EXAM VERSION:

```java
public class QuestionOne {

    public static void main(String[] args) {

        char[][] pic = new char[5][5];

        for (int i = 0; i < 4; i++) {

            for (int j = 0; j < 4; j++) {

                if (i == 0 || i == j + 1 || j == 3 )

                    pic[i][j] = 'A';

                else

                    pic[i][j] = 'B';

            }

        }

        for (int i = 0; i < 4; i++) {

            for (int j = 0; j < 4; j++) {

                System.out.print(pic[i][j]);

            }

            System.out.println();

        }
    }
}
```

```java
public class QuestionThree {

    public static void main(String[] args) {

        int[] arr = { 5, 5, 5, 5, 5 };

        int arr2[] = new int[2];

        int x = 2;

        method(arr, x);

        for (int i = 1; i < arr.length; i++) {

            System.out.print(arr[i] + x);

        }

        for (int j = 0; j < arr2.length; j++) {

            System.out.print(arr2[j] * x);

        }

    }

    public static void method(int[] arr, int x) {

        arr[x] = 4;

        x = 3;

    }

}
```

```java
public class QuestionTwo {

    static void methodOne(int[] arr2) {

        int[] arr1 = new int[6];

        arr1 = arr2;

        System.out.println(arr1.length);

        System.out.println(arr2.length);

        System.out.println(arr2[2]);

    }

    public static void main(String[] args) {

        int[] a = {1,2,3};

        methodOne(a);

        System.out.println(a.length);

    }

}
```

```java
public class QuestionFour {

    public static void main(String[] args) {

        int x = 0;

        int[] y = new int[10];

        m(x, y);

        System.out.println(x);

        System.out.println(y[x]);

        System.out.println(y[x + 1]);

    }

    public static void m(int number, int[] numbers) {

        numbers[number] = number + 1;

        number = numbers[1] + (number + 3) % 2;

        numbers[number] = number + 1;

    }

}
```

```java
public class QuestionFive {

    public static void main(String[] args) {

        // Show the changes for the first 4 iterations (outer Loop)

        int[] num = {1,2,4,6};

        MethodOne(num);

    }

    public static void MethodOne(int[] num) {

        int j;

        int key;

        int i;


        for (j = 1; j < num.length; j++) {

            key = num[j];

            for (i = j - 1; (i >= 0) && (num[i] < key); i--) {

                num[i + 1] = num[i];

            }

            num[i + 1] = key;

            printArray(num,j);
        }

    }


    public static void printArray(int[]arr, int k) {

        System.out.print("Iteration Number " + k + ":");

        for(int i = 0; i<arr.length;i++)
        {

            System.out.print(arr[i]);

        }
        System.out.println();
    }

}
```

Question X:

What is the output?

```java
public class Shape {
    public void what() { System.out.print("Shape ");}

    public static void main(String[] args)

        Shape[] shapes = {new Shape(), new Rectangle(), new Square(),
                          new Circle()};
        for (Shape s : shapes)
        {
            System.out.print(s.what() + " ");
        }

}

public class Rectangle extends Shape {
    public void what() { System.out.print("Rectangle "); }
}

public class Square extends Rectangle {
}

public class Oval extends Shape {
    public void what() { System.out.print("Oval "); }
}

public class Circle extends Oval {
    public void what() { System.out.print("Circle ");}
}
```

Please show how the array changes in the first 5 iterations: Print the array at each iteration

```java
public class QuestionSix
{
    public static void methodCS101(int arr[])
    {
        int n = arr.length;

        for (int i = 0; i < n-1; i++)
        {
            int min_idx = i;
            for (int j = i+1; j < n; j++)
                if (arr[j] < arr[min_idx])
                    min_idx = j;

            int temp = arr[min_idx];
            arr[min_idx] = arr[i];
            arr[i] = temp;

            if(i==0 | i==1)
                printArray(arr);
        }

    }

    public static void printArray(int arr[])
    {
        int n = arr.length;
        for (int i=0; i<n; ++i)
            System.out.print(arr[i]+" ");
        System.out.println();
    }

    public static void main(String args[])
    {

        int arr[] = {64,25,12,22};
        methodCS101(arr);

    }
}
```