Institute of Science & Technology for Advanced Studies & Research

MCA – Sem. – III

Subject: 630002 – Fundamental of Java Programming

Assignment - 1

Que. No.	Answer the following questions
1	Explain the concept of data encapsulation, inheritance and polymorphism in O.O.P. Languages
	Explain the development tools java, javac, javap, appletviewer, javadoc & javah available in Java.
2	Explain how platform independence is achieved in Java.
3	What is Java? Explain the features of Java in brief.
4	Explain the difference between the variables of primitive data types and reference data types.
5	What are the two types of byte ordering? Explain the difference between them.
6	How do we specify integer constants? Specify the three different ways of specifying an integer constant.
7	Explain, with example, how an instance becomes eligible for garbage collection.
8	Explain the narrowing, widening and the mixed conversion for numeric types in Java.
9	Explain the use of keyword *this* and *static* with example.
10	What are the various elements that can be defined within a class definition? Briefly explain each of them.
11	Explain the use of the finalize() method.
12	Explain the overloading of methods and constructors with an example.
13	Explain the process of an instance creation whenever a constructor is invoked by an application.
14	Explain the uses of keywords ***extends***, ***super*** and ***final***.
15	Explain with example what is meant by the statement “method binding is done at the runtime”.
16	Explain the difference between overloading and overriding of methods.
17	Explain the uses of the keywords ***abstract*** and ***final***.
18	Differentiate between abstract class and interface.
19	Explain each of the following terms: inheritance, multiple inheritance, interface, super-class and sub-class.
20	Explain the difference between inheritance of types by interfaces and the inheritance from a class.
21	Explain the consistency rules to be observed whenever we override equals() method.
22	Explain the purpose of equals() method in the Object class.
23	Explain the uses of the keywords ***package*** and ***import***.
24	What are the access specifiers available in Java? Explain each of them. State which of these can be applied to members of a class, and which can be applied to members of a package.
25	Explain how the complier resolves the fully qualified name of a class or an interface.
26	Explain with an example the use of ***static import*** in a Java file.
27	What is the rule for the access specifier of overriding methods?
28	List the names of all wrapper classes in Java. Explain the boxing and unboxing conversions.
29	Explain the difference between ***Comparable*** and the ***Comparator*** interfaces.
30	Explain the uses of the keywords throw, throws, try, catch and finally.
31	Explain Exception Handling Mechanism with example?
32	Explain the difference between the ***checked*** and ***unchecked*** exceptions.
33	Differentiate between inner classes and top-level nested classes.

34	Explain the syntax for creating an anonymous inner class.
35	Explain the four top level stream classes from the java.io package
36	Explain the File class. Explain any eight methods of it.
37	Explain the various kinds of buffered streams.
38	Explain the use of the keyword transient.
39	Explain the various kinds of piped streams.
40	Explain the relation between the Thread instance and the thread of execution.
41	Explain the difference between deamon and non-deamon threads.
42	Explain the life cycle of a Thread.
43	Explain the two different ways of creating a new thread of execution.
44	Explain the difference between AWT and SWING Components.
45	List the various common properties of the Component class.
46	Discuss the Container class in brief.
47	Discuss the Component class in brief with its common methods.
48	Explain the Frame and FileDialog classes
49	Explain creation of MenuBars, Menus & MenuItems with examples.
50	Explain the various layout managers available in AWT.
51	List the four instance variables of GridbagConstraints which determine the display area of the component.
52	Explain the event delegation model used for handling events in Java.
53	Explain the classes and interfaces required to handle following types of event. 1) ActionEvent 2) AdjustmentEvent 3) Item Event 4) WindowEvent 5) KeyEvent 6) MouseEvent
54	What are the adapter classes.
55	Write a short note on JComponent class.
56	Explain how JLayeredPane is used to manage components in the top level container for swing.
57	Explain the Life cycle of an Applet
58	Explain AppletContext and AppletStub interfaces.