1. (i) What is Byte code? [

(ii) What is the use of final keyword in Java?

(iii) What is Garbage collection in Java?

(iv) What is ‘Unicode’ in java?

(v) Explain the differences between checked & unchecked exceptions.

(vi) What is Java Virtual Machine?

(vii) Why Java is known as Platform Independent?

(viii) What is an Exception? How exceptions are handled in Java?

2.a). Explain all the features of java in detail.

b) Write a Java program to add two complex number and display the result using constructor overloading.

c) Explain the use of super keyword in case of inheritance in Java

3. (a) Overload constructors (at least thrice) of a class Figure, to calculate the area of Rectangle, Square and Triangle.

(b) Design a class ‘Student’ (with attribute Roll no, Name, Attendance\_Percentage, Mark1 & Mark2) and another interface ‘Attendance’ (with attribute Required\_Percentage=75). Derived a class Result from the above two with a method to verify the attendance percentage. If the attendance percentage is greater than the Required\_Percentage then display the average mark, otherwise display a message that “The student is debarred”.

4. (a) Write program to demonstrate the use of method overriding and ‘super’   
keyword in JAVA.

(b) Write a JAVA program to demonstrate the use of multiple catch blocks with ‘finally’.

5. Write short notes on any two –

(a) Static vs Instance variables (b) Inner class

(c) Abstract class (d) Dynamic Method Dispatch

(e)Type Conversion (f) Dynamic Method Dispatch

(g) Interface (h) finally block