ii) relational operator '==' is used.

4. Write the output in jTextField1 if deocode is 3.

```
switch(deocode)
{
case 1 :
allowance = 4000;
break;
case 2 :
allowance = 3200;
break;
default :
allowance = 1000;
}
jTextField1.setText(" "+allowance);
```

**Ans** 1000

5. When is if-else if statement preferred over switch statement?

**Ans**

- When relational operators have to be used
- When range checks has to be done
- When data types other than int & char have to be used

6. What is the purpose of break statement?

**Ans** 'break' statement terminates the loop / switch and transfers control to the statement following the loop / switch .

7. What will be displayed in jTextField1 and jTextField2 after the following code is executed:

```
int t;
int s;
s = 2;
t = (4*s++)/2;
jTextField1.setText(" "+t);
jTextField2.setText(" "+s);
```

**Ans.** 4 will be displayed in jTextField1  
3 will be displayed in jTextField2

8. Identify the odd one out of the following Java statements. State reason for your choice
- i) for
  - ii) do while
  - ii) switch
  - iii) while1

**Ans** iii) switch  
switch is a selection statement but others are looping / iteration statements.

9. Write the purpose of parseInt() method.  
**Ans** parseInt() converts a String value to Integer data type.

10. Identify invalid variable names out of the following. State reason if invalid.
- (i) for
  - (ii) -salary
  - (iii) salary12
  - (iv) product

**Ans** Invalid variable names : i) for and ii) -salary  
Reason : i) 'for' : is a keyword  
ii) '-salary' : variable name cannot start with special character

11. Identify programming languages out of the following:  
HTML,C++, JAVA,MySQL

**Ans** C++, Java

12. Write Java statement to extract selected item from a given listbox named "jList1."

**Ans** `String X =(String)jList1.getSelectedValue();`  
OR  
`String X=jList1.getSelectedValue().toString();`

13. What will be displayed in jTextField1 and jTextField2 after the following code is executed:

```
int t;  
int x;  
x = 12;  
t = (3*x++)/3;  
jTextField1.setText(" "+t);  
jTextField2.setText(" "+x);
```

**Ans** 12 will be displayed in jTextField1  
13 will be displayed in jTextField2

14. Write the output that will be displayed in the textfields by the following Java code:

```
String x;  
String stream="Commerce";  
jTextField1.setText((stream.length()+9)+"");  
x = stream.concat("Humanities");  
jTextField2.setText(x);  
jTextField3.setText(" "+x.substring(2,5));  
jTextField4.setText(stream.toLowerCase());
```

Ans    jTextField1 : 17  
      jTextField2 : CommerceHumanities  
      jTextField3 : mme  
      jTextField4 : commerce

15.    While working in Netbeans, Ms. Sonia has designed a login page where she wants to display “Welcome” or “Try again” message depending on the password entered by the user in text field named ‘jTexField1’. If password entered is “India”, ‘Welcome’ message should be displayed otherwise ‘Try again’ message should be displayed. Help her in choosing more appropriate statement out of 'If statement' and 'Switch statement'.

Ans:    IF statement as String matching can only be done through if statement.

16.    Write Java code to assign the value 10 to variable x and store its square value in another variable y.

Ans:    `x=1 ;`  
      `y=x*`  
      `x ;`

17.    Following is a list of programming languages:  
      BASIC, COBOL, C, JAVA

      Help Sandhya in identifying Object Oriented language(s) from the above given list.        (

Ans:    Java

18.    Satyam is designing a frame in Netbeans containing list box. Help him in writing suitable Java statement to extract selected item from a given listbox named “jList1.”        (

Ans:    `jList1.getSelectedIValue();`

19.    What will be displayed in jTextField1 and jTextField2 after the following code is executed:

```
int number = 12;  
if (number <15)  
{  
jTextField1.setText(""+ number) ;  
number++;  
jTextField2.setText(""+ number) ;  
}  
else  
{  
jTextField1.setText("number1") ;  
number++;  
jTextField2.setText("number2") ;  
}
```

Ans.    12  
      13

20.    The\_\_\_\_\_contain all of the components offered by the Swing API.

Ans.    Palette.

