

2008

OBJECT ORIENTED PROGRAMMING WITH JAVA

Time Allotted : 3 Hours

Full Marks 70

The figures in the margin indicate full marks.

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

GROUP – A

(Multiple Choice Type Question)

1. Choose the correct alternatives for the following : 10 x 1 = 10

i) `int i = 2 ;`
`System.out.println ("welcome"+1+2);`

The Output is :

- a) welcome3
- b) welcome12
- c) compiler error
- d) None of these.

ii) `int x = 2;`
`for (x = 0; x <5; x++)`
`System.out.println(x);`

The output is

- a) 0 1 2 3 4
- b) 1 2 3 4
- c) 2 3 4
- d) none of these.

iii) `String a = "3";`
`System.out.println(a);`

The output is

- a) 3
- b) a
- c) compiler error
- d) runtime exception

iv) `int a = 2;`

`for (:a<5: a++)`

`System.out.println(a);`

The output is

- a) compiler error
- b) runtime exception
- c) infinite loop
- d) 2 3 4

v) `int arr [] = new int[3];`

`arr[3] = 7;`

`System.out.println(arr[3]);`

The output is

- a) 3
- b) 7
- c) compiler error
- d) runtime exception

vi) In java applet , `Stop()` method can be invoked for a thread

- a) once
- b) twice
- c) compiler error
- d) not at all.

vii) Dynamic method dispatcher is used for

- a) resolving method overriding
- b) resolving multilevel inheritance
- c) resolving multiple inheritance anomaly
- d) none of these.

viii) JVM stands for

- a) Java Virtual Machine
- b) Java Visual Machine
- c) Java Vision Machine
- d) None of these.

- ix) String s = "WBUT"
System.out.println(s.charAt(2));
The output is
a) U b) Exception occurs c) 2 d) B.
- x) What is the return type of read () method of InputStream class ?
a) String b) Void c) Float d) None of these.
- xi) Consider the following statements :
int a = 10, b = 15;
a = (a < b) ? (b + a) : (b - a);
what will be the value of a after executing these statements ?
a) 10 b) 25 c) 15 d) 5.
- xii) Which of the following statement is true regarding constructors ?
a) All cases must be define as a constructor
b) A constructor can be defined private
c) A constructor can return a value
d) A constructor must initialize all the fields of a class.

GROUP – B

(Short Answer Type Question)

Answer any three of the following.

3 x 5 = 15

2. What do you mean by object oriented programming ? How it differs from conventional procedural Programming ? 2 + 3
3. What is Wrapper Class ? What is the utility of final keyword ? 2 + 3
4. What are the differences between method overloading and method overriding ? Give Example for both. 5
5. What do you mean by interface ? Write the difference between interface and abstract class. 2 + 3
6. Describe the difference string functions.

GROUP – C

(Long Answer Type Question)

Answer any three of the following.

3 x 15 = 45

7. a) Write a program in JAVA to reverse a string.
b) Write a program in JAVA to input a number from the command line & find whether it is Prime or not. 7.5 + 7.5
8. What is applet ? Describe an Applet life cycle. Develop an Applet that receives three numeric values As input from the user and then displays the largest of the three on the screen , also write the HTML code. 1 + 3 + 8 + 3
9. What is thread ? How do we set the priorities for thread ? Describe with an example . Write a Small program which will synchronize among two threads. 2 + 8 + 5
10. a) Describe the structure of typical Java program.
b) What do you mean by method overloading ? Explain with example .
c) Write a java program to find out the sum of harmonic series :
 $1 + \frac{1}{2} + \frac{1}{3} + \dots$ up to n^{th} term , for any value of n. 4 + 3 + 8
11. a) Discuss the lifecycle of thread .
b) Write a small program with output to show thread .
c) What do we mean by thread priority ? 5 + 6 + 4