**Question 1**

Explain the Generics and Enhanced for loop features of JDK 1.5 and above.

**Question 2**

How can you synchronize a Map?

**Question 3**

What are chained exceptions in java and how do you handle them?

**Question 4**

What is the significance of equals and hashCode method.?

**Question 5**

Explain the differences between default and protected access modifiers.

**Question 6**

Can constructor throw Exception in java?

**Question7**

What is the purpose of assert keyword used in JDK1.4.x?

**Question 8**

Complete the main method to output **“CAB”**

**public** **abstract** **class** A {

**public** String output = "A";

}

**public** **abstract** **class** B **extends** A {

**public** String output = "B";

}

**public** **class** C **extends** B {

**public** String output = "C";

**public** **static** **void** main(String args[]) {

// Add code here

}

}

**Question 9**

What is the output of this program?

**public** **class** TestEight {

**public** **static** **void** main(String args[]) {

**int** blScore = 1;

**int** whScore = 1;

String color = "BLACK";

**int** i = (color == "BLACK") ? blScore++ : whScore++;

System.*out*.println("blScore:"+blScore++);

System.*out*.println("whScore:"+whScore++);

}

}

**Question 10**

What is the output of this program?

**public** **class** TestTwo {

p**ublic** **class** MyException **extends** Error {

}

**public** **class** TestException {

**public** **void** throwException() **throws** Error {

**if** (1 == 1)

**new** MyException();

}

};

**public** **static** **void** main(String args[]) {

**try** {

TestTwo t = **new** TestTwo();

TestException tex = t.**new** TestException();

tex.throwException();

} **catch** (Exception ex) {

System.*out*.println("Caught Exception");

} **catch** (MyException Myex) {

System.*out*.println("Caught My Exception");

}

}

}

**Question 11**

Given a positive integer, write a program that gives the Fibonacci series up to (equals or less than) that number?

(Formula for Fibonacci series: Fn = Fn-1+Fn-2 and F0 = 0 and F1 = 1)

**Question 12**

There is an Employee Class with attributes for firstName, lastName, age and salary. Write a program that sorts an ArrayList of employees either alphabetically by the lastName or numerically by the age.

**Question 13**

Given a Employee table

Emp id First Name Last Name Manger\_id

100 X Y null

110 A B 100

120 A B 110

130 E F 100

140 G H 120

1. Write a query to get the First Name and Last Name of an employee with Emp id = 130 and his/her manager’s First Name and Last Name.
2. Write a query to find all employees with duplicate names (both First Name and Family Name).

**Question 14**

Given that Car class can go through multiple safety checks like tire quality check, engine quality check and brake quality check. Each of these checks can go through independently of each other and update a Boolean quality variable to true or false based on the result. Write a multi threaded program that updates this variable with quality check approved when all the three checks pass. If a thread updates any one check to false, other thread should stop working on the car.

**Question 15**

Explain merge sort algorithm with examples.

**Question 16**

Compare JSP and Servlets as J2EE technologies.

**Question 17**

What is URL Encoding?

**Question 18**

Give examples of different types of Action classes in Struts.

**Question 19**

Explain MVC pattern.

**Question 20**

Give examples of implicit objects in JSP.