Rajalakshmi Engineering College

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2024_28_III_OOPS Using Java Lab

2028_REC_OOPS using Java_Week 2_MCQ

Attempt : 1
Total Mark : 15
Marks Obtained : 14

Section 1 : MCQ

1. What will be the output of the following code?

```java
class Test {
    public static void main(String[] args) {
        int x = 5, y = 2;
        if (x + y == 10)
            System.out.print("Ten");
        else if (x - y == 3)
            System.out.print("Three");
        else
            System.out.print("None");
    }
}
```

Answer

Three

2.   What will be the output of the following code?

```java
public class Main {
    public static void main(String[] args) {
        int sum = 0;
        for(int i = 1; i <= 5; i++) {
            sum += i;
        }
        System.out.println(sum);
    }
}
```

Answer

15

Status : Correct   *Marks : 1/1*

3.   What will be the output of the following code?

```java
public class Main {
    public static void main(String[] args) {
        for(int i = 1; i <= 20; i = i * 2) {
            System.out.print(i + " ");
        }
    }
}
```

Answer

1 2 4

Status : Wrong   *Marks : 0/1*

4.   What will be the output of the following code?

```java
class ConditionTest {
    public static void main(String[] args) {
```

```
    int a = 7;
    if (a == 7)
        System.out.print("Match");
    else
        System.out.print("No Match");
  }
}
```

Answer

Match

Status : Correct   *Marks : 1/1*

5. What will be the output of the following Java code snippet?

```
public class Main {
   public static void main(String[] args) {
      int day = 4;
      String result = "";
      switch(day) {
         case 1:
            result = "Monday";
            break;
         case 2:
            result = "Tuesday";
            break;
         case 3:
            result = "Wednesday";
            break;
         default:
            result = "Other Day";
      }
      System.out.println(result);
   }
}
```

Answer

Other Day

Status : Correct   *Marks : 1/1*

6. What will be the output of the following code?

```
class Loop {
    public static void main(String[] args) {
        for (int i = 1; i <= 3; i++) {
            for (int j = 1; j <= 2; j++) {
                System.out.print(i + "" + j + " ");
            }
        }
    }
}
```

Answer

11 12 21 22 31 32

Status : Correct   *Marks : 1/1*

7. What will be the output of the following code?

```
class Test {
    public static void main(String[] args) {
        int num = 15;
        if (num > 10)
            if (num % 3 == 0)
                System.out.print("Divisible");
            else
                System.out.print("Not Divisible");
    }
}
```

Answer

Divisible

Status : Correct   *Marks : 1/1*

8. What will be the output of the following code?

```
class ConditionTest {
    public static void main(String[] args) {
```

```
    int x = 10;
    if (x > 5)
        System.out.print("High");
    }
}
```

Answer

High

Status : Correct   *Marks : 1/1*

9.   What will be the output of the following code?

```
class LoopTest {
    public static void main(String[] args) {
        int i = 1;
        while (i > 0) {
            System.out.print(i + " ");
            i++;
            if (i == 5) break;
        }
    }
}
```

Answer

1 2 3 4

Status : Correct   *Marks : 1/1*

10.   What will be the output of the following code?

```
class Main {
    public static void main(String[] args) {
        for (int i = 5; i > 0; i--) {
            System.out.print(i + " ");
        }
    }
}
```

Answer

5 4 3 2 1

Status : Correct   *Marks : 1/1*

11.   What will be the output of the following code?

```
public class Main {
    public static void main(String[] args) {
        int i = 1;
        while(i < 10) {
          i += 2;
        }
        System.out.println(i);
    }
}
```

Answer

11

Status : Correct   *Marks : 1/1*

12.   What will be the output of the following code?

```
class LoopTest {
    public static void main(String[] args) {
        int i = 1;
        do {
            System.out.print(i + " ");
            i *= 2;
        } while (i <= 8);
    }
}
```

Answer

1 2 4 8

Status : Correct   *Marks : 1/1*

13. What will be the output of the following Java code snippet?

```java
public class Main {
    public static void main(String[] args) {
        int score = 75;
        if(score >= 90) {
            System.out.println("Grade: A");
        } else if(score >= 80) {
            System.out.println("Grade: B");
        } else if(score >= 70) {
            System.out.println("Grade: C");
        } else {
            System.out.println("Grade: D");
        }
    }
}
```

Answer

Grade: C

Status : Correct   *Marks : 1/1*

14. What will be the output of the following code?

```java
public class Main {
    public static void main(String[] args) {
        int i = 10;
        do {
            System.out.print(i + " ");
            i -= 3;
        } while(i > 0);
    }
}
```

Answer

10 7 4 1

Status : Correct   *Marks : 1/1*

15. What will be the output of the following code?

```java
class Test {
    public static void main(String[] args) {
        int a = 4, b = 5;
        if ((a + b) % 2 == 0)
            System.out.print("Even");
        else
            System.out.print("Odd");
    }
}
```

Answer

Odd

Status : Correct   *Marks : 1/1*

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Scan to verify results

2024_28_III_OOPS Using Java Lab

2028_REC_OOPS using Java_Week 2_Q1

Attempt : 1
Total Mark : 10
Marks Obtained : 10

Section 1 : Coding

1. Problem Statement

Arun is working on a project to automate the process of determining whether a student has passed or failed based on their subject marks.

