



SB-1501

Third Year B. C. A. (Sem. V) Examination

March / April - 2011

501, Java Programming Language

Time : Hours]

[Total Marks : 70

Instructions :

(1)

नीचे दर्शावेल निशानीवाणी विगतो उत्तरवडी पर अवश्य लभवी. Fillup strictly the details of signs on your answer book. Name of the Examination : <input type="text" value="T. Y. B.C.A. (Sem. 5)"/> Name of the Subject : <input type="text" value="501, Java Programming Language"/> Subject Code No. : <input type="text" value="1"/> <input type="text" value="5"/> <input type="text" value="0"/> <input type="text" value="1"/> Section No. (1, 2,.....): <input type="text" value="Nil"/>	Seat No. : <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <div style="border: 1px solid black; border-radius: 15px; padding: 10px; width: fit-content; margin: 10px auto;"> Student's Signature </div>
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(2) Numbers to the right side of every questions indicate Marks.

1 Answer following : (any seven) 14

- (a) What is benefit of making Thread as synchronized ?
- (b) What is difference between notify() and notify All() ?
- (c) Assume that class A extends class B, which extends class C. Also all the three classes implement the method test(). Is it possible that a method in a class A invoke the test() method defined in class C (without creating a new instance of class C). If yes, then how ?
- (d) What is the output when the following program is compiled and run ?

```

public class test {
    public static void main (string args[ ] ) {
        int i;
        float f = 2.3f;
        double d = 2.7;
        i = ((int) Math.ceil (f)) * ((int) Math.round (d));
        System.out.println(i);
    }
}

```

- (e) What is the result of compiling and running the following program :

```
public class test {  
    public static void main (string args []) {  
        string str1 = "abc" ;  
        string str1 ="def";  
        string str3 = str1.concat (str2);  
  
        str1.concat (str2);  
        system.out.println (str1);  
    }  
}
```

- (f) Which method defined in Integer class can be used to convert an Integer object to primitive int type.
- (g) Which of the following is correct ? Select the one correct answer :
- (i) An import statement, if defined, must always be the first non-comment statement of the file.
 - (ii) Private members are accessible to all classes in the same package.
 - (iii) An abstract class can be declared as final.
 - (iv) Local variables cannot be declared as static.
- (h) Which of these statements are true. Select the two correct answers.
- (i) For each try block there must be atleast one catch block difined.
 - (ii) A try block may be followed by any number of finally blocks.
 - (iii) A try block must be followed by atleast one finally or catch block.
 - (iv) If both catch and finally blocks are defined, catch block must precede the finally block.

- 2 (a) Explain the concept of Threads. Discuss the creation and execution of threads. 7
- OR**
- (a) How java handle unused objects ? Discuss the process of memory management by cleaning the unused objects in Java in detail. 7
- (b) Discuss java class structure with respect to C++. Explain the limitations of java class structures. 5
- OR**
- (b) What is package ? How java restricts the access of classes and methods at package level using access modifiers ? 5
- (c) Explain the concept of Interface. What is difference between Java class and Interface ? 3
- 3 (a) Explain Class variables. Class methods and Instance variables, instance methods providing appropriate examples. Also discuss inheritance in java. 7
- OR**
- (a) Explain java architecture. How java programs execute ? 7
- (b) Write the process of handling exceptions in Java. Describe how exceptions are handled at code level ? 5
- OR**
- (b) Define package. How do we design a package and a class or an interface to a package ? 5
- (c) What is difference between over loading and over riding ? 3
- 4 (a) Explain the concept of Applet. How it is different from Application ? 7

OR

- (a) Explain the class hierarchy of APPLET class. 7
Discuss how to pass parameters of APPLET ?
- (b) What is garbage collection ? Explain the process of garbage collection in java. 5
- OR**
- (b) How java class structure differ from C++ ? 5
- (c) Describe any three built-in functions of string and stringBuffer class. 3
- 5** (a) Answer following : (any two) 8
- (i) String and StringBuffer class.
- (ii) Thread life cycle
- (iii) Garbage Collection
- (b) Write code which accept name using command line argument and display it in reverse order. 3
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