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Paper Code : BCAC301 Object Oriented Programming

UPID : 300067

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 (Very Short Answer Type Question)

1. Answer *any ten* of the following :   [1 x 10 = 10]

    (I)   What is an event?

    (II)   What is association?

    (III)   What is the difference between a class and an object?

    (IV)   What will be the output of the following code segment?

```
class ClassTest {
public String toString () {
return "Class Test";
}
public static void main (String [ ] args) {
ClassTest ct = new ClassTest ();
System.out.println (ct.toString());
}
}
```

    (V)   How many default constructors can a class have?

    (VI)   Write the code that declare class B belong to the package1.mypackage.

    (VII)   Is multithreading synonymous with multiprocessing?

    (VIII)   Write one demerit of the applet?

    (IX)   What is static import?

    (X)   What is the output of the following program segment:

```
class A
{
String s1 = "A.s1";
String s2 = "A.s2";
}
class B extends A
{
String s1 = "B.s1";
}
public class Test
{
public static void main(String args[])
{
B b1 = new B();
A a1 = b1;
System.out.print(a1.s1+" "+a1.s2);
}
}
```

    (XI)   What is garbage collection in the context of Java?

    (XII)   What will be the output for the following statements?

```
int a[] = new int[3];
a[3] = 7;
System.out.println(a[3])
```

Group-B (Short Answer Type Question)

Answer *any three* of the following :   [5 x 3 = 15]

2. What are the differences between java application and java applet? [5]

3. Explain public, private, protected and default access specifiers in brief. [5]

4. Write a program in java to reverse a character string. [5]

5. Explain Dynamic Method Dispatch with an example. [5]

6. Show by writing a complete code along with the output how multiple inheritance in implemented in Java. [5]

Group-C (Long Answer Type Question)
Answer *any three* of the following : [15 x 3 = 45]

7. (a) Write a Java program to add two strings using StringBuffer. [5]

   (b) Explain the following string handling function with example. [10]
   i)compareTo(), ii) equalsIgnoreCase(), iii)substring(), iv) toLowerCase(), v) lastIndexOf().

8. (a) Explain method overriding with suitable example. [5]

   (b) What is importance of super and this keyword inheritance? Illustrate with suitable example. [7]

   (c) State the need of interface in java. [3]

9. (a) Discuss the steps involved in developing and running a local applet. [4]

   (b) What is the importance of the Container class in Java? [2]

   (c) Write a GUI program in Java that will have two buttons viz. RED and GREEN. If user clicks on RED button the background of the GUI will be painted in red or if user clicks on GREEN button the background of the GUI will be painted green. [9]

10. (a) Write a program to add and multiply two square matrices. [8]

    (b) Write a program to demonstrate the following: [7]
    i) to convert lower case to upper case and vice versa.
    ii) to compare two strings.

11. (a) Explain the method by which you can block a thread. [4]

    (b) What is finally clause in exception handling? When is the finally clause of a try-catch-finally statement executed? Illustrate through example. [5]

    (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 application. [6]

*** END OF PAPER ***