He aims to create a simple program that takes positive integers as marks for five subjects from the user. If the average of the marks is greater than or equal to 50, the student has passed the exam. Otherwise, the student has failed.

Help Arun to implement the project.

Input Format

The input consists of five space-separated integers, representing the marks in five subjects.

Output Format

The first line of output prints "Average score: " followed by an integer representing the average score.

The second line prints one of the following:

1. If the condition is satisfied, print "The student has passed".
2. Otherwise, the output prints "The student has failed".

Refer to the sample output for formatting specifications.

Sample Test Case

Input: 50 60 70 80 90

Output: Average score: 70
The student has passed

Answer

```java
// You are using Java
import java.util.*;
class sample{
   public static void main(String args[]){
      Scanner s=new Scanner(System.in);
      int a=s.nextInt();
      int b=s.nextInt();
      int c=s.nextInt();
      int d=s.nextInt();
      int e=s.nextInt();
      int avg=(a+b+c+d+e)/5;
      System.out.print("Average score: "+avg+"\n");
      if(avg>=50){
         System.out.print("The student has passed");
      }
      else{
         System.out.print("The student has failed");
      }
   }
}
```

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Scan to verify results

2024_28_III_OOPS Using Java Lab

2028_REC_OOPS using Java_Week 2_Q2

Attempt : 1
Total Mark : 10
Marks Obtained : 10

Section 1 : Coding

1. Problem Statement

Samantha is a diligent math student who is exploring the world of programming. She is learning Java and has recently studied conditional statements. One day, her teacher gives her an interesting problem to solve, which takes a number as input and checks whether it is a multiple of 5 or 7.

Help her complete the task.

Input Format

The input consists of a single integer N, representing the number to be checked.

Output Format

If the number is a multiple of 5 but not 7, the output prints "N is a multiple of 5".

If the number is a multiple of 7, the output prints "N is a multiple of 7".

Otherwise the output prints "N is neither multiple of 5 nor 7" where N is an entered integer.

Refer to the sample output for formatting specifications.

Sample Test Case

Input: 10
Output: 10 is a multiple of 5

Answer

```java
// You are using Java
import java.util.Scanner;

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

        if (N % 5 == 0 && N % 7 != 0) {
            System.out.println(N + " is a multiple of 5");
        } else if (N % 7 == 0) {
            System.out.println(N + " is a multiple of 7");
        } else {
            System.out.println(N + " is neither multiple of 5 nor 7");
        }
    }
}
```

Status : Correct   *Marks : 10/10*

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Scan to verify results

2024_28_III_OOPS Using Java Lab

2028_REC_OOPS using Java_Week 2_Q3

Attempt : 1
Total Mark : 10
Marks Obtained : 10

Section 1 : Coding

1. Problem Statement

John is a fitness trainer, and he wants to use the BMI calculator to assess the body mass index of his clients. He has a list of clients based on their height and weight.

John plans to write a program to quickly determine the BMI and provide a classification for each client.

If BMI is less than 18.5, the program will classify it as "Underweight"If BMI is between 18.6 and 24.9, the program will classify it as "Normal Weight"If BMI is between 25.0 and 29.9, the program will classify it as "Overweight"If BMI is 30.0 or higher, the program will classify it as "Obese"

Note: Formula to calculate BMI = weight/(height*height)

Input Format

The first line of input consists of a double value, representing the height of the person in meters.

The second line consists of a double value, representing the weight of the person in kilograms.

Output Format

The first line of output prints "BMI: " followed by a double (rounded to two decimal places) representing the calculated BMI.

The second line prints "Classification: " followed by a string indicating the BMI category (Underweight, Normal Weight, Overweight, or Obese).

Refer to the sample output for formatting specifications.

Sample Test Case

Input: 1.2
45.2
Output: BMI: 31.39
Classification: Obese

Answer

```java
// You are using Java
import java.util.Scanner;

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

        double height = sc.nextDouble();
        double weight = sc.nextDouble();

        double bmi = weight / (height * height);

        System.out.printf("BMI: %.2f%n", bmi);

        if (bmi < 18.5) {
            System.out.println("Classification: Underweight");
        } else if (bmi >= 18.6 && bmi <= 24.9) {
```

```java
        System.out.println("Classification: Normal Weight");
    } else if (bmi >= 25.0 && bmi <= 29.9) {
        System.out.println("Classification: Overweight");
    } else if (bmi >= 30.0) {
        System.out.println("Classification: Obese");
    }
  }
}
```

Status : Correct   *Marks : 10/10*