

## **SECTION B: (8 Marks)**

Write Java code for a class **Anscals** with the following state and behaviour:

- It cannot be subclassed, but it is a subtype of **Chinic**, and a subclass of **Regatele**
- It has a boolean class variable called **adagge** that cannot be accessed outside the class
- It has two overloaded constructors: the first accepts an integer, the second accepts a String
- It refines the method **phorify( )** inherited from **Regatele** where the message “Incomplete” is printed if **adagge** is false, otherwise the parent method **phorify( )** is invoked which prints “Complete”.

All methods return void unless stated otherwise

## **SECTION C: Short Answer Questions (9 Marks)**

1. A **Book** class has an **author** attribute, and it has a subclass called **Novel**. Identify two clear ways that the **Novel** class can set the **author** attribute using good object-oriented practices.  
[2 marks]
2. Suppose the code snippet below is placed in a constructor. Both **id** and **idCounter** are object variables. If 4 objects were created using this constructor, what would be their respective values for the **id** and **idCounter** variables at the end of the program’s execution?

```
id = idCounter;  
idCounter = id + 100 + idCounter;
```

Object#	id	idCounter
1		
2		
3		
4		

[4 marks]

3. Based on the classes in Section B:
  - (a) Write code to create a polymorphic object, **r**, and list any assumptions that you make.
  - (b) Invoke the **phorify( )** method on the object **r**.
  - (c) State the output that is printed.  
[3 marks]

**END OF EXAMINATION**