

GUJARAT TECHNOLOGICAL UNIVERSITY**MCA - SEMESTER– III EXAMINATION – WINTER 2019****Subject Code: 4639302****Date: 19/12/2019****Subject Name: Object Oriented Programming in JAVA****Time: 10:30 AM TO 01:00 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)** State True/False with proper Justification: **07**
1. instanceof is not an operator in java.
 2. We cannot create custom exception by extending the Throwable class.
 3. Java is one platform.
 4. main() method can be declared final.
 5. static variable can be used in non-static methods.
 6. public is the default access specifier for the members of class in java.
 7. abstract class cannot have constructors.
- (b)** Differentiate between:
1. throw v/s throws **04**
 2. abstract class v/s interface **03**
- Q.2 (a)** Why Generics is required in Java? Also Explain Generics in detail by giving a suitable example. **07**
- (b)** What do you mean by functional interfaces? Explain in detail why Lambdas are required in java by giving a suitable example. **07**
- OR**
- (b)** Explain local class, top level nested class and inner class in java by giving suitable example. **07**
- Q.3 (a)** Explain Java buzzwords in detail. **07**
- (b)** Discuss the Object class of java in detail by giving a suitable example. **07**
- OR**
- Q.3 (a)** Differentiate between:
1. String v/s StringBuffer **04**
 2. Method Overloading v/s Method Overriding **03**
- (b)** Explain Exception Handling mechanism by giving a suitable example. **07**
- Q.4 (a)** Explain static, final and super keywords by giving a suitable example. **07**
- (b)** Explain Wrapper class in java by giving a suitable example. **07**

OR

- Q.4 (a)** Explain types of driver available in JDBC. Write steps of JDBC and MySQL connectivity. **07**
- (b)** Explain Enumeration in java by giving a suitable example. **07**
- Q.5 (a)** Create a java program to copy the content of one file to another file. Both the file names must be passed through command line or must be taken from user using Scanner class. Also check if the file exists and also count the number of lines and number of digits available in the file. **07**
- (b)** Create a java program to accept the details of Employee (Empno, name, salary, designation) and insert it into the table. (use PreparedStatement class) **07**

OR

- Q.5 (a)** Define a class A in package apack. In class A, three variables are defined of access modifiers protected, private and public. Define class B in package bpack which extends A and write display() method which accesses variables of class A. Define class C in package cpack which has one method display() in that create one object of class A and display its variables. Define class ProtectedDemo in package dpack in which write main () method. Create objects of class B and C and display method for both these objects **07**
- (b)** Write a java program to implement an interface called Exam with a method Pass (int mark) that returns a boolean. Write another interface called Classify with a method Division (int average) which returns a String. Write a class called Result which implements both Exam and Classify. The Pass method should return true if the mark is greater than or equal to 50 else false. The Division method must return "First" when the parameter average is 60 or more, "Second" when average is 50 or more but below 60, "No division" when average is less than 50. **07**
