

Slip 17

10 Marks:

```
java
Copy code
import java.util.Scanner;

class Cylinder {
    double radius;
    double height;

    public Cylinder(double radius, double height) {
        this.radius = radius;
        this.height = height;
    }

    public double volume() {
        return 3.14 * radius * radius * height;
    }

    public double surfaceArea() {
        return 2 * 3.14 * radius * (radius + height);
    }

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter the radius of the cylinder: ");
        double radius = sc.nextDouble();
        System.out.print("Enter the height of the cylinder: ");
        double height = sc.nextDouble();

        Cylinder cylinder = new Cylinder(radius, height);
        System.out.println("Volume of Cylinder: " + cylinder.volume());
        System.out.println("Surface Area of Cylinder: " +
cylinder.surfaceArea());
    }
}
```

20 Marks:

```
java
Copy code
import java.util.*;

class Employee {
    int id;
    String name;
    String deptName;
    float salary;
    static int count = 0;

    public Employee(int id, String name, String deptName, float salary) {
        this.id = id;
        this.name = name;
    }
}
```

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        this.deptName = deptName;
        this.salary = salary;
        count++;
    }

    public void display() {
        System.out.println("ID: " + id + ", Name: " + name + ", Dept: " +
deptName + ", Salary: " + salary);
    }

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter number of employees: ");
        int n = sc.nextInt();
        Employee[] employees = new Employee[n];

        for (int i = 0; i < n; i++) {
            System.out.print("Enter ID: ");
            int id = sc.nextInt();
            sc.nextLine(); // Consume newline
            System.out.print("Enter Name: ");
            String name = sc.nextLine();
            System.out.print("Enter Dept Name: ");
            String deptName = sc.nextLine();
            System.out.print("Enter Salary: ");
            float salary = sc.nextFloat();
            employees[i] = new Employee(id, name, deptName, salary);
        }

        System.out.println("\nEmployee Details:");
        for (Employee emp : employees) {
            emp.display();
        }

        System.out.println("Total Employees: " + Employee.count);
    }
}

```