Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

MCA - SEMESTER– III EXAMINATION- SUMMER 2017

Subject Code: 2630002 **Date: 09-06-2017**

Subject Name: Fundamentals of Java Programming (Java)

Time: 02:30 pm - 05:00 pm **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1 (a) Fill in the blanks **07**

1. _____ is super class of all class.
2. In java method biding is done at _____ time.
3. ____ block is always executed whether exception is raised or not
4. A concrete class cannot have ____ methods.
5. To stop inheritance class should be declared _____.
6. By default _____ package is imported in every java. file.
7. Java uses _____ character set to represent character. data.

(b)

1. Explain use of toString () method. **02**
2. What is ByteCode? **02**
3. Explain when an instance become eligible for garbage collection. **03**

Q.2 (a)

1. What is CLASSPATH? Explain its importance in context to packages. **03**
2. Explain equals () and "==" with example. **04**

(b)

1. What is abstract class? Explain when class can be made abstract. **03**
2. Write the output of following program **04**

```
class A
{
    int x;
    int y;
    A(){ System.out.println("In constructor 1");}
    A(int x, int y) {x=x; y=y; System.out.println("In constructor 2");}
    public void display(){
        System.out.println("x = " + x + " y = " + y);
     }
}
class Test
{
  public static void main(String args[])
  {
      A a1 = new A();
      a1.display();
      A a2 = new A(100,200);
     a2.display();
  }
}
```

OR

(b) 1. Explain private, public and protected access specifier. **03**

2. Write the output of following program **04**

```
class Test{
   private String s = "I am Smart.";
   Child i1 = new Child();
   void getS(){
      System.out.println(s);
   }
   void getChildS(){
      System.out.println(i1.s);
   }
   class Child{
      private String s = "Am still Smarter";
      void getS(){
         System.out.println(s);
      }
      void getTestS(){
         System.out.println(Test.this.s);
      }
   }
   public static void main(String[] args){
      Test o = new Test();
      Test.Child oi = o.new Child();
      o.getS();
      oi.getS();
      o.getChildS();
      oi.getTestS();
   }
}
```

Q.3 **(a)** 1. What is Exception? Explain try, catch and finally. **05**

2. Compare StringBuffer and String class. **02**

(b) 1. Explain Anonymous class with example. **05**

2. Explain Character Stream and Byte Stream. **02**

OR

Q.3 **(a)** 1. Explain variable shadowing and how super is used with example. **05**

2. Diffrentiate Abstract Class and Interface. **02**

(b) 1. What is Wrapper Class? Explain auto boxing with example. **05**

2. Explain inner class in brief. **02**

Q4 **(a)** 1. Explain the use of synchronized keyword with example. **04**

2. Explain Thread Life Cycle. **03**

(b) Explain Pattern and Matcher class with example. **07**

OR

Q4 **(a)** 1. Explain Map Interface of Collection Framework. **04**

2. Explain SimpleDateFormat class and its usage. **03**

(b) What is Thread? Explain two different ways to create Thread with example. **07**

Q5 **(a)** 1. Explain the role and importance of Adapter class with example. **04**

2. Write a code for how to set layout to flowlayout. **03**

(b) What is use of Layout Managers? List and explain different type of Layout Managers. **07**

OR

Q5	**(a)**	1. Explain Event Delegation Model with example.	**04**
		2. What is Applet? Explain applet tag with attributes.	**03**
	(b)	Write a GUI program to add two numbers. [Use AWT]	**07**

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