21    Name the method to set the value of jTextField.

Ans.    `setText()`

22. In the statement given below, which statement will be executed next if the value of a=5 and b=10?

```
if ((a>4) || b<7)
    jLabel1.setText(" Greater");
    else
    jLabel1.setText(" Lesser");
```

Ans. The statement is: jLabel1.setText(" Greater");

23. What is the starting /first index value for a jList and a JComboBox control?

Ans. The first item is added at index (); the next item is added at index 1 and so forth in case of a JComboBox and jList controls.

24. What is an Interface?

Ans. An interface is a list of methods that must be defined by any class which implements that interface. It may also define constants (public static final). In Java an interface is similar to an abstract class in that its members are not implemented.

25. What is the purpose of get connection() method?

Ans. The DriverManager class contains the getConnection() method is used to establish a connection to a database. It uses a username, password, and a jdbc url to establish a connection to the database and returns a connection object.

26. Write the syntax of for statement.

Ans. The syntax of for statement is:  
For (<initialization>;<loop condition>;<increment expression>)  
    <loop body>

27. Define voice mail.

Ans. Voice mail is a 24-hour universally accessible voice messaging service. It will answer your telephone calls and allow callers to leave messages when you are unable to take calls.

28. While making a form in NetBeans, Ms Jayalaxmi wants to enter students roll no. and gender (Male/female) in to a form. Name the controls that she will use in her form.

Ans. For roll no. she will use: JTextBox.

29. In the statement give below, which statement will be executed next if the value a=5 and b=10?

```
if (a*a>=b)
    a=a+1;
    else
    b=b+1;
```

Ans. The statement is: a+1;

30. What are abstract methods?

Ans. Abstract methods are methods with no body specification. Subclasses must provide the method statements for their particular meaning. If the method was one provided by the superclass, it would require overriding in each subclass. And if one forgot to override, the applied method statements, may be inappropriate. The abstract keyword is also used to declare a method as abstract. An abstract method consists of a method signature, but no method body.

31. How many times the following loop get executed?

```
int x = 5, y = 36;
while (x<=y)
{
    X+=6;
```

Ans. }  
The loop will execute 6 times.

## 2 Marks Question/Answers

1. Sandhya is creating a webpage. She is entering HTML code on her computer. In between, she keeps pressing 'Refresh' / 'Reload' button on her browser. What is the purpose?

**Ans** The purpose of 'Refresh'/'Reload' is to view the changes in the webpage.

2. What does 'XML' stand for? How is the purpose of HTML different from XML?

**Ans** XML stands for eXtensible Markup Language. HTML is used to create web pages / display data whereas XML is used to describe/store/transport data.

3. Write Java code (statements) to declare Y as integer variable. Then, assign the value 30 to a variable Y. Increase the value of Y by 5 and store the increased value in Z.

**Ans** `int Y;`  
`Y = 30;`  
`Y = Y + 5;`  
`Z = Y;`  
*(½ mark for declaring Y)*  
*(½ mark for initialising Y to 30)*  
*(½ mark for incrementing the value of Y)*  
*(½ mark for assigning the final value to Z)*

4. Write the contents of jTextField1, jTextField2, jTextField3 and jTextField4 when the following statements are executed :

```
String x;  
String str = "Java";  
x = str.concat("study");  
double a = 7.8765;  
jTextField1.setText(x.length()+" ");  
jTextField2.setText(x.toUpperCase());  
jTextField3.setText(x.substring(2,5));  
jTextField4.setText(Math.round(7.8765)+" ");
```

**Ans** jTextField1: 9  
jTextField2: JAVASTUDY  
jTextField3: vas  
: 8  
**OR**  
9  
JAVASTUDY  
vas  
8

5. Rewrite the following code using WHILE loop:

```
int sum = 0;  
for(int i=9;i>=1;i)  
{  
if(i%3==0)  
sum = sum + i;  
else  
sum = sum i;  
}
```

**Ans.** `int sum = 0, i= 9;`  
`while (i>=1)`

```

{
if(i%3==0)
sum = sum + i;
else
sum = sum i;
i;
}

```

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

```

int x = 10;
int y = 50;
do;
{
x+5 = x;
y5
= y;
while ( x <= y );

```

**Ans**

```

int x = 10;
int y = 50;
do
{
x= x+5;
y = y5;
}
while ( x <= y );

```

7. What is the difference between statements (i) and (ii)

```

(i)    t = 2;
(ii)   if (t == 2)
        d = 3;

```

**Ans** In (i) variable 't' is being assigned the value 2 whereas in (ii) 't' is being checked for equality with OR  
In (i) assignment operator is used and in (ii) relational operator '==' is used.

