Two Dimensional Arrays and Array of Objects

1.  Perform the following tasks for a two-dimensional array.

a)  The diagram in Figure 1 represents a 2 dimensional array, named **table**. Define a 2 dimensional array that for **table** and initialize with values as in the Figure.

| A | B | C | D |
|---|---|---|---|
| M | M | | |
| Z | Y | X | |

Figure 1   - 2 dimensional array, **table**

[2 marks]

b) Give the output of the following program based on **numbers** array declared above.

```
1   for (int row = 0; row < numbers.length; row++){
2       System.out.println("Row   ", row+1);
3       System.out.printf( table[row][0]);
4       System.out.println();
5   }
```

[3 marks]

2.  What is wrong with the following Java codes for 2 dimensional array, named **number** ?

```
1   int [][] number = new int[3][];
2   number[0] = new int[2];
3   number[1] = new int[5];
4   number[2] = new int[4];
5   number[3] = new int[3];
6   System.out.print("Table Length" + number.length+" ");
7   System.out.println("Row length "+ number[1].length);
```

[2 marks]

4. Perform the following tasks for an array of object.
   Assume that the declaration of **Invoice** class is as given below.

```
1   class Invoice
2   {
3         public String partDesc;
4         public double price;
5
6         public Invoice(String pD,int q,double p){
7               partDesc = pD;
8               price = p;
9         }
10
11
12    public String getDesc() {
13          return partDesc;
14    }
15     public double getPrice( ){
16         return price;
17       }
18  }
```

a) Declare one dimensional array of **Invoice**, named **purchase** with size 3. Initialize element of **purchase** with the following values:

        `Hammer – RM 14.9`
        `Paint Brush – RM 15.23`
        `Mini Broom – RM 10.00`

[4 marks]

b) Give Java codes that use **enhanced for-loop** to display the desciption and price for all elements in the **purchase** array?

[4 marks]