

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-V (OLD) - EXAMINATION – SUMMER 2018

Subject Code:150704

Date:12/05/2018

Subject Name:Object Oriented Programming With Java

Time:02:30 PM to 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) Differentiate between constructor and method of class. Define method overloading and its purpose. Write a program to demonstrate the constructor overloading **07**
(b) Explain :this,super,static,final ,finally, static and garbage collection **07**

- Q.2** (a) Declare a class called employee having employee_id and employee_name as members. Extend class employee to have a subclass called salary having designation and monthly_salary as members. Define following: - Required constructors - A method to find and display all details of employees drawing salary more than Rs. 20000/-. - Method main for creating an array for storing these details given as command line arguments and showing usage of above methods. **07**
(b) Explain Thread Life Cycle in detail. Write a code to create Thread in JAVA. **07**

OR

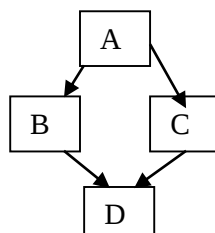
- (b) Describe abstract class called Shape which has three subclasses say Triangle,Rectangle,Circle. Define one method area() in the abstract class and override this area() in these three subclasses to calculate for specific object i.e. area() of Triangle subclass should calculate area of triangle etc. Same for Rectangle and Circle **07**
- Q.3** (a) Write a program to replace all “word1” by “word2” to a file without using temporary file and display the no. of replacement. **07**
(b) Explain inner class and working of concatenation operator + by giving examples. **07**

OR

- Q.3** (a) Write an application that executes two threads. One thread displays "Good Morning" every 1000 milliseconds & another thread displays "Good Afternoon" every 3000 milliseconds. Create the threads by implementing the Runnable interface. **07**
(b) Compare List, Set and Map interfaces. Also compare ArrayList, TreeSet and HashMap classes in java. **07**
- Q.4** (a) Write a java application that has three Buttons labeled Red, Green, Blue & on clicking the background color should change accordingly & have a label displaying the color selected. **07**
(b) Enlist and explain the difference between error and exception. Write a program to handle InterruptedException, IllegalArgumentException using try-catch-finally and throw **07**

OR

- Q.4** (a) Write a program to demonstrate the multipath inheritance for the classes having relations as shown in figure 2. **07** A->(B,C)->D



- (b) Write an applet that draws four horizontal bars of equal size & of different colors such that they cover up the whole applet area. The applet should operate correctly even if it is resized **07**

- Q.5

(a)

Explain various methods called during execution cycle of the applet. Also explain boarder layout.

07

(b)

Explain Generics in java with demo program.

07
- OR
- Q.5

(a)

Write a program to create a frame with exit capabilities. Handle events for mouse pressed, mouse released, mouse clicked and mouse dragged by displaying appropriate message describing the event at the coordinates where the event has taken place.

07

(b)

Explain utility class Hashtable and instanceof operator by giving examples

07
