

**GANPAT UNIVERSITY****B. Tech. Semester: III (CE/IT)****Regular/Remedial Examination November – December 2013****2CE304/2IT304: Object Oriented Programming****Total Marks: 70****Time: 3 Hours**

- Instruction:**
- 1 Attempt all questions.
  - 2 Figures to the right indicate full marks.
  - 3 Each section should be written in a separate answer book.
  - 4 Be precise and to the point in your answer.

**SECTION - I****Que.1 Answer the following questions.**

1. Explain the basic principles of OOP: Encapsulation, Inheritance and Polymorphism. [12]  
6
2. Explain features of Java. 6

**OR****Que.1 Answer the following questions.**

1. Explain type conversion and casting with example. [12]  
6
2. Explain final, finally keywords and finalize( ) method with example. 6

**Que.2 Answer the following questions.**

1. Differentiate between method overloading and method overriding with example. [11]  
6
2. Explain this and super keywords with example. 5

**OR****Que.2 Answer the following questions.**

1. Explain dynamic method dispatch with suitable example. [11]  
6
2. Discuss the Access Control of Java in brief. 5

**Que.3 Answer the following questions.**

1. Describe abstract class called Shape which has three subclasses say Triangle, Rectangle, and Circle. Define one method area() in the abstract class and override this area() in these three subclasses to calculate area for specific object i.e. area() of Triangle subclass should calculate area of triangle etc. Same for Rectangle and Circle. [12]  
6
2. Write a java program to create a package Book which has class Bookdetails. 6  
Bookdetails has members like book name, author name, price and year of publishing. Import this Book package to create another class Bookdemo which has main() method. Inside main() create objects of Bookdetails.(Use constructor for initialization of Instance variables and get() method to display values)



## SECTION – II

**Que.4 Answer the following questions.**

[12]

1. Write a java program to create your own exception subclass that throws exception if sum of two integers is greater than 99. 4
2. What is an Interface? Differentiate interface and abstract class in java. 4
3. Explain any four java's built in exceptions with example. 4

OR

**Que.4 Answer the following questions.**

[12]

1. Explain inheritance and types of inheritance in java. 4
2. Explain exception handling mechanism. 4
3. What is package? Give the advantages of packages. List out Java API Packages. 4

**Que.5 Answer the following questions.**

[11]

1. Explain lifecycle of thread. 5
2. Explain wait(), notify(), and synchronized() methods with example. 6

OR

**Que.5 Answer the following questions.**

[11]

1. Explain life cycle of applet and various methods called during execution cycle of the applet. 5
2. Differentiate between String and StringBuffer class. 3
3. Write output of following code. Justify your answer. 3

```
public class Test extends Thread{
    public static void main(String argv[]){
        Test t = new Test();
        t.run();
        t.start();
    }
    public void run(){
        System.out.println("run-test");
    }
}
```

**Que.6 Answer the following questions.**

[12]

1. State whether the following statements are true or false. 4
  - I. An abstract class contains constructors.
  - II. An interface can extend an abstract class.
  - III. Dynamic binding happens during runtime not compile time.
  - IV. A non static variable can be passed as a parameter to a static method, but the reverse case is not true.
2. Explain following methods in applet with appropriate parameters. 4
  - a. drawString( )
  - b. setBackground( )
  - c. showStatus( )
  - d. drawArc( )
3. Write an applet to draw cube. 4

END OF PAPER