

4. Classes

- (a) Write an abstract class called `ClassOne` that contains two methods, `methodA` and `methodB`, one of which is implemented and one of which is not. [3]
- (b) Write a concrete class called `ClassTwo` that extends `ClassOne`. Do not use method overriding in your implementation. [2]
- (c) Write an implementation of `ClassTwo` that does use method overriding. [2]
- (d) Write an interface called `InterfaceOne` that contains type signatures for two methods called `methodC` and `methodD`. [2]
- (e) Now write a new concrete class called `ClassThree` that is based on `ClassOne` and `InterfaceOne`. [4]
- (f) Explain the term multiple inheritance. You should use the definitions above to illustrate your answer. [2]
- (g) Using the following class definition

```
public class C {  
    public static int a;  
    private static int b;  
    public int x;  
    private int y;  
}
```

explain how you would access the values of `a`, `b`, `x` and `y` from another class. If further code is needed in class `C` then you should document this, being careful to explain the selection of any modifiers that are used. [5]