

GUJARAT TECHNOLOGICAL UNIVERSITYB.E. Sem-Vth Examination December 2010

Subject code: 150704

Subject Name: Object Oriented Programming with Java

Date: 18 /12 /2010

Time: 03.00 pm - 05.30 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) Write a program to create directories (/home/abc/bcd/def/ghi/jkl) in the home directory /home/abc and list the files and directories showing file/directory, file size. Read-write-execute permissions. Write destructor to destroy the data of a class. **07**
- Q.2** (a) Define polymorphism with its need. Define and explain static and dynamic binding using program. **07**
- (b) Explain single level and multiple inheritances in java. Write a program to demonstrate combination of both types of inheritance as shown in figure 1. i.e. hybrid inheritance **07**

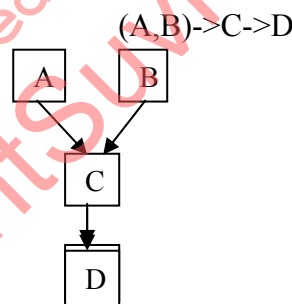


Figure 1

OR

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

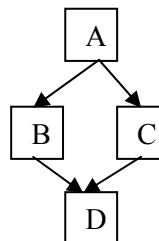


Figure 2

- Q.3** (a) Define generics in java. Write a program to demonstrate generic interface and generic method. **07**
- (b) Define and write a program to differentiate between pass by value and pass by reference. **07**

OR

- Q.3** (a) Define generics in java. Write a program to demonstrate generic class and generic constructor. **07**
- (b) Differentiate between abstract class and interface specifying matrices of differences. Write a program to define abstract class, with two methods addition() and subtraction(). addition() is abstract method. Implement the abstract method and call that method using a program(s). **07**
- Q.4** (a) Write an event handling program to handle e-mail sending form using your creativity. **07**
- (b) Write a program to replace all “word1” by “word2” from a file1, and output is written to file2 file and display the no. of replacement. **07**
- OR**
- Q.4** (a) Write an event handling program to handle feedback form of GTU examination system using your creativity. **07**
- (b) Write a program to replace all “word1” by “word2” to a file without using temporary file and display the no. of replacement. **07**
- Q.5** (a) Explain the importance of Exception handling in java. Write a program to handle NoSuchElementException, ArrayIndexOutOfBoundsException using try-catch-finally and throw. **07**
- (b) Write a program of writing binary file using multithreading. Demonstrate use of join() and yield() interrupt(). **07**
- OR**
- Q.5** (a) Enlist and explain the difference between error and exception. Write a program to handle InterruptedException, IllegalArgumentException using try-catch-finally and throw. **07**
- (b) Write a program to add (keyword, URL) list for a web crawler in suitable data structure in concurrent manner but one process at a time, and retrieving data from the data structure in concurrent manner. **07**
