INTERNATIONAL INDIAN SCHOOL, RIYADH

CLASS-XII FIRST TERM INFORMATICS PRACTICES

Chapter 1

1. What is MAC Address?

2. Write two advantages of networks.

3. Write two disadvantages of networks.

4. What is communication channel? Name the basic types of communication channels available.

5. What is IP address?

6. What is domain name? How is it alternatively known?

7. What are the various types of networks?

8. What is the difference between MAN and WAN?

9. What is meant by Topology? Name some popular topologies.

10. Define a network

11. What are the similarities and differences between bus and tree topologies?

12. What are the limitations of star topology?

13. What are the goals of network?

14. Write the applications of network?

15. What do you understand by domain name resolution?

16. What are communication channels? Discuss various channels available for networks?

17. Advantages and disadvantages of the followings :
    i. optic fiber
    ii. coaxial cables
    iii. twisted pair cables
    iv. radio waves
    v. microwaves
    vi. Satellites

18. Discuss and compare various types of networks?

19. Explain mostly used topologies.

20. What are hubs? What are its types?

21. What is the role of a switch in a network?

22. Discuss repeater.

23. What are common threats to network security?

24. What are denial of services attacks?

25. How can you prevent/ counter threats of network security?

26. When do you think, ring topology becomes the best choice for a network?

27. Write the two advantages and two disadvantages of star topology in network.

28. Write the disadvantages if twisted pair cables.

29. Define Hub.

30. Define switch

Chapter2

1. What is OSS?

2. Expand the terms: OSI, FLOSS, FSF, GNU, W3C, and PHP.

3. What is free software?

4. Define freeware and shareware.

5. What is openoffice.org?

6. What is font? What is OTF?

7. What are different font categories?

8. Define ODF.

9. What is key map based text entry?

10. What is Unicode?

11. What is ISCII?

12. What is Indian Script key map known as?

13. What is open source software?

14.Compare Free software and open source software.

15.Compare OSS and floss.

16.Compare Proprietary software and free software.

17.Compare Free ware and shareware.

18.Compare Freeware and free software

19.Write Short notes on GNU.

20.Write short notes on LINUX.

21.Write Short notes on MOZILLA.

22.Write short notes on APACHE.

23.Write short notes on POSTGRE SQL.

24.Write short notes on PHP.

25.Write short notes on Open Office.

26.What are technological standard and its various categories?

27.Mention some advantages of open standards.

28.What is the significance of Unicode in terms of Indian Language Computing?

29.How phonetic text entry is different from key map based text entry?

30.What is Ogg Vorbis? Why?

31.How to represent character in Memory?
32. What is font and its types?

Chapter 3

1.Name any two Object Oriented Programming languages?

2. Why is java called a platform independent language?

3. Elaborate the java Compilation process.

4. Why do we write a comment in a program? What are the two ways of writing comment in a java Program?

5. What is a syntax error in context of a program? Give an example.

6. What is RAD programming? Why is program developmentin java using Netbeans IDE is RAD?

7. What is IDE? Name two IDE for Programming in java.

8. Name any two type of Tokens available in Java

9. What are primitive data types? Name the various primitive data type available in Java.

10.. What are Reference data types?

11. What is type casting?

12. Name and explain the usage of any two data typesused in Java to store numbers with decimals.

13. What are Keywords? Give two examples of keywords available in Java.

14. Name and explain the usage of any one relational and one logical operator in Java.

15. What is the difference between = and == operator in java?

16. Name the two type of selection statement available in Java.

17.. Write the purpose of Switch Statement with the help of an example. Which Java Statement can be used in place of switch statement? In the switch statement, what happens if every case fails and there is no default option?

