Elect B

CS/BCA(H)/Even/6th Sem/BCAE-602B/2014

2014

Object Oriented Programming with Java

Time Alloted : 3 Hours *Full Marks : 70*

The figure 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: 10x1=10

i) A class can have many methods with the same name as long as the number of the parameters or type of parameters is different. This OOP concept is known as _____

a) Method invocating b) Method overriding
c) Method labeling d) Method overloading

ii) What keyword is used in java to define a constant ..

a) Static b) Final
c) Abstract d) Public
e) private

iii) Which one of the following methods keeps the Thread t in run state?

a) t.start( ) b) t.run( )
c) t.setRun( ) d) t.stop -( )

iv) Color clr = new Color (Color.red);

The above statement produces same intensity of red color on any color monitor as Java is platform independent.

a) True b) False

v) What is the most expensive phase in a software development life cycle

a) Design b) Maintenance
c) Implementation d) Analysis
e) Testing

vi) What is the width of the line that drawLine() method draws?

a) 1 pixel b) 2 pixel
c) 3 pixel d) 4 pixels
e) none

vii) Java was developed by the company

a) Sun Micro systems b) Microsoft
c) Micro tech d) IBM

viii) 3. _____keyword is used to invoke the current object.

a) new b) that c) this d) me

ix) What is the default return type of main()

a) Void b) double c) float d) int

x) Method overloading is one of the way that Java supports_____

a) encapsulation b) class
c) inheritance d) polymorphism

GROUP - B

(Short Answer Type Questions)

Answer any *three* of the following. 3x5=15

2. Explain method overloading and method overriding with examples.
3. What do you mean by an interface? Why do we need interface? Differentiate between abstract class and interface.

4. What is meant by dynamic method dispatch? How is it accomplished in java?
5. What is the difference between run time polymorphism and compile time polymorphism?
6. What is garbage collection? What is a static variable? Give examples for both.
7. What is a wrapper class? Explain with example the utility of final keyword in java.
8. What is checked and unchecked exception? Explain with proper examples.
9. How can a programmer define a class that cannot be inherited? Illustrate using an example.

GROUP - C

(Long Answer Type Questions)

Answer any *three* of the following. 3x15=45

10. a) What do you mean by object oriented programming? How does it differ from procedure oriented programming?

    b) What is an exception? How can you handle exception in java? Explain.

    c) Show by writing a complete code along with output how multiple inheritances is implemented in Java.

    (2 + 3 + 1 + 4 + 5)

11. What is polymorphism? What are the types of polymorphism present in java? Compare and contrast overloading and overriding methods along with proper examples.

    (2 + 5 + 8)

12. Write short notes on any three:

    (5 x 3)

    a) Interface

    b) Package

    c) Container class

d) Exception handler

e) Abstraction

f) Garbage collection

13. a) What do you mean by thread? Discuss the life cycle of a thread.

b) State the different ways of thread creation. How we set priorities of a thread? What is the need of synchronized block?

c) What is an applet? Describe the life cycle of an applet. What are the demerits of using an applet?

(2 + 3 + 2 + 2 + 1 + 1 + 3 + 1)

14. a) Write a program in java that checks whether a given string is a palindrome or not.

Ex: MADAM is a palindrome.

b) Write a program in java that will compute the following series: 1 + 1/2 + 1/3+ .....+1/n.

c)Illustrate the use of serialization and de-serialization in java.

(6 + 6 + 3)

15. What are the features of java language? What is the role of JVM in execution of a java program?

What is Unicode in java? Explain with example the use of super keyword in java.

(5 + 3 + 2 +5)