8. Write HTML tags to do the following :

(i) Inserting a horizontal line in a web page.  
(ii) Inserting a line break

**Ans** (i) <HR> or <hr>  
(ii) <BR> or <br >

9. What does 'XML' stand for? How is the purpose of HTML different from XML?

**Ans** XML stands for eXtensible Markup Language.  
HTML is used to create web pages / display data whereas XML is used to describe/store/transport data.

*(1 mark for expanding XML)*  
*(1 mark for correct difference)*

*Note : Full 1 mark to be allotted if only purpose of HTML is specified.*

10. Rewrite the following code using if else if statement:

```

switch(decode)
{
case 1 :

```

```

allowance = 4000;
break;
case 2 :
allowance = 3200;
break;
default :
allowance = 1000;
}

```

**Ans** if (depcode == 1)  
allowance = 4000;  
else if (depcode == 2)  
allowance = 3200;  
else  
allowance = 1000;

11. Write the value that will be stored in variable sum after execution of following code:

```

int sum = 0, m=4;
for(int i=9;i>=6;i)
{
if(i%3==0)
sum = sum + i;
else
sum = sum i;
}

```

**Ans** sum = 0

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

```

int a = 0;
int b = 15;
do ;
a= a+3;
b = b3;
while a <= b ;

```

**Ans** int a = 0;  
int b = 15;  
do  
{  
a= a+3;  
b = b3;  
}  
while ( a <= b );

13. Deepti works as a programmer in a travel company. She has developed the following code to display travel detail according to user's choice. Help her in rewriting the same code using SWITCH CASE:

```

if(choice==1)
jTextField1.setText("New Delhi to Goa");
else if(choice==2)
jTextField1.setText("New Delhi to Paris");
else if(choice==3)
jTextField1.setText("New Delhi to Bangkok");
else
jTextField1.setText("Pl. choose valid option");

```



Ans. switch(choice)  
 {  
 case 1:  
 jTextField1.setText("New Delhi to Goa");  
 break;  
 case 2:  
 jTextField1.setText("New Delhi to Paris");  
 break;  
 case 3:  
 jTextField1.setText("New Delhi to Bangkok");  
 break;  
 default:  
 jTextField1.setText("Pl. choose valid option");  
 }  
 }

14. Shambhavi has to design two web pages with following specifications:  
 i. One web page should have an unordered list.  
 ii. Another web page should have background "Yellow" in colour.  
 Suggest her suitable tag(s) and attribute(s) for the above specifications.

Ans: i. <UL> <LI>  
 ii. <body> tag and bgcolor attribute

15. Albert works as a website developer in Global Website Designers company. Currently he has created following tags in XML:  
 <STUDENT>...</STUDENT>  
 <Student>....</Student>  
 Are these tags part of HTML code or XML code?  
 Are these same same or different?

Ans: These tags are part of XML code.  
 These tags are different.

16. How many times will the loop execute?  
 int value1 =7,value2=19;  
 do  
 {  
 JOptionPane.showMessageDialog(null,value1+value2);  
 value1=value1+2;  
 value2=value2-2;  
 } while(value1<=value2);

Ans : 4 times.

17. Find output of the following Java code snippet:  
 String City="Delhi",PinCode="110001",Str="";  
 City=City+" "+PinCode;  
 JOptionPane.showMessageDialog(null,City);  
 int l=City.length();  
 int i=0;  
 while(i<l)  
 {  
 Str=Str+City.substring(6);  
 i=i+15;  
 }  
 JOptionPane.showMessageDialog(null,Str);

Ans: Delhi 110001  
 110001

18. Rewrite the following code using WHILE loop:

```
int x=100;
for(int i=2;i<=22;i=i+4)
{
    jTextArea1.append("\n"+(i+x));
    x=x-2;
}
```

Ans: 

```
int x=100;
int i = 2;
while (i<=22)
{
    jTextArea1.append("\n"+(i+x));
    x=x-2;
    i = i+4;
}
```

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

```
int n=5,int i=1,f=1;
do;
{
    f=f*i;
    i++;
    while(i<=n)
    jTextField1.setText(""+f);
```

Ans: 

```
int n=5,i=1,f=1;
do
{
    f=f*i;
    i++;
}while(i<=n);
jTextField1.setText(""+f);
```

20. Write a program to accept an integer value in a jTextField1 and append all odd and even numbers in two different jTextArea respectively.

