

## **Script 1**

### **Slide 2**

Question 1 and the mark scheme can be bullet pointed into five tasks. They are:

1. Import random
2. declaration and initialisation of a variable
3. declaration and initialisation of a constant
4. Assign the result of a library call to a variable
5. display a message and the content of a variable on screen

In this table we have provided signposting to where you can find out more about each of these from our current available resources and materials.

### **Slide 3**

This is the original question from the GCSE 2020 Computer Science Specimen Assessment Material.

This type of question simulates the development process that students will have encountered during their class lessons. There are syntax, runtime, or logic errors that need to be fixed to create a functional solution to a problem. There are improvements needed to the code to make it more maintainable.

Students are provided with scaffolded bullets indicating the amendments that need to be made to the code. In this question, the inputs are described as well as the anticipated outputs. This is, in effect, the test data for the code. Students can use it to make judgements about the completeness of the code they produce.

### **Slide 4**

This is the file that the students are given during the exam.

Students are provided with additional comments in the code to remind them of the tasks that they need to address.

### **Slide 5**

For ease and speed, we will provide a summary of how marks were awarded for response A shown on screen. A more detailed explanation of how marks were awarded including additional information that would support an improved response, you should open up the mark explanation document that is part of this download pack.

In summary, the marks for this particular response were awarded as follows:

- 0 marks for importing random library (line 7)
- 2 marks for creating variable roll and setting it to 0 (line 14)
- 1 mark for setting a constant to 6, but 0 mark for naming the constant (line 18)
- 0 marks for assignment (line 24), as equality operator is used
- 2 marks for correct message and variable value printed (line 28)

The total marks are 5.

You or your students may wish to annotate onto this example those accredited points, and then look at how they might improve them to score a higher mark.

### **Slide 6**

For response B, marks were awarded as follows:

0 marks for importing random library (line 6)

1 mark for creating variable 'roll', but not set correctly (line 13)

1 mark for setting a constant to 6, but name is not correct (line 16)

1 mark for assignment of library call (line 23)

0 marks for display of correct message (line 27)

The total marks are 3. Again, review the mark explanation document for additional explanation including how this candidate could have improved their response. You might want to consider how different this response was to the first, and again, how you might improve this response to achieve higher marks.

### **Slide 7**

This type of question just requires students to follow a set of instructions, in order to produce a working solution to a simple program. They don't have to understand what the code does. As long as they follow the instructions correctly and write the lines of code required, they will earn the marks.

This type of question is therefore easiest developed in reverse order, i.e. write the solution yourself, following the conventions from the Programming Language Subset (PLS), before writing the question and deciding which parts of the solution will make up the mark scheme.

Add scaffolded instructions in the code to guide students through construction of the solution. Then, remove the parts required in the response. Bear in mind that students should be able to complete the task in 10 minutes.

In the question text itself, provide just enough and only the information that students need to accomplish the task.

State each requirement using a verb. If possible, state each requirement from a positive perspective, avoiding negation.

### **Slide 8**

You can use this flow chart as a step by step to both support the creation of this question type, but also the decision making behind creating an accessible and challenging question for your students to complete.