Section1Q1

```
import java.util.*;
class Section1Q1 {
	public static void main(String[] args) {
		Scanner getInput = new Scanner(System.in);

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

		double sum = num1 + num2;
		System.out.println(sum);
	}
}
```

Section1Q2

```
import java.util.*;
class Section1Q2 {
	public static void main(String[] args) {
		Scanner getInput = new Scanner(System.in);
		System.out.print("Enter age: ");
		int age = getInput.nextInt();
```

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

Section1Q3

```
import java.util.*;
class Section1Q3 {
    public static void main(String[] args) {
        Scanner getInput = new Scanner(System.in);

        // Inupt ict mark
        System.out.print("Enter ICT mark: ");
        float ictMark = getInput.nextFloat();

        // Input coursework mark
        System.out.print("Enter coursework mark: ");
        float courseworkMark = getInput.nextFloat();
```

```
            if (ictMark > 30 && courseworkMark > 30) {
                float finalMark = (ictMark + courseworkMark) / 2;
                System.out.println("Congratulations! you passed the module");
                System.out.println("Final mark: " + finalMark);
            }

            else {
                System.out.println("Unfortunately, you have not pass the exam.");

            }
        }
}
```

Section1Q4

```
import java.util.*;
class Section1Q4 {
    public static void main(String[] args) {
        Scanner getInput = new Scanner(System.in);
        System.out.print("Enter mark: ");
        float mark = getInput.nextFloat();

        if (mark >= 70 && mark <= 100) {
            System.out.println("1st Class Honours (1)");
        }
```

```
            else if (mark >= 60 && mark <= 69) {
                System.out.println("2nd Class Honours Upper Division (2:i)");
            }
            else if (mark >= 50 && mark <= 59) {
                System.out.println("2nd Class Honours Lower Division (2:ii)");
            }
            else if (mark >= 40 && mark <= 49) {
                System.out.println("3rd Class Honours (3)");
            }
            else {
                System.out.println("Invalid value");
            }
        }
}
```

Section1Q5

```
import java.util.*;
class Section1Q5 {
    public static void main(String[] args) {
        Scanner getInput = new Scanner(System.in);

        // Input first value
        System.out.print("Enter first value: ");
        float value1 = getInput.nextFloat();
```

```
        // Input second value
        System.out.print("Enter second value: ");
        float value2 = getInput.nextFloat();

        // Input operator
        System.out.print("Enter operator: ");
        String operator = getInput.next();

        float output = 0;

        switch (operator) {
            case "+":
            output = value1 + value2;
            break;
            case "-":
            output = value1 - value2;
            break;
            case "/":
            output = value1 / value2;
            break;
            case "*":
            output = value1 * value2;
            break;
        }
        System.out.println("Output: " + output);
}
```

```
}
```

Section2Q6

```
import java.util.*;
class Section2Q6 {
   public static void main(String[] args) {
      // Get inputs
      Scanner getInput = new Scanner(System.in);
      System.out.print("Enter the number of classes held: ");
      float heldCount = getInput.nextInt();
      System.out.print("Enter the number of classes attended: ");
      float attendCount = getInput.nextInt();

      // Calculate percentage
      float percent = (attendCount/heldCount) * 100;
      if (percent >= 75) {
         System.out.println("Attendance test passed! Percent: " + percent + "%");
      }
      else {
         System.out.print("I have medical documents available if needed regarding the issue of unmet attendance requirements. (Enter Y or N): ");
         String medical = getInput.next();
         if (medical.equals("Y") || medical.equals("y")) {
            System.out.println("Percent: " + percent + "%. We will let you know after reviewing the related documents");
         }
```

```
        else {
            System.out.println("Attendance test failed! Percent: " + percent + "%");
        }
      }
   }
}
```

Section2Q7

```
import java.util.*;
class Section2Q7 {
   public static void main(String[] args) {
      Scanner getInput = new Scanner(System.in);

      //Get acc balance as input
      System.out.print("Enter current account balance: ");
      float accBalance = getInput.nextFloat();



      while (true) {
         System.out.println("Press 1 for deposit\nPress 2 for withdraw\nPress 3 for quit:");

         int trxType = getInput.nextInt();
         if (trxType == 1) {
            System.out.print("Enter deposit amount: ");
            float depositAmt = getInput.nextFloat();
```

```
            accBalance += depositAmt;
            System.out.print("Remaining balance: " + accBalance + "\n");
        }

        else if (trxType == 2) {
            System.out.print("Enter withdraw amount: ");
            float withdrawAmt = getInput.nextFloat();
            if (withdrawAmt > accBalance) {
                System.out.println("Warning!! Insufficient account balance");
                continue;
            }
            accBalance -= withdrawAmt;
            System.out.print("Remaining balance: " + accBalance + "\n");
        }

        else if (trxType == 3) {
            System.out.print("Have a nice day!");
            break;
        }

        else {
            System.out.print("Invalid input. Please try again" + "\n");
        }
    }
  }
}
```

Section2Q8

```
import java.util.*;
class Section2Q8 {
   public static void main(String[] args) {
      Scanner getInput = new Scanner(System.in);

      // Get user input
      System.out.print("0: Rock\n1: Paper\n2: Scissor\nEnter number: ");
      int userInput = getInput.nextInt();

      // Get a random number as pc input
      int random_number = new Random().nextInt(3);

      // Conditions
      try {
         if (userInput == random_number) {
            System.out.println("tie");
         }
         else if ((userInput == 0 && random_number == 1) || (userInput == 1 &&
random_number == 2)) {
            System.out.println("Pc Wins !!");
         }

         else {
            System.out.println("User Wins !!");
```

```
        }


      } catch (java.lang.Exception e) {
         throw new RuntimeException(e);
      }
   }
}
```

Section2Q9 – 1

Program A and Program C
In Program B, the first if part works as a single section. After that there is another if-else part and it works as another separate section. If we gives a positive number as the input, first if section and the last else section both executes and gives the output.

Section2Q9 – 2

Corrected code:

```
int i = 1; i += ++i + i++ + ++i;
int j = 1; j += ++j + j++ + ++j;
int k = 1; k += k++ + k++ + ++k;
System.out.println("i = " + i);
System.out.println("j = " + j);
System.out.println("k = " + k);
```

I = 9, j = 9, k = 8

Section2Q9 – 3

```
if ((age < 17 ) || (age > 85))
{ //don't drive! }
```