Ans. The code is as follows:

```
int n;
n = Integer.parseInt(jTextField1.getText());
for(int i=1;<=;i++)
}
if (i%2!=0)
jTextArea1.append(i+"\n");
else
jTextArea2.append(i+"\n");
}
```

21. Consider the HTML code <A HREF =#into>Introduction</A>.

In the above code,

(i) What is the purpose of #?

(ii) What will be happen when the user clicks "Introduction"?

Ans. (i) # is used to place the anchor in same document.

(ii) When the user clicks on Introduction, the marked anchor intro will be displayed on screen.

22. Write a function using java to calculate the area of a circle. Notice that the function should pass radius as parameter and return area.

Ans. The function is as:

```
Private double area_circle(float radiou) {  
    double area = 0;  
    area = 3.14 * radious * radious;  
    return area;  
}
```

23. Rewrite the following if-else if construct using switch case statement:

```
If (opt == 1)  
    jLabel1.setText("You entered one");  
else if (opt == 100)  
    jLabel1.setText("You entered ten");  
else if  
    jLabel1.setText("You entered hundred");  
else if (opt == 1000)  
    jLabel1.setText("You entered thousand");  
else  
    jLabel1.setText("Invalid entry");
```

Ans. The switch case code is as follow:

```
switch (opt) {  
    case 1 : jLabel1.setText("You entered one");  
        break;  
    case 10 : jLabel1.setText("You entered ten");  
        break;  
    case 100 : jLabel1.setText("You entered hundred");  
        break;  
    case 1000 : jLabel1.setText("You entered thousand");  
        break;  
    default : jLabel1.setText("Invalid entry");  
}
```

24. What will be the values of variables 'P' and 'Q' after the execution of the following code?

```
int P, Q=0;  
for (P=1; P<=4; P++)  
{  
    Q+=P;  
    Q--;  
}
```

Ans. P=5 and Q=6,

25. What will be displayed in jTextField2 if you enter 9999 in jTextField1?

```
Double Number, RoundedNumber;  
Number=Double.parseDouble(jTextField1.getText());  
RoundedNumber=Math.round(Number*1000)/1000.0;  
jTextField2.setText(Double.toString(RoundedNumber));
```

Ans. jTextField2=9999.0

26. Rewrite the following code using for loop:

```
int sum = 0, i = 9;  
while (i > 0) {  
    if(i%3==0)  
        sum=sum+i;
```

```

else
    sum=sum-l;
i--;
}

```

Ans. The for loop is:

```

int sum = 0;
for(int i=9;>0;-- )
    if(i%3==0)
        sum=sum+l;
    else
        sum=sum - l;
}

```

27. What will be the output in JTextArea1 when the object of class Hello invoke the function display()?

```

public class Hello {
    int a;
    void set_a(int num) {
        a = num;
    }
    int get_a() {
        return a;
    }
    void display() {
        Hello ob1 = new Hello();
        Hello ob2 = new Hello();
        ob1.set_a(10);
        ob2.set_a(99);
        JTextArea1.append((ob1.get_a() + "\n"));
        JTextArea1.append((""+ob2.get_a()));
        int x = ob1.get_a();
        JTextArea1.append("++x + "\n");
        JTextArea1.append("x--");
    }
}

```

Ans. The output is as follows:

```

10
99

```

28. Explain the following:

(i) `<tr>...</tr>`                      (ii) `<td>...</td>`

Ans. (i) `<tr>...</tr>`. This is used when you want a new Table Row to start. To close off this tag you need just the one `</tr>` at the end of the row.

(ii) `<td>...</td>`. You define a cell in a table by using `<td>`. Use `<td>` (Table Data) in front of every piece of information you want in a cell. To close off this tag you need just the one `</td>` at the end.

