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Total Number of Pages: 03

B.TECH
PCIT4303

5th Semester Regular / Back Examination 2016-17

JAVA PROGRAMMING

BRANCH(S): CSE, IT, ITE

Time: 3 Hours

Max Marks: 70

Q.CODE: Y443

Answer Question No.1 which is compulsory and any five from the rest.

The figures in the right hand margin indicate marks.

Q1

Answer the following questions:

(2 x 10)

- a) Name the access specifiers not used with interface and why?
- b) Why packages are used in java ?
- c) What is the difference between throw and throws ?
- d) Why applet does not have menu bar ,title bar or border?
- e) What is the difference between panel and frame ?
- f) How we can extract integer, Boolean, Float and double value from string ?Write the syntax with example?
- g) What is the output of the following program with justification?

```
class A
{
    final public intGetResult(int a, int b) { return 0; }
}
class B extends A
{
    public intGetResult(int a, int b) {return 1; }
}
public class Test
{
    public static void main(String args[])
    {
        B b = new B();
        System.out.println("x = " + b.GetResult(0, 1));
    }
}
```

- h) Write the Output with proper justification?

```
public class test
{
    public void test1()
    {
        int x= 0;
        while ( 1 )
        {
            System.out.println("x plus one is " + x + 1);
        }
    }
}
```

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i) What is the output of the following program with justification?

```
public class Test
{
    public static void main(String args[])
    {
        class Foo
        {
            public int i = 3;
        }
        Object o = (Object) new Foo();
        Foo foo = (Foo) o;
        System.out.println("i = " + foo.i);
    }
}
```

j) What is the output of the following program with justification?

```
public class MainClass
{
    public static void main(String[] args)
    {
        int i = 10 + + 11 - - 12 + + 13 - - 14 + + 15;
        System.out.println(i);
    }
}
```

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Q2 Write a java program to compute following using multithreading and set priority in such a way that execution will start from last function **(10)**

- Square root of any No without using sqrt or pow function
- Factorial of any Number
- GCD
- LCM

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Q3 Write a program to display one bouncing ball which is dropped from some height represented by coordinate (50,10) and after that it will bounce and finally stop at the position(500,450) using Applet? Here size of the window is 500 * 500 and color of the ball is blue and background is yellow? **(10)**

Q4 a) What is method overloading? Write a program to print following using method overloading and interface? **(5)**

```
      *
    * *
  * * *
* * * *
```

1
2 3
4 5 6
7 8 9 10

b) What is package? Write a program to find out sum of product of consecutive digits of a number using interface, package and command line arguments? **(5)**
Suppose Number is 12345 then Result will be $1*2 + 2*3 + 3*4 + 4*5$

Q5 a) Write a program to move your pic of size (200,300) horizontally from top to bottom in standard window using swing? **(5)**

b) What is the difference between method overloading and method overriding? Write a program to find out area and perimeter of rectangle and square using method overriding and also call the overridden function using dynamic method dispatch and also use abstract class as base class? **(5)**

Q6 a) What is the difference between Checked Exception and unchecked Exception? Following program belongs to which category? **(5)**
Write a java program to create your own exception which creates Palindrome Exception whenever any palindrome number was detected?

b) What is super keyword and why it is used? Write a java program to find out cost, weight and volume of a box using multilevel inheritance and use super keyword at proper places? **(5)**

Q7 a) What is the difference between capacity and length in string Buffer? Write a java program to sort 10 strings in alphabetical order? **(5)**

b) What is network? Write a java program to create chat application in which client will say hi then server will reply as hello using socket programming? **(5)**

Q8 Short Notes on any Two: **(5 x 2)**

- a) Life cycle of Thread
- b) Exception Hierarchy
- c) Encapsulation
- d) Modifiers