Name : ……………………………………………………………

Roll No. : ………………………………………………………

Invigilator's Signature : ………………………………………

CS/B.Tech/(ICE-NEW)/SEM-6/IC-604C/2013

2013
OBJECT ORIENTED PROGRAMMING

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)
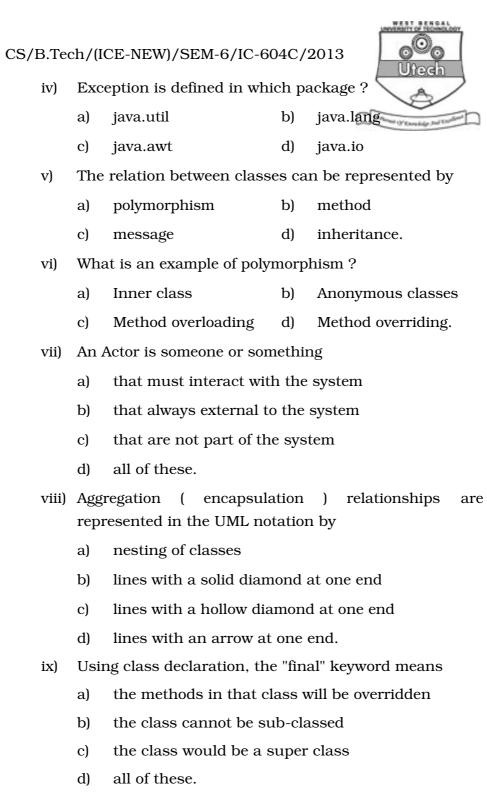
1. Choose the correct alternatives for the following :

                                                    10 × 1 = 10
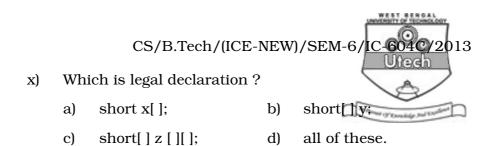
    i)   Which is a primitive type variable declaration ?

          a)   Char   b)   Byte

          c)   Double   d)   All of these.

    ii)   In JAVA, Applet is a

          a)   Super Class   b)   Interface

          c)   Package   d)   Object.

    iii) From any non-subclass outside the package, which
          access is possible ?

          a)   Public   b)   Protected

          c)   Default   d)   All of these.

6478   [Turn over

iv) Exception is defined in which package ?

    a) java.util   b) java.lang

    c) java.awt   d) java.io

v) The relation between classes can be represented by

    a) polymorphism   b) method

    c) message   d) inheritance.

vi) What is an example of polymorphism ?

    a) Inner class   b) Anonymous classes

    c) Method overloading   d) Method overriding.

vii) An Actor is someone or something

    a) that must interact with the system

    b) that always external to the system

    c) that are not part of the system

    d) all of these.

viii) Aggregation (encapsulation) relationships are represented in the UML notation by

    a) nesting of classes

    b) lines with a solid diamond at one end

    c) lines with a hollow diamond at one end

    d) lines with an arrow at one end.

ix) Using class declaration, the "final" keyword means

    a) the methods in that class will be overridden

    b) the class cannot be sub-classed

    c) the class would be a super class

    d) all of these.

x) Which is legal declaration ?

a) short x[ ];   b) short[ ] y;

c) short[ ] z [ ][ ];   d) all of these.

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

2. What do you mean by Object Oriented Programming ? How does it differ from Structure Oriented Programming ?   2 + 3

3. What are the differences between method overloading and method overriding ?

4. What is Synchronization ? When is it used ?   3 + 2

5. What do you mean by interface ? Write the difference between interface and abstract class.

6. Illustrate the use of this and super with an example.

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

7. a) What are the features of java language ? Describe.

b) What do you mean by command line argument ?

c) What do you mean by subclass constructor method ?

5 + 5 + 5

8. a) Describe the complete life cycle of a thread.

b) Explain the method by which you can block a thread.

c) What is thread synchronization ?

d) Describe the inter-thread communication. 4 + 4 + 4 + 3

9. a) What is applet ?

    b) Describe the applet life cycle.

    c) What is local applet ?

    d) What are the differences between Java applicatioin & Java applet ?

    e) What are the applications of applet tag ?

                                                2 + 4 + 2 + 5 + 2

10. a) Explain the function of a JVM in brief.

    b) What might be the differene in functionality between a machine with only JDK installed and another machine with only JRE installed.

    c) Discuss the requirement of each keyword in the following Java program statement.

          "public static void main (string args [ ])"

    d) i) Multiple inheritance can be performed in Java. Explain how.

        ii) Write a Java program to support your views.

                                                3 + 2 + 3 + (4 + 3)

11. What is polymorphism ? What is the use of super key word ? What do you mean by dynamic method dispatch ? What is garbage collection and how does java achieve this feature ?   4 + 3 + 4 + 4

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