29. Rewrite the following set of if-else statement in terms of switch-case statement.

```
int num, val, nval;
num = Integer.parseInt(jTextField1.getText());
if (num == 5)
{
    val = num * 25 - 20;
    nval = num + val;
    jLabel1.setText(String.valueOf(num) + val);
}
else
    if ( num == 10)
    {
        val = num * 20 - 15;
        nval = val - num;
        jLabel1.setText(Integer.toString(nval));
    }
```

Ans. The switch statement program code is as:

```
int num, val, nval;
num = Integer.parseInt(jTextField1.getText());
switch (num)
{
    case 5 : val = num * 25 -20;
            nval = num + val;
            jLabel1.setText(String.valueOf(num) + val);
            break;
    case 10 : val * 20 -15;
            nval = val num;
            jLabel1.setText(Integer.toString(nval));
            break;
}
```

30. Rewrite the following if segment using switch-case statement.

```
char code='A';
if(code=='A')
    jTextField1.setText("Accountant");
if ((code == 'C') || (code = 'G'))
    jTextField1.setText("Grade IV");
if (code == 'F')
    System.out.println("Financial Advisor");
```

Ans. The switch-case converted code is as follows:

```
char code='A';
switch (code) {
    case 'A' :
        jTextField1.setText("Accountant");
        break;
    case 'C' :
    case 'G' :
        jTextField1.setText("Grade IV");
        break;
    case 'F';
        jTextField1.setText("Financial Advisor");
}
```

31. What will be the contents of jTextField1 to jTextField4 after executing the following code?

```
String s="abcdefghi";  
(i) jTextField1.setText(s.substring(5));  
(ii) jTextField2.setText(s.substring(5,8));  
(iii) jTextField3.setText(" " + Math.abs(-10));  
(iv) jTextField4.setText(" " +Math.floor(10.56));
```

Ans. (i) jTextField1 : fghi  
(ii) jTextField1 : fgh  
(iii) jTextField3 : 10  
(iv) jTextField4 : 10

32. What will be the values of the variables 'p' and 'q' after the execution of the following code?

```
int p, q=0;  
for (p=1; p<9; p++)  
{  
    q+=p;  
    q--;  
}
```

Ans. The values of p= 10 and q = 36

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

```
int Ctr;  
Ctr = 18;  
do;  
    Ctr = Ctr-2;  
    System.out.displayln(Ctr);  
}while Ctr >= 2;
```

Ans. The underlined corrections are:

```
int Ctr;  
Ctr = 18;  
Do {  
    Ctr = Ctr-2;  
    System.out.println(Ctr);  
}while (Ctr >= 2;
```

### 3 Marks Question/Answers

1. Vijay has developed software for planning personal budget. A screenshot of the same is shown below:

The screenshot shows a Java Swing window titled "PERSONAL BUDGET PLAN". It contains a "Total Income" text field at the top. Below it is a section titled "EXPENSES" which includes four text fields for "Bills(Water/Electricity)", "Groceries", "Entertainment", and "Other Expenses". To the right of the "Groceries" field is a checkbox labeled "Money to be sent to Hostel". At the bottom of the "EXPENSES" section are three buttons: "CALCULATE", "CLEAR", and "CLOSE". Below these buttons are three more text fields: "SUM OF EXPENSES", "GRAND TOTAL OF EXPENSES", and "SAVINGS".

Total Income, Expenses of Bills (Water/Electricity), Groceries, Entertainment, other expenses and whether money is to be sent to Hostel are entered by the user. Sum of Expenses, Grand Total of Expenses and Savings are calculated and displayed by the program.

Write the code to do the following:

- (i). When 'CALCULATE' button is clicked, Sum of Expenses, Total Expenses and Savings should be calculated and displayed in appropriate text fields.
- Sum of Expenses is calculated by adding expenses on Bills(Water/Electricity), Groceries, Entertainment other expenses.
  - Grand Total of Expenses is calculated according to the following criteria:  
If 'Money to be sent to Hostel' checkbox is selected, 3000.00 is to be added to the sum of expenses. If it is not selected, Grand Total of Expenses is the same as sum of expenses.
  - Savings = Total Income – Grand Total of Expenses.

