wer all questions   **Time allowed: Two Hours**

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1. What is programming Language and list five programming languages in existence today?

2. State the difference between **Compiler** and **Assembler**.

3. What is java and write three characteristics of java?

4. Briefly explain the difference between **syntax** and **semantic** rules of a programming language.

5. Give java statements that accomplish each of the following tasks:

    I.   Declare int variables x and y. Initialize x to 16 and y to 18.

    II. Update the value of an int variable x by adding 5 to it.

    III. Display the variables and a message saying which variable is greater.

1. Find the output of the following java code fragment.

    System.out.println (3 / 2 + 5.5);

    System.out.println(15.6 / 2 + 5);

    System.out.println(4 + 5 / 2.0);

    System.out.println(4 * 3 + 7 / 5 - 25.5);

2. Briefly explain the **while loop** with suitable example.

3. Convert the following code fragment into **while loop** and **do-while loop**.

```
j = 2;
for (i = 1; i <= 5; i++);
    {
        System.out.println (j);
        j = j + 5;
    }
System.out.println();
```

4. What is the output of the following program segment? Assume all variables are declared.

```
for (j = 0; j < 8; j++)
    {
        System.out.println (j * 25 + " - ");
        if (j != 7)
            System.out.println ((j + 1) * 25 - 1);
        else
            System.out.println ((j + 1) * 25);
    }
```

Q3.

1. State the difference between **Object** and **Class**.

2. Briefly explain what is meant by **Inheritance** in Object Oriented Paradigm.

3. Write a java program to do the following tasks:

    a. Define a class **Room** which has attributes **roomNo**, **roomArea** and roo
    A method **setData()**, accepts the values for variables and a
    displayData(), display the values of the variables.

    b. Write a java class **TestRoom** which has a **main ()** method to instantiate t
    Room and inherit all the member methods of the class **Room**.

4. List the **Access Modifiers** in java programming

Q4.

1. Define the following terms related with variables:

   a. Local variable,

   b. Instance variable,

   c. Class variable.

2. Briefly explain the **default constructor** and **parameterized constructor**.

3. Discuss the difference between method **Overriding** and **Overloading** in java.

4. What are the difference between constructors and methods?