18. What is the purpose of 'break' statement in java?

19. What is the purpose of 'break' statement in java?

20. Find the output of the following code snippet written in java public static void main(String [ ]args)

```
{
long a=78345,s1=0,s2=0,r;
while(a>0)
{
r=a%10;
if (r%4==0)
s1+= r;
else
s2+=r;
a/=10;
}
System.out.println("S1 ="+ s1);
System.out.println("S2 ="+ s2);
}
```

21. Correct the errors in the following program segment written in JAVA. You are just required to

write the corrected code, underlying the corrections made.

```
public Static Void Main (String [] args)
{
Integer Nos = 100;
while (Nos => 45)
{
If (Nos % 5 = 0);
Nos+=10;
otherwise
Nos + = 20;
}
}
```

22. What will be output of the following code:

```
byte b;
double d= 417.35;
b= (byte) d;
system.out.println(b)
```

23. Given the value of a variable, write a statement,without using if construct, which will produce

the absolute value of a variable.

24. What is wrong with the following code fragment?

```
Switch (x)
{
case 1:
n1= 10;
n2= 20;
case 2:
n3=30;
break;
n4= 40;
}
```

25. What will be the output of the following program

```
code?
int m = 100;
int n = 300;
while(++m < --n);
System.out.println(m+" "+ n);
```

26. What does the following fragment display

```
String s = "Six:" + 3+ 3;
System.out.println(s);
```

26. What is the output of the following code?

String s = new string();
System.out.println("s = " + s);

27. What will be the output of the following code snippet?

int x= 10;
int y = 20;
if ((x<y)||(x=5) > 10)
System.out.println(x);
else
System.out.println(y);

28. State the output of the following program:

public static void main(String args[ ])
{
int x = 10;
int y = 15;
System.ou.println((x>y)? 3.14: 3);
}

29. State the output of the following program:
public static void main(String args[ ])
{
int x = 10;
float y = 10.0;
System.ou.println((x>y)? true: false);
}

30. Given a pacakage named EDU.student, how would you import a class named Test contained in this package? Write one line statement.

31.Consider the following class definition:
Class Student
{
abstract double result( )
}
This code will not compile since a keyword is missing in the first line. What is the keyword?

12.Can an abstract method be declared final? Yes or No

Chapter :4

1.What does getPassword() on a password field return?

  (a) a string (b) an integer (c) a character array.

2.Which of the following component is the best suited to accept the country of the user?

A.List B. Combo box C. Radio button D. Check box

3.What command do you need to write in actionPerformed() event handler of a button, in order to make it exit button?

a. System.out.println(); b. System.exit(0); c. System.out.print()

4.What method would you use, in order to simulate a button's(namely Okbtn) click event, without any mouse activity from user's side?

a. Okbtn.setText() b.Okbtn.getText() c. Okbtn.doClick()

5.What would be the name of the event handler method in the ListSelection listener interface for a list namely CheckList to handle its item selections?

a. CheckListValueChanged() b. getSelectedValue() c. clearSelection()

6.Which control displays text that the user cannot directly change or edit?

a.TextField b. Checkbox c. Combobox d. Label

7.Which control provides basic text editing facility?

a.TextField b. Checkbox c. Combobox d. Label

8.Occurrence of an activity is called:

a. Function b. Class c. Object d. Event

9.Which property is used to set the text of the Label?

a. font b.text c.name d. icon

10.The object containing the data to be exhibited by the combo box by which property.

a. editable b. model c.selectedIndex d.selectedItem

11.What is GUI programming?

12.How is swing related to GUI programming?

13.What is an event? What is event handler?

14.What is the default name of action event handler of a button namely TestBtn?

15.What property would you set to assign access key to a button?

16.Which method can programmatically performs the click action of a push button?

17.Which property would you set the setting the password character as '$'?

18.Which method returns the password entered in a password field?

19.Which list property do you set for specifying the items for the list.

20.Which method would you use to determine the index of selected item in a list?

21.Which method would you use to insert an item atspecified index, in the list?

22.How you can determine whether 5th item in a list is selected or not?

23.Which method you would use to insert 'Hello' at 10th position in the Text Area control.

24.Which method you would like to use to insert an Icon (picture) on a Push Button.

25.Which property would you like to set to make a Combo box editable?

26.What is Layout Manager? Name the layout manager s offered by NetBeans?

27. Name three commonly used properties and methods of the following controls.
    (a) text field (b) text area (c) Check Box

28.What is dispose() used for ?