**Ans**

```
//Calculation of Sum of Expenses
jTextField6.setText("" +
Integer.parseInt(jTextField2.getText()+
Integer.parseInt(jTextField3.getText()+
Integer.parseInt(jTextField4.getText()+
Integer.parseInt(jTextField5.getText()));
//Calculation of Grand Total of Expenses
if(jCheckBox1.isSelected())
jTextField7.setText("" + 3000 +
Integer.parseInt(jTextField6.getText()));
else
jTextField7.setText("" +
Integer.parseInt(jTextField6.getText()));
// Calculation of Savings
jTextField8.setText("" +
Integer.parseInt(jTextField1.getText()) Integer.
```

```
parseInt(jTextField7.getText()));
```

(ii) When 'CLEAR' button is clicked, all text fields and checkbox should be cleared.

```
jTextField1.setText("");  
jTextField2.setText("");  
jTextField3.setText("");  
jTextField4.setText("");  
jTextField5.setText("");  
jTextField6.setText("");  
jTextField7.setText("");  
jTextField8.setText("");  
jCheckBox1.setSelected(false);
```

(iii) When 'CLOSE' button is clicked, the application should close.  
System.exit(0);

2. Ms. Sharma works as a programmer in "ABC Car Rental Company" where she has designed a software to compute charges to be paid by the client. A screenshot of the same is shown below:

The screenshot shows a Java Swing window titled "ABC CAR RENTALS". It features several input fields and controls: a "NAME" label with a text box, a "PHONE NUMBER" label with a text box, and a "Car Required for No. of Days" label with a text box. There are three radio buttons for car selection: "Deluxe Car", "Semi Deluxe Car", and "Ordinary Car". A "GUIDE REQUIRED" checkbox is located to the right of the radio buttons. At the bottom of the window, there are three buttons: "CALCULATE", "CLEAR", and "CLOSE". Below these buttons are three text fields labeled "Amount", "Guide Charges", and "Total Amount".

A client can take any car out of Deluxe/ SemiDeluxe/ Ordinary for rent.

A client can also opt for services of a guide. Charges vary depending on the type of car opted.

Charges of services of Guide are extra.

Help Ms. Sharma in writing the code to do the following:

(i) After selecting appropriate Radio Button and checkbox (if required), when 'CALCULATE' button is clicked, Amount, Guide Charges and Total Amount should be calculated and displayed in the respective text fields

Category of Car	Amount (In Rs.)
Deluxe Car	1000 per day
Semi deluxe car	800 per day



Ordinary car	700 per day
--------------	-------------

Amount is obtained by multiplying per day charges of Car with number of days for which the car is taken.

If 'Guide Required' checkbox is selected, Guide charges per day are Rs.500.00.

Guide Charges is calculated as :Car required for No. of days \* 500;  
Total Amount = Amount + Guide Charges

**Ans** // Calculation of Amount  
if (jRadioButton1.isSelected())  
jTextField3.setText("" + 1000\*  
Integer.parseInt(jTextField2.getText()));  
if (jRadioButton2.isSelected())  
  
jTextField3.setText("" + 800\*  
Integer.parseInt(jTextField2.getText()));  
if (jRadioButton3.isSelected())  
jTextField3.setText("" + 700\*  
Integer.parseInt(jTextField2.getText()));  
//Calculation of Guide Charges  
if(jCheckBox1.isSelected())  
jTextField4.setText("" + 500\*  
Integer.parseInt(jTextField2.getText()));  
//Total Amount  
jTextField5.setText("" +  
(Integer.parseInt(jTextField3.getText()+  
Integer.parseInt(jTextField4.getText())));

(ii) When 'CLEAR' button is clicked, all the textfields and checkboxes should be cleared.

```
jTextField1.setText("");
jTextField2.setText("");
jTextField3.setText("");
jTextField4.setText("");
jTextField5.setText("");
jTextField6.setText("");
jCheckBox1.setSelected(false);
```

(iii) When 'CLOSE' button is clicked, the application should close.

```
System.exit(0);
```

3. Mr. Pawan works as a programmer in “ABC Marketing Company” where he has designed a Salary generator software to generate the salary of salesman in which Name and Salary are entered by the user. A screenshot of the same is shown below:

Help him in writing the code to do the following:

- i.) After selecting appropriate Radio Button, when ‘Commission’ button is clicked, commission should be displayed in the respective text field as each Salesman will get a commission based on the units sold according to the following criteria:

