

1995 Paper 10 Question 2

Modula-3

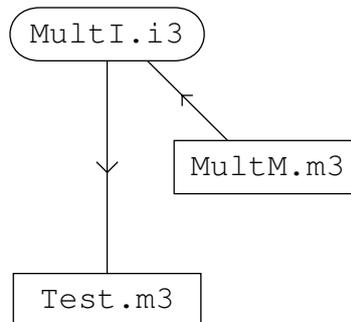
In the context of Modula-3, define the following: *compilation unit*, **INTERFACE**, **MODULE**, **IMPORT** and **EXPORT**. [5 marks]

The following module, which is in the file `Test.m3`, has been written to test two procedures, `Twice` and `Thrice`, which are imported through the interface `MultI` (in the file `MultI.i3`) from the module `MultM` (in the file `MultM.m3`).

```
MODULE Test EXPORTS Main;  
  
IMPORT MultI;  
  
BEGIN  
  MultI.Twice ('A')  
  MultI.Thrice ('A')  
END Test.
```

The procedures `Twice` and `Thrice` are intended simply to output the single character, presented as parameter, twice and three times respectively. Write a suitable interface `MultI` and a suitable module `MultM`. [8 marks]

Working in terms of files containing source code, the relationships between the module `Test`, the interface `MultI` and the module `MultM` may be represented by the following diagram:



In this representation, a box with rounded ends represents an interface and a rectangular box represents a module. The arrows represent the directions of imports and exports. Augment this diagram to include the file containing the interface `Main` and any other interfaces and modules used directly or indirectly by the interface and module you have written. [7 marks]