29.What is the difference between-
    (a) Text field & Text area
    (b) Text field & password field
    (c) Radio Button & Check Box

30.What is the significance of following properties of a text area ?
    (a) lineWrap (b) wrapStyleword

31.What is the significance of a button group? How do you create a button group?

32.What do you understand by focus?

33.What is meant by scope of a variable?

34.Create a Java Desktop Application to find the incentive (%) of Sales for a Sales Person on the basis of following feedbacks

Feedback	Feedback Incentive (%)
Maximum Sales	10
Excellent Customer Feedback	8
Maximum Count Customer	5

Note: that the sales entry should not be space.Calculate the total incentive as :Sales amount* Incentive. The feedback will be implemented in JCheckBox controls.Using a JButton's (Compute Incentive) click event handler,display the total incentives in a JTextField control. Assume the nomenclature of the swing components of your own.
Note that the JFrame from IDE window will be shown as given:

35.Assume the following interface built using Netbeans used for bill calculation of a ice-cream
parlor. The parlor offers three verities of ice-cream – vanilla, strawberry, chocolate. Vanilla icecream costs
Rs. 30, Strawberry Rs. 35 and Chocolate Rs. 50. A customer can chose one or more ice-creams, with
quantities more than one for each of the variety chosen. To calculate the bill parlor manager selects the
appropriate check boxes according to the verities of ice-cream chosen by the customer and enter their
respective quantities.
Write Java code for the following:
a. On the click event of the button 'Calculate', the application finds and displays the total bill of the
customer. It first displays the rate of various ice -creams in the respective text fields. If a user doesn't
select a check box, the respective ice-cream rate must become zero. The bill is calculated by multiplying
the various quantities with their respective rate and later adding them all.
b. On the Click event of the clear button all the text fields and the check boxes get cleared.
c. On the click event of the close button the application gets closed

36.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 a nd 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

(a) Write the code to calculate the Basic salary, deductions, gross salary and net salary based on the given specification. Add 3000 to net salary if employee is working for more than 10 years.

Gross salary=Basic salary + DA + HRA
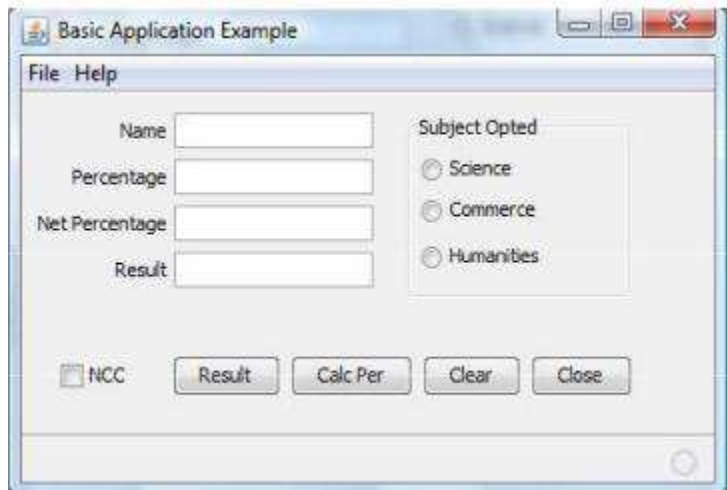   Net salary = Gross salary – deductions

(b) Write the code to exit the application. (c)Write the code to disable textfields for gross salary, deductions and netsalary.

37. ABC School uses the following interface built in java to check the eligibility of a student for a

particular stream from science, commerce and humanities. The user first enters the total percentage and selects the desired stream by selecting the appropriate option button. An
additional 5% is marks is given to students of NCC. Write Java Code for the following
a. On Action event of the button 'Calc Percentage' Net percentage of the student is
calculated and displayed in the appropriate text filed. Net percentage is same as that of
the actual percentage if the student doesn't opts for NCC otherwise 5% is added to actual
percentage.
b. On Action event of the button 'Result', the application checks the eligibility of the
students. And display result in the appropriate text field. Minimum percentage for science
is 70, 60 for commerce and 40 for humanities.
c. On the Click event of the clear button all the text fields and the check boxes get cleared.
d. On the click event of the close button the application gets closed.

