**Question 1**

What is the output of the program?

**public** **class** Number{

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

String 2010String = "Year 2010 ";

String $dollarStr = 2010String + "Dollar Value!!";

System.out.println($dollarStr);

}

}

**Question 2**

Explain Final and Abstract Classes?

**Question 3**

What is the importance of hashCode() and equals() methods? How are they used in java?

**Question 4**

Explain java heap vs stack memory? What is the role of garbage collector with these?

**Question 5**

What is the difference between prepared statement and callable statement?

**Question 6**

What is the difference between Serializable and Externalizable interface?

**Question 7**

Which method names follow the JavaBeans standard?

a. addSum

b. getMail

c. delMail

e. isEmail

**Question 8**

Write an efficient program to split a comma separated string?

**Question 9**

What is the difference between Boolean & operator and the && operator?

**Question 10**

In the program given below will the isOdd() method be able to identify the even and odd numbers correctly?

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

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

**for**(**int** i=-2;i<=2;i++) {

**if**(*isOdd*(i)){

System.*out*.println("Odd:"+i);

} **else** {

System.*out*.println("Even:"+i);

}

}

}

**public** **static** **boolean** isOdd(**int** i) {

**return** i % 2 == 1;

}

}

**Question 11**

Explain Servlet’s life cycle?

**Question 12**

How is a session maintained in a web application?

**Question 13**

What is a RequestDispatcher? What object do you use to forward a request?

**Question 14**

Write program to reverse a linked list?

**Question 16**

Write a program/pseudocode to print a histogram of the frequencies of different characters in its input.

**Question 16**

Write the pseudocode for binary search?

**Question 17**

Examine the data and answer the following questions

**EMPLOYEES**

|  |  |  |
| --- | --- | --- |
| **LAST\_NAME** | **DEPARTMENT\_ID** | **SALARY** |
| Getz | 10 | 3000 |
| Davis | 20 | 1500 |
| Bill | 20 | 2200 |
| Davis | 30 | 5000 |
| Kochhar |  | 5000 |

**DEPARTMENTS**

|  |  |
| --- | --- |
| **DEPARTMENT\_ID** | **DEPARTMENT\_NAME** |
| 10 | Sales |
| 20 | Marketing |
| 30 | Accounts |
| 40 | Adminstration |

Retrieve all employees, whether or not they have matching departments in the department table.

**Question 18**

Describe Action classes and Action forms?

**Question 19**

What is the difference between schema and DTD?

**Question 20**

Analyze the following data

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 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 |

Write a query to get the list of ID, Name and salary of the employee, and the ID and name of the employee’s manager, for all the employees who have a manager and earn more than 4000.