- **Answer 1:-** Increment (i++) should be written at last line before the } where while loop end.

- **Answer 2:-**

```
int result = 56;
if(result>40)
{
        System.out.println(“Passed”);
}
Else
{
        System.out.println(“Failed”);
}
```

- **Answer 3:-** 9 exclamation marks (!) will be print in output.

- **Answer 4:-**

```
for(int number = 10; number<15; number++)
{
        System.out.println(“*”);
}
```

- **Answer 5:-** The code will check if the number entered by the user is less than 10. If it’s not, it will print ‘Finished’. If the number is less than 10, it will enter a while loop to check if the number is 0. If it is, the loop will break; otherwise, it will continue.

- **Answer 6:-**

```
int i = 4;
      switch(i) {
         case 10:
            System.out.println("Congratulations you have full marks");
            break;
         case 9:
            System.out.println("Congratulations you have almost full marks");
            break;
         case 8:
            System.out.println("Congratulations you have done very well");
            break;
         case 7:
            System.out.println("Congratulations you have done well");
            break;
         case 6:
            System.out.println("You are doing alright but could study more");
            break;
         case 5:
            System.out.println("You only got half marks, you need to do more");
```

```
            break;
        case 4:
            System.out.println("You got less than half marks, you need to do more");
            break;
        case 3:
            System.out.println("You have got low marks, see a teacher");
            break;
        case 2:
            System.out.println("You have got very low marks, see a teacher");
            break;
        case 1:
            System.out.println("You only got 1 marks, see a teacher");
            break;
        default:
            System.out.println("You have failed abysmally");
    }
```

- **Answer 7:-** The value entered by the user will be assigned to variable i, which will then be printed. At the end, it will check the condition: if i is not equal to 0, then run the loop; otherwise, don't run it.

- **Answer 8:-** The program will print 'Hello + name' because everything is written within double quotation marks, making the entire statement a string. If we want to print 'Hello Mumbai', then the print statement will be: System.out.println("Hello " + name);.

- **Answer 9:-**

```
For(int i=11;i<20;i++)
{
        System.out.println(i);
}
```

- **Answer 10:-** If we want to assign a value from right to left, then instead of '=', we have to use '=='. So the if condition will be 'if(i==10)'.

- **Answer 11:-**

```
import java.util.Scanner;

public class Main {
    public static void main(String[] args) {
        Scanner getnumber = new Scanner(System.in);
        int number;

        do {
            System.out.print("Enter a number (0 to exit): ");
            number = getnumber.nextInt();
            System.out.println(number);
```

```
        } while (number != 0);

        System.out.println("Program exited.");
    }
}
```

- **Answer 12:-** This code checks if the variable i is less than 10 or if it's equal to 15. If either condition is true, it increments i by 1 and then prints its value.

- **Answer 13:-**

```
import java.util.Scanner;

public class Main {
    public static void main(String[] args) {
        Scanner getnumber = new Scanner(System.in);
        int number = getnumber.nextInt();

        for(int i = 1; i <= 10; i++) {
            System.out.println(number + " * " + i + " = " + (number * i));
        }
    }
}
```

- **Answer 14:-**

```
import java.util.Scanner;

public class Main {
    public static void main(String[] args) {
        Scanner getnumber = new Scanner(System.in);
        int number = getnumber.nextInt();

        int factorial = 1;
        int i = 1;

        while (i <= number) {
            factorial *= i;
            i++;
        }

        System.out.println("Factorial of " + number + " is: " + factorial);
    }
}
```

- **Answer 15:-**

```
import java.util.Scanner;

public class Main {
```

```
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter a number: ");
        int number = scanner.nextInt();

        int sum = 0;
        int temp = number;

        do {
            // Extract the last digit of the number and add it to the sum
            sum += temp % 10;
            // Remove the last digit from the number
            temp /= 10;
        } while (temp != 0); // Continue the loop until all digits are processed

        System.out.println("Sum of digits of the number is: " + sum);
    }
}
```

- **Answer 16:-**

```
import java.util.Scanner;

public class Main {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter a number: ");
        int number = scanner.nextInt();

        boolean isPrime = true;

        if (number <= 1) {
            isPrime = false; // 0 and 1 are not prime
        } else {
            for (int i = 2; i * i <= number; i++) {
                if (number % i == 0) {
                    isPrime = false;
                    break;
                }
            }
        }

        if (isPrime) {
            System.out.println(number + " is a prime number.");
        } else {
            System.out.println(number + " is not a prime number.");
```

```
        }
    }
}
```

- **Answer 17:-**

```
import java.util.Scanner;

public class Main {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter a number (1 to 12) representing a month: ");
        int monthNumber = scanner.nextInt();

        String monthName;
        switch (monthNumber) {
            case 1:
                monthName = "January";
                break;
            case 2:
                monthName = "February";
                break;
            case 3:
                monthName = "March";
                break;
            case 4:
                monthName = "April";
                break;
            case 5:
                monthName = "May";
                break;
            case 6:
                monthName = "June";
                break;
            case 7:
                monthName = "July";
                break;
            case 8:
                monthName = "August";
                break;
            case 9:
                monthName = "September";
                break;
            case 10:
                monthName = "October";
                break;
            case 11:
```

```
            monthName = "November";
            break;
        case 12:
            monthName = "December";
            break;
        default:
            monthName = "Invalid month number";
            break;
    }

    System.out.println("Month name: " + monthName);
  }
}
```

- **Answer 18:-**

```
import java.util.Scanner;

public class Main {
  public static void main(String[] args) {
    Scanner scanner = new Scanner(System.in);

    System.out.println("Simple Calculator");
    System.out.println("---------------------- ");

    System.out.print("Enter first number: ");
    double num1 = scanner.nextDouble();
    System.out.print("Enter second number: ");
    double num2 = scanner.nextDouble();

    System.out.println("\nSelect an operation:");
    System.out.println("1. Addition (+)");
    System.out.println("2. Subtraction (-)");
    System.out.println("3. Multiplication (*)");
    System.out.println("4. Division (/)");
    System.out.print("Enter your choice (1-4): ");
    int choice = scanner.nextInt();

    double result;
    switch (choice) {
      case 1:
        result = num1 + num2;
        System.out.println("Result: " + num1 + " + " + num2 + " = " + result);
       break;
      case 2:
        result = num1 - num2;
        System.out.println("Result: " + num1 + " - " + num2 + " = " + result);
       break;
```

```
            case 3:
                result = num1 * num2;
                System.out.println("Result: " + num1 + " * " + num2 + " = " + result);
             break;
            case 4:
                if (num2 != 0) {
                    result = num1 / num2;
                   System.out.println("Result: " + num1 + " / " + num2 + " = " + result);
             } else {
                    System.out.println("Error: Cannot divide by zero!");
                }
                break;
            default:
                System.out.println("Error: Invalid operation choice!");
                break;
        }
    }
}
```