38. Describe the relationship between properties, methods and events.

39. What is container tag?
40. What does a getPassword() method of a password field returns?

41. What will be the contents of jTextArea1 after executing the following statement:
jTextArea1.setText("Object\nOriented\tProgramming");

42. What is difference between jRadioButton and jCheckBox?

43. What does a JList fire when a user selects an item?

44. What is Layout Manager? Discuss briefly about layout managers offered by NetBeans?

47. Name three commonly used properties and methods of the following controls.

    (a) text field (b) text area (c) label (d) Check Box (e) button.

48. What is dispose() used for ?

50. What is the difference between-
(a) Text field & Text area
(b) List & Combo
(c) Radio Button & Check Box

51. What is the significance of following properties of a text area ?
(a) lineWrap (b) wrapStyleword

52. What is the significance of a button group ? How do you create a button group ?

53. Discuss about some commonly used properties of lists and a combo boxes.

54. What methods obtains the current selection of a combo box ? Give a code example.

55.The FOR U SHOP has computerized its billing. A new bill is generated for each customer. The shop allows three different payment modes. The discount is given based on the payment mode.

Credit Card Type	Shopping Amount	Discount
Cash	< 10000	20 %
	>= 10000	25 %
Cheque	< 15000	10 %
	>= 15000	15 %
Credit Card	< 10000	10 %
	>= 10000	12%

a.Write the code for the CmdClear Button to clear all the Text Fields.
b) Write the code for the CmdCalc Button to display the Discount Amount and Net Price in the TxtDisc and the TxtNet Text Fields respectively

Chapter 5

1. In java, methods reside in _____.
(a) Function (b) Library (c) Classes (d) Object

2. The number and type of arguments of a method are known as _____.
(a) Parameter list (b) Calling (c) Definition (d)None to these.

3. The first line of method definition that tells about the type of return value along with number and type of arguments is called_____.
(a) Class (b) Object (c) Prototype (d) Datatype

4. A member method having the same name as that of its class is called_____method.

(a) Destructor (b) Constructor (c) Object (d) Variable

5. A constructor method has_____return type.
(a) float (b) void (c) no (d) int

6. A_____constructor takes no arguments.
(a) Copy constructor (b) Non-Parameterized constructor (c) Parameterized constructor

7. A_____constructor creates objects through values passed to it.
(a) Copy constructor (b) Default constructor (c) Parameterized constructor

8. The keyword_____refers to current object.
(a) void (b) goto (c) this (d) null

9. Define a method. What is method prototype and signature?

10. How are following passed in Java: (i) primitivetypes (ii) reference types?

11. The String objects being reference types are passed by reference but changes, if any, are not reflected back to them. Why?

12.At what time is the constructor method automatically invoked?

13. What are Composite and user defined data types?

14. Can you refer to a class as a composite type/ user-defined type?

15.How is a constructor invoked?

16. Which method of a class is invoked just once for an object? When?

17. Passing the address means call by value or call by reference?

18. What's wrong with the following constructor definition for the class PlayInfo?
public void PlayInfo(int sticks)

{

nsticks = sticks;

}

19. How many values can be returned from a method?

20. What do you understand by Class and Object?

21. How to declare a class in Java?

22. What is the difference between instance and static variable?

23. What do you understand by constructor in OOP?

24.What are the properties of Constructor?

25..What do you understand by methods? What are the advantages of methods?

26. How to define a method?

27.What are the way to pass values to methods in Java?

28. Differentiate between constructor and method.

29. What is "this" keyword?

30.How can we use a class as a composite data type?

31.How are parameterized constructors different from non-parameterized constructors?

32. List some of the special properties of the constructor methods.

33. Differentiate between Instance member and static members of a class.
34. What do you mean by actual and formal parameters of a method? Explain with an example.
35. Identify the errors in the method skeletons given below:
(1) float average (a, b) { }
(2) float mult (int x, y) { }
(3) float doer (int, float = 3.14) { }
36. Given the method below write an ActionPerformed event method that includes everything necessary to call this method.

int thrice (int x)
{ return (a * 3) ; }

Chapter 6

1. Which keyword can protect a class in a package from accessibility by the classes outside thepackage?

2. We would like to make a member of a class visible in all subclasses regardless of what package theyare in. Which one of the following keywords would achieve this?