Units sold	Commission(in Rs.)
1-20	500
20-40	1000
>40	2000

Ans. Code to calculate and display commission:

```
int com=0;
if(jRadioButton1.isSelected())
com=500;
else if(jRadioButton2.isSelected())
com=1000;
else if(jRadioButton3.isSelected())
com=2000;
jTextField3.setText(""+com);
```

- ii.) When ‘Gross Salary’ button is clicked, Gross Salary should be calculated and displayed in the respective text field as per the given formulae:

$$\text{Gross Salary} = \text{Salary} + \text{Commission}$$

Ans. Code to calculate and display Gross Salary:

```
int sal,comm;
sal=Integer.parseInt(jTextField2.getText());
comm=Integer.parseInt(jTextField3.getText());
jTextField4.setText(""+(sal+comm));
```

- iii.) After required selection of Checkbox(es), when ‘Facility Charges’ button is clicked, Facility charges will be displayed in the respective text field according to the following criteria:

Facility	Charges
Transport	500
Mess	2000

Ans. Code to calculate and display charges for the facilities:

```
int extra=0;
if(jCheckBox1.isSelected())
extra=extra+500;
if(jCheckBox2.isSelected())
extra=extra+2000;
jTextField5.setText(""+extra);
```

iv.) Money will be deducted from the Gross Salary according to the facilities opted by the employee. When 'Net Salary' button is clicked, Net Salary should be calculated and displayed in the respective text field as per the given formulae:

Net Salary= Gross Salary-Deductions

Ans. Code to calculate and display the Net Salary

```
int amt,extra;
amt=Integer.parseInt(jTextField4.getText());
extra=Integer.parseInt(jTextField5.getText());
jTextField6.setText(""+(amt-extra));
```

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

Mr. Mittal working in a Multi-national company. His family members visited a shopping mall and purchased variety of products including garments. The total amount goes into sum thousands. The owner of the shopping mall provides handsome discounts for credit cards holders:

Card Type	Discount shopping amount
HDFC	12%
ICICI	10%
Visa	9.5%
Axis	10.5%
Standard Chartered	8.5
City Bank	11.5%
SBI	8%

Carefully observe the picture:



A JPanel container is used for card types with JRadioButton controls as follows:

- jRadioButton1 : HDFC (optHDFC) with buttonGroup1
- jRadioButton2 : ICICI (optICICI) with buttonGroup1
- jRadioButton3 : Visa (optVisa) with buttonGroup1
- jRadioButton4 : Axis (optAxis) with buttonGroup1
- jRadioButton5 : Standard Chartered (optSC) with buttonGroup1
- jRadioButton6 : City Bank (optCity) with buttonGroup1
- jRadioButton7 : SBI (optSBI) with buttonGroup1

Enter the shopping amount (txtAmount) and do the following:

(i) Write the command for Discount button (named as cmdDisc) to compute discount amount (named as txtDisc) and net amount (named as txtNet).

(ii) Write the code for Clear button (named as cmdClear) to clear all the text boxes and set the default choice in the radio button as SBI.

(iii) Write the code for Exit button to close the application.

Ans. Project folder: ....\Source\_XII\Practice Papers\ShopUI

(i) Double click on the discount button. Notice that a cmdDiscActionPerformed event handler appears with a // TODO marker line. Write the following lines:

```
// Calculating discount amount and net amount
double discount=0;
double netamount=0;
double Amount = Double.parseDouble(txtAmount.getText());
If (optHDFC.isSelected())
    discount = Amount * 12/100;
else if (optICICI.isSelected())
    discount = Amount * 10\100;
else if (optVisa.isSelected())
    discount = Amount * 9.5/100;
else if (optAxis.isSelected())
    discount = Amount * 10.5/100;
else if (optSC.isSelected())
    discount = Amount * 8.5/100;
else if (optCity.isSelected())
    discount = Amount * 11.5/100;
else if (optSBI.isSelected())
    discount + Amount * 8/100;
netamount = Amount – discount;
txtDisc.setText(String.valueOf(discount));
txtNet.setText(String.valueOf(netamount));
```

