1. Can we override static methods? Can we apply dynamic method dispatch for static methods? Justify your answer with an example program.
2. Define a Person class with the following private instance variables name, date of birth(Date user defined class) and add appropriate accessor methods for these variables. Create a subclass of Person called Author with private instance variables email (String) gender(char), No of books authored. Show how the super class members are initialled by the subclass. Display the Author object in the following manner.

System.out.println(author);// author is an object of type Author.

1. Static methods cannot refer to ***this*** or ***super*** in anyway. Justify the statement with an example program. Can we override private methods? Justify your answer.
2. Define a class **Teacher** with the following private instance variables, name, date of birth (is of type **DATE**) and appropriate constructor and display function. Define a separate DATE class with 3 integers year, month and date. Derive 2 classes from Teacher class namely **PartTimeTeacher** and **FullTimeTeacher**. **PartTimeTeacher** class has an instance variable ‘int hrs’ representing number of hours the teacher has worked. The salary is calculated based on the number of hours the teacher has worked. For 1 hr = the amount is Rupees 2000.00. For FullTimeTeacher, the salary is calculated as follows. salary=Basic +HRA( 10% of basic)+DA(60% of basic)+ other incentives. Define display method in both the subclasses and show how the hidden method of Teacher class can be accessed using super keyword. Write a separate driver class to create objects of each class and test the methods of other classes.