3. Which of the following keywords are used to control access to a class member?
   (a) default (b) abstract (c)protected (d) interface (e) public.

4. The public members of objects are accessed through which operator.
   (a) arrow (b) dot (c) this (d) none of these

5. The private members are accessible only inside their _____class.
   (a) own (b) sub (c) super (d) none of these

6. Which command is used to import packages and their classes?
   (a) include (b) import (c) public (d) inline

7. Which statement is used to create a package in Java?
   (a) Class (b) super (c) this (d) package

8. In Java, all strings are objects?
    (a) True (b) False (c) don't say

9. What do you understand by Package in Java?

10. .Given a package named EDU. Student, how would you import a class named Test contained in thispackage? Write one line statement.

11. What will be the output of the following code
    StringBuffer city = new StringBuffer("Madras");
    StringBuffer string = new StringBuffer();
    string.append(new String(city));
    string.insert(0,"Central");
    string.out.println(string);

12. Give the output of the following program:
    classMainString
    { public static void main(String agrs[])
    { StringBuffer s = new StringBuffer("String");
    if(s.length() > 5) && (s.append("Buffer").equals("x");
    System.out.println(s);
    }
    }

13. What is the output of the following code fragment if "abc" is passed as argument to the func()?
    Public static void func(string s1)
    {
    String s = s1 + "xyz";
    System.out.println("s1=" + s1);
    System.out.println("s = " +s);
    }

14. What are the access specifiers in Java? Expalin.

15. What do you meant by private, public, protected, package(friendly) access specifiers?

16. What do you understand by Library in Java?

17. What are the different types of access specifier supported by java?
18. Which is the default package of java?

19. What is friendly access of class member?

20. How does a class enforce information hiding?

21. Define an abstract class and abstract methods.

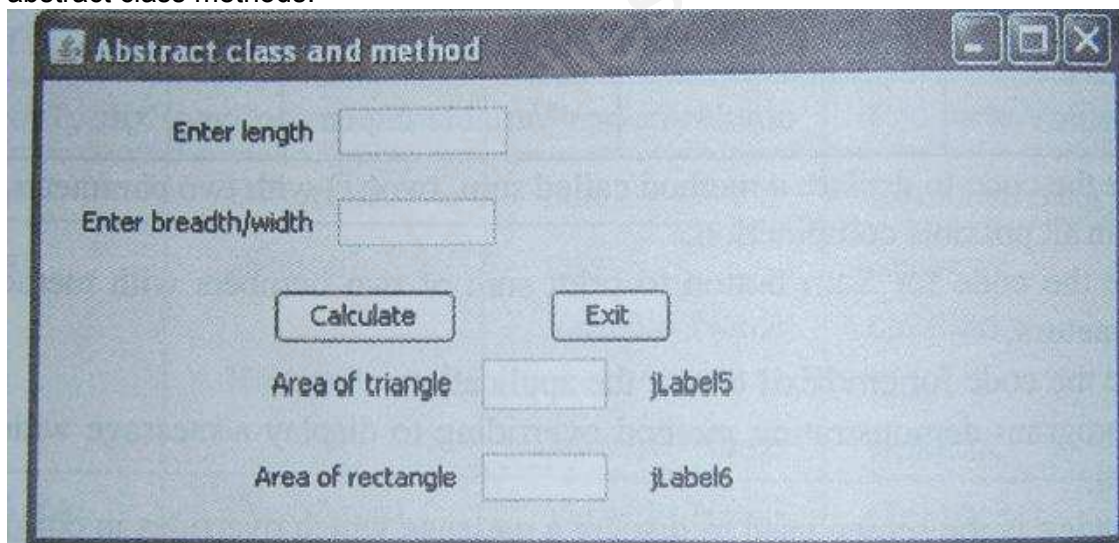22. What is an interface? What is the use of Interface.

