

**Name of subject: JAVA PROGRAMMING**  
**Subject code: 17515**  
**Semester: V**

## **ASSIGNMENT 1**

### **Introduction to Java (16 Marks)**

#### **3 Marks**

1. Write all primitive data types available in java with their storage size in bytes.
2. Illustrate with Example the use of switch case statement.
3. Write a Program to generate Fibonacci series.
4. Explain any 4 features of java.
5. Describe various bitwise operators with example.

#### **4 Marks**

6. What is Byte-code? Explain JVM.
7. Why java is not 100% (true) Object oriented language.
8. Explain the use of break statement in java with example.
9. Explain Relational and Logical Operator in java.
10. What is type casting? Explain with example.

## ASSIGNMENT 2

### **Classes, Objects & Methods (24 Marks)**

#### **3 Marks**

1. Define a class 'Person' with data members as name and age. Accept and display data for one objects .Differentiate between Method Overloading and Method overriding.
2. Define a class 'Employee' with data members as empid , name and salary. Accept data for five objects and print it.
3. Explain Constructor overloading with suitable example.
4. What is garbage collection and finalize() Method in java?
5. Explain the following method of vector class:
  1. elementAt ( )                      2.addelement ( )
  3. insertelementAt ( )            4.removeelement ( )
6. Describe the access specifiers in Java.

#### **4 Marks**

7. Illustrate with example the use of Static members with example.
8. Explain following methods of String class with suitable example.
  2. charAt( )                      2.compareTo( )
  3. equals ( )                      4.length ( )
9. What is Vector? How it differs from array? Explain.
10. Describe general structure of class and how to create object with example.
11. Write a program to calculate percentage of 4 subjects and print in suitable format.
12. Write a program to accept a string from the console and count number of vowels in a string.
13. Give the steps to specify how the java invokes overloaded methods.
14. List various Wrapper Classes. Give any four methods of Integer wrapper class.

## **ASSIGNMENT 3**

### **Interface & Package (12 Marks)**

#### **5 Marks**

1. List any four built in packages from java API along with their use.
2. Write the effect of access specifiers public, private & protected in package.
3. What is package? How to create package? Explain with suitable example.

#### **6 Marks**

4. What is Interface? Describe syntax, feature & need of an interface.
5. Write four major differences between an interface & a class.
6. Explain with example how to achieve multiple inheritance with interface.

## ASSIGNMENT 4

### **Multithreading & Exception Handling (16 Marks)**

#### **4 Marks**

1. What is Exception? Give different types of exception that could occur during runtime. Why to handle exception?
2. Describe complete life cycle of thread.
3. What is thread priority? Write are the default values? Write methods to get & change priority of thread.
4. What is thread? What is difference between multiprocessing & multithreading?

#### **7 Marks**

1. What is synchronization? How do we achieve it?
2. Write a program to define two threads. One thread will print 1 to 10 no whereas other will print 10 to 1 nos.
3. Explain the following terms with respect to exception handling:

Try/Catch

Throw

Finally

Throws

4. WAP to input name & age of a person and throw an user-define exception, if the entered age is negative.

## ASSIGNMENT 5

### **Applets & Graphics (20 Marks)**

#### **16 Marks**

- 1 Explain applet life cycle with suitable example.
- 2 Differentiate between java applet & java application.
- 3 Explain <PARAM> tag of applet with suitable example.
- 4 Explain <applet> tag with all its major attributes.

#### **8 Marks**

Write an Applet to accept a username in the form of parameter and print “Hello <username>”.

Write the steps involved in developing and running a local applet.

Describe any four methods from graphics class.

## **ASSIGNMENT 6**

### **Streams & File I/O (12 marks)**

1. Write a program to read a file (using character stream).
2. Explain serialization in relation with stream class.
3. Describe different stream classes.
4. Write a program to copy content of one file to another using character stream class.