**Question 1**

What is the Output for the following code snippet?

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

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

**int** i = 42;

String s = (i<40)?"life":(i>50)?"universe":"everything";

System.*out*.println(s);

}

}

**Question 2**

What are the two types of exceptions? Explain why we need them?

**Question 3**

What is the difference between Arrays.sort() vs Collections.sort()? Which one is faster?

**Question 4**

Explain reflection with an example?

**Question 5**

What is the difference between >> and >>> operators?

**Question 6**

What is the purpose of finalize() method?

**Question 7**

Explain Serialization and deserialization?

**Question 8**

What is the difference between sleep and wait?

**Question 9**

What is the difference between static and non-static variables?

**Question 10**

Provide the output for the program

**public** **class** Animal {

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

String pig = "length: 10";

String dog = "length: " + pig.length();

System.*out*.println("Animals are equal: " + pig == dog);

}

}

**Question 11**

What is the difference between GET and POST method?

**Question 12**

What is the difference between static variables and instance variables in a servlet?

**Question 13**

What is the Difference between client side vs server side validation? Explain.

**Question 14**

Write a program that provides the nth number in the following series and also the function should return the nth number in the series

F(n) = F(n-1) + F(n-2)

**Question 15**

Write program/pseudocode to wrap long input lines into two or more shorter lines after the last non-blank character that occurs before the n-th column of the input. Make sure your program does something intelligent with very long lines and if there are no blanks or tabs before the specified column.

**Question 16**

Which is faster: finding an item in a hash table or in a sorted list?

**Question 17**

Given the following 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) |  |

Write the sql query to show the maximum salary paid in each job category of each department?

**Question 18**

Why do we need Ajax? Describe the role of XMLHttpRequest/Response object?

**Question 19**

How is a session maintained in a web application?

**Question 20**

What is the difference between Hashtable and Hashmap? Can/cannot a HashMap be synchronized? Explain?