Chapter 7

1.What is inheritance?

2.What is the primary purpose of inheritance?

3.Name three basic concepts in Java which are used in Object oriented programming.

4.Which constructor is called first: subclass or superclass?

5.What is abstract class?

6.What is method overriding in Java?

7.What is an Interface in Java?

8.What is the significance of abstract class in Java program?

9.What types of inheritance does Java have?

10.State True and False
      a. A subclass inherits both member variables and member methods of superclass.
      b. A class created with keyword abstract can have at the most one object.
      c. Overloading and Overriding are similar concepts in Java.
      d. Java supports single inheritance only at multiple levels of inheritance.
      e. Interfaces are used for multiple inheritance.
11.Declare and explain the basic syntax of inheritance.

12.How does inheritance support software reuse?

13.Differentiate between method overloading and method overriding.

14.Write a program to find the area of triangle and rectangle through abstract class and abstract class method.
The following is the screen used to find the area of triangle and rectangle using abstract class and abstract class methods:
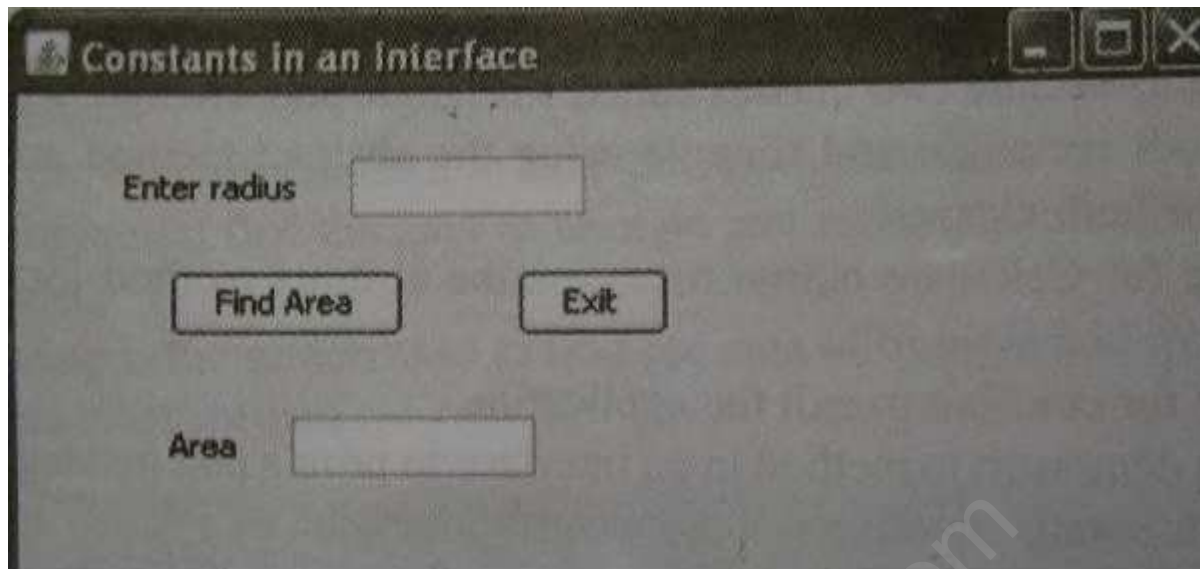
Control Type	Control Name	Property Name	Property Value
JFrame	AbstractU1	title	Abstract class and method
JTextField	JTextFIeld1	text	[None]
		Variable Name	txtL
	JTextFIeld2	text	[None]
		Variable Name	txtH
	JTextFIeld3	text	[None]
		Variable Name	txtAreaT
	JTextFIeld4	text	[None]
		Variable Name	txtAreaR
JButton	JButton1	text	Calculate
		Variable Name	cmdCalc
		text	Exit
		Variable Name	cmdExit

a) Write the code to declare an abstract class Figure with an abstract method area(Notice that the class should declare the possible variables for area operation.

b) Write the code to declare two classes called Rectangle and Triangle which will calculate the area for both rectangle and triangle using the abstract method area( ). Use suitable constructorsfor both classes.

c) Write the code for Calculate button to access the abstract method for both triangle and rectangle.

d) Write the code for cmdExit to exit the application.

