2012

OBJECT ORIENTED PROGRAMMING WITH JAVA

Time Allotted : 3 Hours   *Full Marks : 70*

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

GROUP – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for the following :

$$10 \times 1 = 10$$

i)   A constructor

a)   must have the same name as the class it is declared within

b)   is used to create objects

c)   may be declared private

d)   none of these.

e)   a, b, c.

ii) Which of the following may be part of a class definition ?

    a) Instance variables

    b) Instance methods

    c) Constructors

    d) All of these.

iii) What is the difference between a Java applet and a Java application ?

    a) An application can in general be trusted whereas an applet can't

    b) An applet must be executed in a browser environment

    c) An applet is not able to access the files of the computer it runs on

    d) (a), (b) and (c).

iv) What is byte code in the context of Java ?

    a) The type of code generated by a Java compiler

    b) The type of code generated by a Java Virtual Machine

    c) It is another name for a Java source file

    d) It is the code written within the instance methods of a class.

v) What is garbage collection in the context of Java ?

    a) The operating system periodically deletes all of the java files available on the system

    b) Any package imported in a program and not used is automatically deleted

    c) When all references to an object are gone, the memory used by the object is automatically reclaimed

    d) The JVM checks the output of any Java program and deletes anything that doesn't make sense.

vi) Consider the following code snippet

    String river = new String ("Columbia") ;

    System.out.println(river.length()) ;

What is printed ?

    a) 6   b) 7

    c) 8   d) Columbia

    e) River.

vii) You read the following statement in a Java program that compiles and executes

    submarine.dive(depth);

What can you say for sure ?

    a) Depth must be an int

    b) Dive must be a method

    c) Dive must be the name of an instance field

    d) Submarine must be the name of a class

    e) Submarine must be a method.

viii) Consider the following program :

import myLibrary. *;

public class ShowSomeClass

{

// code for the class...

}

What is the name of the Java file containing this proram ?

a) myLibrary.java

b) ShowSomeClass.java

c) ShowSomeClass

d) ShowSomeClass.class

e) Any file name with the java suffix will do.

ix) Which of the following is TRUE ?

a) In java, an instance field declared public generates a compilation error

b) int is the name of a class available in the package java.lang

c) Instance variable names may only contain letters and digits.

d) A class has always a constructor (possibly automatically supplied by the java compiler)

e) The more comments in a program, the faster the program runs.

x) What is the full form of JVM ?

    a) Java Visual Machine

    b) Java Variable Management

    c) Java Virtual Machine

    d) None of these.

GROUP – B
(Short Answer Type Questions)
Answer any *three* of the following.   3 × 5 = 15

2. What is similarity/difference between an abstract class and interface ?

3. What is thread ?   1

   What is multi-threading ?   2

   How to create a thread in a program ?   2

4. Display Traingle as follow :

1

2 3

4 5 6

7 8 9 10 ... N*/

5. What is the package ? What is the difference between throw and throws keywords ?   2 + 3

6. Explain polymorphism with suitable example.

GROUP – C
(Long Answer Type Questions)
Answer any *three* of the following.   3 × 15 = 45

7. a) What is the difference between Swing and AWT components ?   3

    b) Write a program to convert given no. of days into months and days.   5

    c) How are this and super used ?   2

    d) Write the difference between method overriding and method overloading.   5

8. a) What is meant by "Abstract Interface" ?   3

    b) What is the main difference between Java platform and other platforms ?   5

    c) Write life cycle of the Applet   7

9. a) In System.out.println(),what is System,out and println, please explain ?   3

    b) Explain teh following string handling function with syntax.   8

    c) Explain inheritance, Encapsulation concept.   4

10. a)   What is the purpose of finalization ?   3

    b)   What are the different identifier states of a Thread ?   6

    c)   Write a program that welcomes a person whose name is passed to as its parameter. Write the exception handling code to handle the case when no name is passed to then appliation.   6

11. Compare between method overloading and method overriding in Java. What is the superkey in Java. Explain multithreading with suitable example. What is wrapper class Java ?   4 + (3 + 4) + 4