(ii) Double click on the Clear All button. Notice that a cmdClearActionPerformed event handler appears with a //TODO marker line. Write the following lines:

```
txtAmount.setText("");
txtDisc.setText("");
txtNet.setText("");
optSBI.setSelected(true); // Default button selected
```

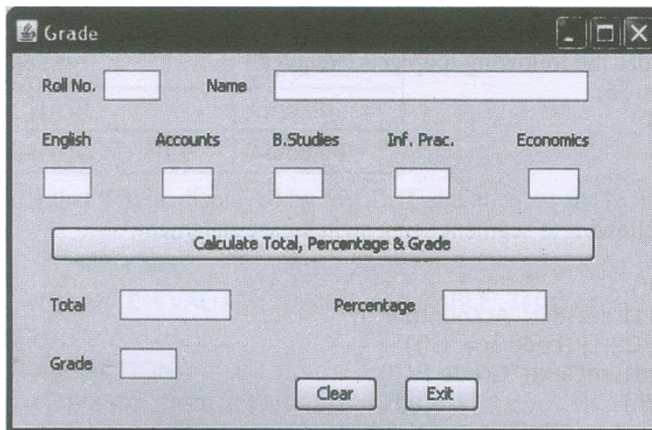
(iii) Double click on the Exit button. Notice that a cmdExitActionPerformed event handler appears with a //TODO marker line. Write the following line:

```
System.exit(0);
```

5. Design a GUI application (Grade) to calculate your class friends' grade using Java NetBeans IDE. The grade is calculated depending on the percentage of mark in five subjects as English (txtEng), Accounts (txtAcc), Business Studies (txtBst), Informatics Practices (txtInf) and Economics (txtEco). The grade will be calculated as follows:

Percentage	Grade
>=90	A+
>=80 & <90	A
>=70 & <80	B
>=60 & <70	C
>50 & <60	D
<50	F

The following is the screen used to calculate student grade:



Enter roll number, name and five marks in respective text boxes and do the following:

- (i) Write the code for Calculate Total, percentage & Grade button (named as cmdCalc) to calculate total (txtTotal), Percentage (txtPer) and grade (txtGr). Also display the same in respective text boxes.
- (ii) Write the code for Clear button (named as cmdClear) to clear all the textbox contents.
- (iii) Write the code for exit button (named as cmdExit) to close the application.

Ans. Project folder: ....\Source\_XII\Practice Papers\SGrade

(i) To calculate Grade, double click on the Calculate Total, Percentage and Grade button (cmdCalc). Notice that a cmdCalcActionPerformed event handler appear with a

//TODO marker line. Write the following lines:

```
Int R, eng, acc, bst, inf, eco, tot; // Marks and total
```

```
Float per;
```

```
String Name, Gr=" ";
```

```
R = Integer.parseInt(txtRoll.getText());
```

```
eng = Integer.parseInt(txtEng.getText());
```

```
acc = Integer.parseInt(txtAcc.getText());
```

```
bst = Integer.parseInt(txtBst.getText());
```

```
inf = Integer.parseInt(txtInt.getText());
```

```
eco = Integer.parseInt(txtEco.getText());
```

```
// Total mark
```

```
tot = eng + acc + bst + inf + eco;
```

```
// Percentage
per = tot / 5;
if (per >= 90)
    Gr = "A+";
else if (per >= 80 && per < 90)
    Gr = "A";
else if (per >= 70 && per < 80)
    Gr = "B";
else if (per >= 60 && per < 70)
    Gr = "C";
else if (per >= 50 && per < 60)
    Gr = "D";
else if (per < 50)
    Gr = "F";
// Displaying total, percentage and grade
txtTotal.setText(Integer.toString(tot));
txtPer.setText(Float.toString(per));
txtGr.setText(Gr);
```

- (ii) Double click on the clear button, Notice that a `cmdClearActionPerformed` event handler appears with

a `// TODO` marker line. Write the following lines:

```
txtName.setText("");
txtRoll.setText("");
txtEng.setText("");
txtAcc.setText("");
txtBst.setText("");
txtInf.setText("");
txtEco.setText("");
txtTotal.setText("");
txtPer.setText("");
txtGr.setText("");
```

- (iii) Double click on the Exit button. Notice that a `cmdExitActionPerformed` event handler with a `//TODO` marker line appears. Write the following line,  
`System.exit(0);`