

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. Differentiate 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**

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

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