Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA– SEMESTER –III EXAMINATION –SUMMER-2019

Subject Code:4639302   **Date: 17-05-2019**
Subject Name: Object Oriented Programming in JAVA
Time:02.30 pm to 5.00 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) Do As Directed :   **07**
   1. _____ is the cosmic super class.
   2. What do you understand by Functional interface?
   3. null is a keyword in java. [T/F] (With reason)
   4. It is not mandatory that a class must be abstract when a method is declared
      as abstract in java.[T/F] (With reason)
   5. Static methods can be called with its 'this' reference. [T/F] (With reason)
   6. The Constructors of enum type are always private.[T/F] (With reason)
   7. What is the use of Varargs in java

(b) 1. Find errors (if any), solve errors and write code again. Also give the   **04**
            output of the program.

```
import java.util.*;
package p1;

public static void main(String ar[])
{
        int a=50, b=0;
        int c;
        try
        {
                c=a/b;
                System.out.println(c);

        }
        System.out.println("Hello");
        catch(Exception e)
        {
                System.out.println(e);
        }
        catch(ArithmeticException e)
        {
                        System.out.println("Divide by Zero...." + e);
        }
}
```

   2. What is difference between '==' and 'equals()'? Give appropriate   **03**
      example for the same.

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| **Q.2** | **(a)** | List and explain Java Buzzwords in detail. | **07** |
| | **(b)** | Explain Character Stream and Byte Stream. Also write program to copy content of one file to another file with using command line arguments. | **07** |

OR

| | **(b)** | 1. Explain initializer block and class initializer block in detail. | **04** |
| | | 2. Give difference between abstract class and interface. | **03** |

Q.3	**(a)**	1. Explain the concept of thread synchronization in brief.	**04**
		2. Give difference between String and StringBuffer.	**03**
	(b)	What is multiple inheritance? How multiple inheritance is supported in java? Explain it with suitable example.	**07**

OR

Q.3	**(a)**	1. Explain instanceof and bitwise operator in java by giving a suitable example.	**04**
		2. Give difference between Comparable and Comparator interfaces.	**03**
	(b)	Explain this, super and final keywords in detail with e.g.	**07**

| **Q.4** | **(a)** | What is thread? Explain thread life cycle in detail with diagram. | **07** |
| | **(b)** | What is package? How to create and import packages in java? Explain it with suitable example | **07** |

OR

| **Q.4** | **(a)** | What is exception? Explain exception handling mechanism with try, catch and finally blocks. Give Suitable example of custom exception. | **07** |
| | **(b)** | Explain enum type in java by giving a suitable example. | **07** |

| **Q.5** | **(a)** | What is lambda expression? How to create lambda expressions? Give advantages of Lambda expression. Also give a suitable example. | **07** |
| | **(b)** | What is JDBC? Explain types of driver available in JDBC. Write steps of JDBC and MySQL connectivity. | **07** |

OR

| **Q.5** | **(a)** | What is generics? What is the use of generics? Also explain how to define generic class with suitable example. | **07** |
| | **(b)** | Explain top level nested class and local class in detail with e.g. | **07** |

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