Reg. No. : | | | | | | | | | | |

Question Paper Code: 50242

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2017

Fourth Semester

Computer Science and Engineering

15UCS402 - JAVA PROGRAMMING

(Regulation 2015)

(Common to Information Technology)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 1 = 5 Marks)

1. The correct way of inheriting class A by class B is

   (a) Class B + class A {} (b) Class B inherits class A {}
   (c) Class B extends A {} (d) Class B extends class A {}

2. Choose the output of this program?

```
class multithreaded_programing {
public static void main(String args[]) {
Thread t = Thread.currentThread();
System.out.println(t);
}  }
```

   (a) Thread [5,main] (b) Thread[main,5]
   (c) Thread[main,0] (d) Thread[main,5,main]

3. The Exceptions in Java arises in code sequence when

   (a) run time (b) compilation time
   (c) can occur any time (d) none of these

4. The class used to read characters in a file is

(a) FileReader (b) FileWriter
(c) FileInputStream (d) InputStreamReader

5. AWT stands for

(a) All Window Tools (b) All Writing Tools
(c) Abstract Window Toolkit (d) Abstract Writing Toolkit

PART - B (5 x 3 = 15 Marks)

6. How can a subclass call a method or a constructor defined in a superclass?

7. Define constructer and its types.

8. State the difference between the methods sleep( ) and wait( ).

9. Give a note on output streams and input streams in Java.

10. There are two classes: A and B. The class B need to inform a class A when some important event has happened. What Java technique would you use to implement it?

PART - C (5 x 16 = 80 Marks)

11. (a) Create an 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. (16)

Or

(b) Differentiate between constructor and method of class. Define method overloading and its purpose. Write a program to demonstrate the constructor overloading. (16)

12. (a) Is JAVA supports multiple inheritance? Write down the code to implement multiple inheritances. Is it possible to initialize base class data member through derived class constructor? Show with proper syntax. (16)

Or

(b) Create single level and multiple inheritances in JAVA. Write a JAVA program to demonstrate combination of both types of inheritance as (A, B) -> C -> D. (16)

13. (a) State the mechanisms how JAVA exceptions are handled. State the difference between two sub-class of Throwable class namely Exception and Error. (16)

Or

(b) Evaluate a program to read 20 marks and store them in an array. Define your own exception. Make use of your exception when a mark is "<" 0 or a mark is ">"100. (16)

14. (a) Elucidate the importance of collection framework. Which exception is thrown by Java Run-time, when an attempt is made to change the content of an un-modifiable method of collection framework? (16)

Or

(b) Explain the differences between byte stream and character stream with necessary examples. (16)

15. (a) Define swing. Explain the components and containers in the swings with suitable example program. (16)

Or

(b) Write the purpose of the following swing components:

(i) JLabel (ii) JTextField (iii) JScrollPane (iv JComboB (16)