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SYBCA, SEM III, SPECIAL SUPPLEMENTARY EXAMINATION, MAY/JUNE 2015

OBJECT ORIENTED CONCEPTS (BCA 301)

Duration: 2 hours **Max.Marks: 50**

Instructions: 1) All questions are compulsory
2) Start each new question on a fresh page
3) Figures to the right indicate full marks

Q.1 A) Mention the output for the following (5 x 1= 5)

a) Consider the following `String str = "Object oriented Concepts";`

i) str.charAt(9)

ii) str. replace('t', 'm')

iii) str.substring(13)

iv) str.toLowerCase()

v) str.concat("In Java")

Q.1 B) Define the following in 2-3 lines

a) Abstract methods (2)

b) **'implements'** keyword (1)

c) Composition relationship (2)

Q.2) Answer the following

a) What makes compiled Java programs portable in nature? Explain. (2)

b) Explain some of the limitations of Procedure-oriented Programming (3)

c) What is the difference between Method Overloading and Method Overriding using an example in detail. (5)

Q.3) Answer the following

a) Differentiate between Default Constructor and Parameterized Constructor. (2)

b) What are static methods? Give an example. (3)

c) Compare and contrast between Abstract Class and Interface. (5)

Q.4) Answer the following

a) Differentiate between Error and Exception. (2)

b) Explain what will be output of the Java code given below implementing Inheritance.

```
public class Bird
{
      public void eat()
      {      System.out.println("All birds eat ");      }
}
public class Parrot extends Bird
{
     public void eat()
     {       System.out.println("Parrots eat with their
                          beaks");                          }
     public void colour()
     {      System.out.println("Parrots are green in colour"); }
     public static void main(String args[])
     {
           Bird b1 = new Bird();
           b1.eat();
```

```
        Bird b2 = new Parrot();
        b2.eat();
        Bird b3 = new Parrot();
        p1.color();
    }
}
```

(3)

c) Explain the types of Exception Handling mechanism available in Java, with an example of each. (5)

Q.5) Answer the following

a) What happens if final is applied to a method of a class? (2)

b) Briefly explain the concept of stream classes. (3)

c) Explain the concept of **Multilevel Inheritance** with a diagram and show its implementation in Java. (5)
