



Coimisiún na Scrúduithe Stáit
State Examinations Commission

Leaving Certificate Examination 2022

Computer Science

Section C

Ordinary Level

Wednesday 25 May Morning 11:30 – 12:30

50 marks

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Instructions

There is one section in this paper.

Section C	Programming	One question	50 marks
		Answer all question parts	

Answer all parts of the question on your digital device.

Calculators may be used during this section of the examination.

The *Formulae and Tables* booklet cannot be used for this section of the examination.

The superintendent will give you a copy of the *Python Reference Guide*.

Ensure that you save your work regularly.

Save your files using the naming structure described at the beginning of the question.

If you are unable to get some code to work correctly, you can comment out the code so that you can proceed. The code that has been commented out will be reviewed by the examiner.

Rough work pages are provided at the end of this booklet. Please note that this booklet is not to be handed up and will **not** be reviewed by an examiner.

At the end of the examination it is your responsibility to ensure that you have saved your file onto your external media.

You will be provided with a brown envelope for your external media. Write your examination number on this envelope and place your external media into it before sealing. Place this envelope in the pouch at the front of the red envelope that contains your examination booklet from Section A and B.

There is no examination material on this page

Answer all question parts.

Question 16

- (a) Open the program called **Question16_A.py** from your device. The source code is shown and described briefly below.

Before making any changes, you should save your working copy of the file using the format **ExaminationNumberQuestion16_A.py**. For example, you would save the file as **123456Question16_A.py** if your Examination Number was 123456.

Enter your Examination Number in the space provided on **line 2** in your Python file.

```
1  # Question 16 (a)
2  # Examination Number:
3
4  firstName = input("What is your first name? ")
5
6  print("Hello", firstName)
7  print("Please select from the list of items.\n")
8  # \n creates a new line
9
10 print("\tItems Available") # \t creates a tab
11 print("1 = Book")
12
13 shoppingItem = int(input("\nEnter the number of the item you
14 would like: "))
15
16 if shoppingItem == 1:
17     print("You bought a book")
```

The program above is to simulate an automated shop. The aim of the program is to accept the name of the user and then to ask the user to choose what item they would like to buy. The user will select the number of the item they wish to buy and the program outputs a message confirming the item they chose.

This question continues on the next page.

Make the following changes to the program:

- (i) Insert a comment in an appropriate place to say “user enters first name”.
- (ii) Amend the program to ask for and accept the user's surname. Store the user's surname in a variable called `surname`.

When the program is run the output may now look as follows:

```
What is your first name? Mary
What is your surname? Murphy
```

- (iii) Amend the program so that the user's first name and their surname are printed when they are asked to select their item.

When the program is run the output may now look as follows:

```
What is your first name? Mary
What is your surname? Murphy
Hello Mary Murphy
Please select from the list of items.
```

- (iv) Amend the program so that the items **2 = Ruler** and **3 = Pen** appear in the shopping list under the item **1 = Book**.

When the program is run the output may now look as follows:

```
Items Available
1 = Book
2 = Ruler
3 = Pen
```

- (v) Amend the program so that a dashed line appears above and below the available items.

When the program is run the output may now look as follows:

```
Items Available
-----
1 = Book
2 = Ruler
3 = Pen
-----
```

This question continues on the next page.

- (vi) Amend the program so that the correct message is printed if the user purchases a ruler or pen.

When the program is run the output may now look as follows:

```
Enter the number of the item you would like: 2
You bought a ruler
```

- (vii) Amend the program to deal with invalid number entries. If the user enters any number other than the numbers 1, 2 or 3 they should be presented with an error message.

When the program is run the output may now look as follows:

```
Enter the number of the item you would like: 5
Invalid choice. Goodbye.
```

Save your file using the format **ExaminationNumberQuestion16_A.py**. For example, you would save the file as **123456Question16_A.py** if your Examination Number was 123456.

Space for rough work.

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