

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

MCA - SEMESTER- III EXAMINATION – WINTER 2018

Subject Code: 3630005

Date: 09-01-2019

Subject Name: Programming with Java

Time: 10.30 am to 1.00 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) Specify whether the following statements are True or False. If False then correct it. 07

1. Each object has its own copy of the static variables defined in the class.
2. Always a super class constructor must execute before a subclass constructor.
3. A class can extend from more than one super class.
4. We can create our own sub-class of the java.lang.Math class.
5. To call the parent class constructor explicitly, super() and this() both are use together.
6. The size of char data type is 1 byte.
7. The toString() method can be overridden to be protected.

Q.1 (B) Attempt the following

1. Class defined in Java without using extends keyword having parent(super) class. Why? **01**
2. It is not compulsory to import java.lang package in Java source file. Why? **01**
3. After execution of following statements, value of b is not 333. Why?
int i = 333;
byte b = (byte)i; **01**
4. Discuss the features of Java **02**
5. Explain importance of Constructor **02**

Q.2(A) What are Wrapper classes? Explain boxing and unboxing with example 07

Q.2 (B) Define package. Explain the steps to and important and create package 07

OR

Q.2 (B) Explain life cycle of Applet with proper example 07

Q.3(A) 1.Explain the difference between subtypes and supertypes with example 03

2. Differentiate character stream and byte stream. 04

Q.3 (B) What is an exception? Explain different types is an exception? Discuss “try”, “catch”, “finally”, “throw” and “throws” with suitable java code 07

OR

Q.3 A) Explain the difference between runtime errors and compile time errors with example. 07

Q.3 (B) Difference between static and instance variable with example. 07

- Q.4(A)** 1. To display “Hello India” on frame. **04**
2. To display weekdays along with its description using enum data type. **03**
- | Weekdays | Description |
|-----------|-------------|
| Sunday | Sun |
| Monday | Moon |
| Tuesday | Mars |
| Wednesday | Mercury |
| Thursday | Jupiter |
| Friday | Venus |
| Saturday | Saturn |

- Q.4 (B) Write program for following.**
1. To display contents of text file on console if file exist. Provide file name from command-line argument. **04**
2. To find average of values given as a command-line arguments. Also write necessary exception handling code **03**

OR

- Q.4(A)** What is difference between Vector and Hashtable class? How the Enumeration interface is useful in Java explain with code? **07**
- Q.4 (B)** 1. What is container and component class in Java? Specify different types of components with its events? **04**
2. Explain final, native and synchronized method modifier. **03**
- Q.5 A)** What is CLASSPATH? How it is important? **07**
- Q.5 (B)** Define Thread. How different way thread is created in Java? Discuss the Thread life cycle with suitable example of java program code. **07**

OR

- Q.5(A) Write program for following.** **04**
1. To copy file using character stream. Provide source file name and destination file name using command-line arguments.
2. To create two different threads. One thread to display odd numbers between 1 to 40 at every 1 second and other thread to display even numbers between 1 to 20 at every 2 seconds. **03**
- Q.5 (B)** Explain final, native and synchronized method modifier. **07**
