THE INDEPENDENT
INSTITUTE of
IIE EDUCATION

MODULE NAME:	MODULE CODE:
PROGRAMMING 1A	**PROGf5111**
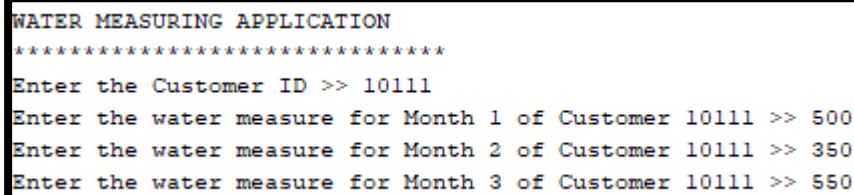
ASSESSMENT TYPE:	TEST (PAPER ONLY)
TOTAL MARK ALLOCATION:	**20 MARKS**
TOTAL HOURS:	**40 MINUTES (+5 minutes reading time)**

INSTRUCTIONS:
1. *Please adhere to all instructions in the assessment booklet.*
2. *Independent work is required.*
3. *Five minutes per hour of the assessment to a maximum of 15 minutes is dedicated to reading time before the start of the assessment. You may make notes on your question paper, but not in your answer sheet. Calculators may not be used during reading time.*
4. *You may not leave the assessment venue during reading time, or during the first hour or during the last 15 minutes of the assessment.*
5. *Ensure that your name is on all pieces of paper or books that you will be submitting. Submit all the pages of this assessment's question paper as well as your answer script.*
6. *Answer all the questions on the answer sheets or in answer booklets provided. The phrase 'END OF PAPER' will appear after the final set question of this assessment.*
7. *Remember to work at a steady pace so that you are able to complete the assessment within the allocated time. Use the mark allocation as a guideline as to how much time to spend on each section.*

Additional instructions:
1. *This is an OPEN BOOK assessment.*
2. *Calculators are allowed.*
3. *For open book assessments the students may have open access to all resources inclusive of notes, books (hardcopy and e-books) and the internet. These resources may be accessed as hard copies or as electronic files on electronic devices. All electronic devices batteries must be fully charged before the assessment as no charging of devices will be permitted during the sitting of the assessment. The IIE and associated brands accept no liability for the loss or damage incurred to electronic devices used during open book assessments.*
4. *Answer All Questions.*

5.   *Instructions for assessments including practical computer work:*
- *Use of good programming practice and comments in code is compulsory.*
- *Save your application in the location indicated by the administrator (e.g. the Z:\ drive or your local drive).*
- *Create a folder as follows: use the module code and your own student number and create a folder with a folder name as per the format shown here:*
- ***StudentNumber_ModuleCode_Test****. Save all files (including any source code files, template files, design files, image files, text files, database files, etc.) within this folder.*
- *E.g. if your student number is 12345, and you are writing an examination for the module PROG121, create a folder named **12345_Prog121_Test** and use this throughout the session to save all of your files.*
- ***Important:*** *Upon completion of your assessment, you must save and close all your open files and double click the ExamLog application on your desktop. You must follow the instructions carefully to ensure that the information about the files that you have submitted for this assessment has been logged on the network. Specify the location of your source code on your question paper.*

SECTION B: Practical   **(Marks 20)**

Question 5 __

You are required to create a console application for a local municipality that will allow a user to capture a customer's water usage for 3 months. The application must capture the Customer ID and three months water usage.

Sample screenshot

```
WATER MEASURING APPLICATION
*******************************
Enter the Customer ID >> 10111
Enter the water measure for Month 1 of Customer 10111 >> 500
Enter the water measure for Month 2 of Customer 10111 >> 350
Enter the water measure for Month 3 of Customer 10111 >> 550
```

In your solution include a class called Water. The class must include the following:

• Four variables to store the customer id, month 1, month 2 and month 3 rainfall values.

• A method to calculate the total.

• A method to calculate the average.

• A method to print the water usage.

Marking Rubric

Marking Guideline	Mark	Examiner	Moderator
Variables declared and assigned. No variables declared/assigned – 0.	4		
Water class created.	2		
Call of methods in the Water class. Methods not created – 1 mark.	3		
File saved correctly.	2		
Use Scanner to accept input from user.	2		
Correct calculation for the total and average.	4		
Comment statements.	2		
Naming Standards.	1		
TOTAL	**20**		

END OF PAPER