Section 01 : Main Questions

Q1.

```java
import java.util.Scanner;

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

        Scanner input = new Scanner(System.in);

        System.out.print("Enter your first nb:");
        double nb1 = input.nextDouble();

        System.out.print("Enter your second nb:");
        double nb2 = input.nextDouble();

        double sum = nb1 + nb2;

        System.out.println("The sum is " + sum);
    }
}
```

Q2.

```java
import java.util.Scanner;

public class Q2 {
    public static void main(String[] args) {

        Scanner input = new Scanner(System.in);

        System.out.println("Enter your age: ");
        int age = input.nextInt();

        if (age >= 18) {
            System.out.println("Over 18");
        } else if (age < 0) {
            System.out.println("The age entered is incorrect.");
        } else {
            System.out.println("Under 18");
        }
```

```
    }
}
```

Q3.

```
import java.util.Scanner;

public class Q3 {
    public static void main(String[] args) {

        Scanner input = new Scanner(System.in);

        System.out.println("Enter your ICT marks:");
        double ict = input.nextDouble();

        System.out.println("Enter your CW marks:");
        double cw = input.nextDouble();



        if (ict >= 30 && cw >= 30){
            double finalMarks = (ict + cw)/2;
            System.out.println("Your final marks is "+ finalMarks);
                if (finalMarks>40){
                    System.out.println("You pass the exam");
                }else{
                    System.out.println("You fail the exam");
                }
        } else{
            System.out.println("Fail the exam");
        }

    }
}
```

Q4.

```java
import java.util.Scanner;

public class Q4 {
    public static void main(String[] args) {

        Scanner input = new Scanner(System.in);

        System.out.println("Enter your marks: ");
        double marks = input.nextDouble();

        if (marks > 100) {
            System.out.println("Invalid value");
        } else if (marks >= 70 && marks <= 100) {
            System.out.println("1st Class Honours");
        } else if (marks >= 60 && marks <= 69) {
            System.out.println("2nd Class Honours Upper Division");
        } else if (marks >= 50 && marks <= 59) {
            System.out.println("2nd Class Honours Lower Division");
        } else if (marks >= 40 && marks <= 49) {
            System.out.println("3rd Class Honours");
        } else {
            System.out.println("Invalid value");
        }

    }
}
```

Q5.

```java
import java.util.Scanner;

public class Q5 {
    public static void main(String[] args) {

        Scanner input = new Scanner(System.in);

        System.out.println("Enter your first nb: ");
        double num1 = input.nextDouble();

        System.out.println("What do you want,(+,-,/,*) ");
        char operator = input.next().charAt(0);
```

```
        System.out.println("Enter your second nb: ");
        double num2 = input.nextDouble();

        double result = 0;
        switch (operator) {
            case '+':
                result = num1 + num2;
                break;
            case '-':
                result = num1 - num2;
                break;
            case '*':
                result = num1 * num2;
                break;
            case '/':
                if (num2 != 0) {
                    result = num1 / num2;
                } else {
                    System.out.println("Error: Division by zero");
                    return;
                }
                break;
            default:
                System.out.println("Invalid operator");
                return;
        }

        System.out.println("Result: " + result);
    }
}
```

Section 02 (Challenging Questions)

Q6.

```
import java.util.Scanner;

public class Q6 {
    public static void main(String[] args) {

        Scanner input = new Scanner(System.in);

        System.out.println("Enter number of class held?");
        int held = input.nextInt();
```

```
        System.out.println("Enter number of class attend?");
        int attend = input.nextInt();

        double percentage = (attend/held)*100;

        if (percentage<75){
            System.out.println("Your attendance is low & you can't sit the
exam.");
        }else {
            System.out.println("You can sit the exam.");
        }
    }
}
```

Q7.

```
import java.util.Scanner;

public class Q7 {
    public static void main(String[] args) {

        System.out.println("Welcome to banking!");

        Scanner input = new Scanner(System.in);

        System.out.println("Enter amount of balance: ");
        double balance = input.nextDouble();

        while (true) {
            System.out.println("\nChoose a transaction:");
            System.out.println("1. Deposit");
            System.out.println("2. Withdrawal");
            System.out.println("3. Check for fraud");
            System.out.println("4. Exit");
            System.out.print("Enter your choice (1-4): ");

            int choice = input.nextInt();
            input.nextLine();

            switch (choice) {
                case 1:
                    System.out.print("Enter deposit amount: $");
                    double depositAmount = input.nextDouble();
                    balance += depositAmount;
                    System.out.println("Deposit successful. Updated balance:
$" + balance);
                    break;
                case 2:
                    System.out.print("Enter withdrawal amount: $");
                    double withdrawalAmount = input.nextDouble();

                    if (withdrawalAmount > balance) {
                        System.out.println("Error: Insufficient funds.
Current balance: $" + balance);
```

```
                    } else {
                        balance -= withdrawalAmount;
                        if (balance < 0) {
                            System.out.println("Warning: Overdraft! Current
balance: $" + balance);
                        } else {
                            System.out.println("Withdrawal successful.
Updated balance: $" + balance);
                        }
                    }
                    break;
                case 3:
                    if (balance < 100) {
                        System.out.println("Warning: Potential fraud
detected! Current balance: $" + balance);
                    } else {
                        System.out.println("Account balance is above the
fraud threshold. Current balance: $" + balance);
                    }
                    break;
                case 4:
                    System.out.println("Exiting the program. Final balance:
$" + balance);
                    System.exit(0);
                default:
                    System.out.println("Error: Invalid choice. Please enter a
valid option.");
            }
        }
    }
}
```