**Question 1**

Provide the Output for the program

**public** **class** test {

**private** test(Object o) {

System.*out*.println("Object");

}

**private** test(Integer dArray) {

System.*out*.println("double array");

}

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

**new** test(**null**);

}

}

**Question 2**

What is the difference between java.util.Iterator and java.util.ListIterator?

**Question 3**

Which implementation of the List interface provides for the fastest insertion of a new element into the middle of the list?

**Question 4**

Difference between synchronized block vs synchronized method?

**Question 5**

Explain life cycle of a thread briefly?

**Question 6**

What is the difference between equals() method and = =?

**Question 7**

What is the difference between abstract class and an interface and why should we use them?

**Question 8**

Does the order of the catch Statements in a program matter? Explain why.

**Question 9**

What is the difference between prefix and postfix forms of the ++ operator?

**Question 10**

Provide the result of compiling this program and provide the reason

**public** **class** Test {

**public** **static** **void** go(Integer n) {System.*out*.println("integer"); }

**public** **static** **void** go(Long n) {System.*out*.println("Long"); }

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

Integer y = **new** Integer(6);

Integer z = **new** Integer(7);

*go*(y);

*go*(z);

}

}

**Question 11**

What is the difference between forward() and sendRedirect()?

**Question 12**

What is a scriplet?

**Question 13**

What are the differences between static and dynamic include in a jsp?

**Question 14**

Write a pseudocode to identify if the expression has extra bracket? (((A+B))\*C))?

**Question 15**

Write a pseudocode for quick sort

**Question 16**

How would you find a duplicate element in an array of integers between 1 and 1000000. There exists one element which has occurred more than once.

**Question 17**

Examine the description of the Employee table

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data type** | **Nullable** |
| EMP\_ID | NUMBER(4) | NOT NULL |
| LAST\_NAME | VARCHAR(30) | NOT NULL |
| FIRST\_NAME | VARCHAR(30) |  |
| DEPT\_ID | NUMBER(2) |  |
| JOB\_CAT | VARCHARD2(30) |  |
| SALARY | NUMBER(8,2) |  |

SELECT dept\_id, MIN(salary), MAX(salary)

FROM employees

GROUP BY dept\_id

HAVING MIN(salary) < 5000 AND MAX(salary)

Describe in words what the above sql query solves?

**Question 18**

Can we use javascript to submit a form?

**Question 19**

Evaluate the following query and provide the ouput for the following query

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| EMPLOYEE\_ID | EMP\_NAME | DEPT\_ID | MGR\_ID | JOB\_ID | SALARY |
| 101 | Smith | 20 | 120 | SA\_REP | 4000 |
| 102 | Martin | 10 | 105 | CLERK | 2500 |
| 103 | Chris | 20 | 120 | IT\_ADMIN | 4200 |
| 104 | John | 30 | 108 | HR\_CLERK | 2500 |
| 105 | Diana | 30 | 108 | HR\_MGR | 5000 |
| 106 | Bryan | 40 | 110 | AD\_ASST | 3000 |
| 108 | Jennifer | 30 | 110 | HR\_DIR | 6500 |
| 110 | Bob | 40 |  | EX\_DIR | 8000 |
| 120 | Ravi | 20 | 110 | SA\_DIR | 6500 |

Select e.employee\_id “Emp\_id”, e.emp\_name “Employee”, e.salary, m.employee\_id “Mgr\_id”, m.emp\_name “Manager” FROM employees e, employee m

WHERE e.mgr\_id =m.employee\_id and e.salary> 4000

**Question 20**

Write program to reverse a linked list?