Oxford Revise | OCR Computer Science | Answers

Chapter 23 Coding errors

Question	Answer	Extra information	Marks	AO / Specification reference
1	**Syntax error:** An error that breaks the rules of the language. **Example:** `prnt` instead of `print`. **Logic error:** The program can run but does not produce the expected output due to an error in your code. **Example:** A loop completes an extra iteration because the condition for exit is > and not >=.	1 mark for each correct description and 1 mark for each correct related example up to 4 marks. The answers given are examples. Other correct descriptions and examples are also acceptable.	1 1 1 1	AO1/AO2 2.3.2
2	When a program is written using an IDE, if the code has errors, the IDE can identify some types of errors. This process is called error diagnostics. The IDE will give an error message that shows the type of error and the location of the error. The programmer can then correct the error and try to run the program again. The IDE can only find syntax errors and run-time errors.	1 mark for each correct statement up to a maximum of 3 marks.	1 1 1	AO2 2.5.2

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3	**Syntax error 1:** `next counter` incorrect. **Correction:** `endwhile` is needed to close a `while` loop. **Syntax error 2:** The array indexes this loop would address (once the errors are corrected) would be 1 to 20. **Correction:** counter = 0 at the start (to give 0 to 19). **Logic error 1:** `counter` is incremented outside the loop, so the loop will never stop. **Correction:** move `counter = counter + 1` underneath the `sum` statement and above `endwhile`. **Logic error 2:** The program outputs `counter`, which is not the sum of the marks. **Correction:** `print(sum)`	1 mark for each correct error identification and correction up to 4 marks.	1 1 1 1	AO2 2.3.2