

“3-a-day” A-Level Exam Practice Unit 2 (003)

Question 1

1 (a) Describe what is meant by the term *IDE (Integrated Development Environment)*.

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.....[2]

Question 2

(b) Identify and describe **three** features commonly found in an IDE that will help programmers to find any bugs in their code.

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.....[6]

Question3

(d) Explain why parameter passing to a function can be a better alternative to using global variable:

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.....[2]

Answer 1

1	(a)	<ul style="list-style-type: none"> A (single) program (1) used for developing programs (1) made from a number of components (1). 	2 AO1.1 (2)	Up to 2 marks for a valid description.
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Answer 2

	(b)	<ul style="list-style-type: none"> Debugging tools allow inspection of variable values (1 – AO 1.1) this can allow run-time detection of errors (1 – AO 1.2). Code can be examined as it is running (1 – AO 1.1) which allows logical errors to be pinpointed (1 – AO 1.2). IDE debugging can produce a crash dump (1 – AO 1.1), which shows the state of variables at the point where an error occurs (1 – AO 1.2). It can display stack contents (1 – AO 1.1) which show the sequencing through procedures/modules (1 – AO 1.2). It can step through code (1 – AO 1.1), which allows the programmer to watch the effects each line of code (1 – AO 1.2). The insertion of a break-point (1 – AO 1.1) allows the program to be stopped at a predetermined point in order to inspect its state (1 – AO 1.2). 	6 AO1.1 (3) AO1.2 (3)	1 mark (AO 1.1) for each correct identification up to a maximum of three identifications plus up to a further 1 mark (AO 1.2) for each of three valid descriptions.
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Answer 3

	(d)	<ul style="list-style-type: none"> When a parameter is passed to a function, only a <u>copy</u> of the data passed may be changed (1), therefore no unforeseen effects will occur in other modules (1). This is the case only if passed by value (1). 	2 AO1.2 (2)	Up to 2 marks for a valid explanation.
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