15. Write a program to demonstrate constant in an interface to find the area of circle. Notice that the interface should declare the value of pie as a constant. That is:
interfacevaluePie {
double PIE= 3.14;
}

Using class, implement the interface constant and find the area of circle. The following is the screen used to find area of circle using interface constant.:

The list of controls for the above form is as follows:

Control Type	Control Name	Property Name	Property Value
JFrame	IntAreaUi	Title	Constant in an Interface
JTextField	JTextField1	text	[None]
		Variable	txtR
	JTextField2	Name	[None]
		text	txtArea
		Variable	
		Name	
JButton	JButton1	text	Find Area
		Variable	cmdArea
		Name	Exit
		text	cmdExit
		Variable	
		Name	

a) Write the code to declare an interface for constant with implementation class method area().

b) Write the code for FindArea button to acecess the abstract method and display the area ofcircle in textbox.

c)Write the code for cmdExit to exit to exist the application.

17.What members of a class out of private, protected and public are inheritable?

18. When do we declare a method or class 'final'?

18. What is an abstract class?

19. When do we declare a method or class abstract?

20. What is the difference between an abstract class and an interface?

Chapter 8

1.What is dialog in Java?

2. Write the import statement required for using JOptionPane class.

3. What is showConfirmDialog ( ) method of JOptionPane class do ?

4. What is showInputDialog ( ) method of JOptionPane class do ?

5. What is the difference between a dialog created with JDialog and a dialog created with JOptionPane?

6. What are the various type of dialog options supported by JOptionPane?

7. Name four methods associated with JOption dialog.

8. Explain the various possible value for Option type property of JOptionPane dialog.

Chapter 9

1.   What is the importance of java.sql.*; in java jdbcconnection ?

2.What is DriverManager ?

3.What is the purpose of connection.close() method?

4. Name the four components of JDBC.

5. What are the steps involved in establishing a connection?

6. What is ResultSet ?

7. What type of parameter that used in executeQuery( ) method?

8. What is Connection? What is its role?

9. What all JDBC classes/objects are used in a database connectivity application?

10. What is JDBC? What is its basic functionality?

11. What is the JDBC-ODBC Bridge?

12. Explain the purpose of DriverManager
.
13.Name the methods which are useful for executing SQL statements.

14.Differentiate between JDBC and ODBC ?

15. What are the main tasks of JDBC ?

16.What are the various steps involved in establishing a JDBC connection?

17. Name the method used to trigger an update query using JDBC

Chapter 10

1.Identify the web browser software from the following options:
   (a) Apache Web Server (b) MS Word (c) HTML (d) Mozilla Firefox

2.A_____ document is created by web server whenever a browser requests the documents.
   (a) active (b) static (c) dynamic (d) none of the above

3.A_____ document is a fixed content document that is created by web server whenever a browser requests the documents.
   (a) active (b) static (c) dynamic (d) none of the above

4. Identify the web server software from the following options:
   (a) Apache (b) MS Word (c) HTML (d) Mozilla Firefox

5. The address of a resource on the net is known as:
   (a) ISP (b) HTTP (c) URL (d) WWW

6. A program that serves requested HTML files and pages.
   (a) Web Address (b) Web Page (c) Web Server (d) None of these

7. What is Uniform Resource Locator?

8. What is Web Server?

9. What is Web Browser?

11. In the URL, http://www.mycorp.com/pr/master.htm, what is the http component?

12.In the URL, http://www.mycorp.com/pr/master.htm, what is the www.mycorp.com component?

13.In the URL, http://www.mycorp.com/pr/master.htm, what is the /pr/master.htm component?

14.What do you mean by Web Browser, and Web Server?

15. Which protocol is used to upload/ transfer the file from host to server Internet?

16.What is WWW? How does it function?

16.A web browser & web server are an application of client/server computing concept. Comment on this statement?

17.What is URL ? What are its components?

18.What is CGI? How it works in Dynamic web Page service?

19. Differentiate between Static and Dynamic Web Service?

.