

4(a)	One mark per scheduling routine (Max 2) from: - Round robin - Shortest job first - First come first served - Shortest remaining time
4(b)	One mark for identification and one mark for a description (Max 4) Two from: Provision of a User Interface // Provision of a Graphical User Interface [1] Allows the user to interact with the computer in a more intuitive way // Icons and menus are used to control devices by simply 'pointing and clicking' [1] Use of device drivers [1] Makes it easier to control peripherals such as printers within the operating system of the computer rather than on the separate device itself [1] Device mapping [1] Different devices (physical and virtual) are easy to identify on the network, check their status, or use [1] The user interacts only with the Application / top layer (of the TCP/IP protocol suite) [1] leaving the lower layers and their complexities hidden from the user [1]
8(a)	One mark per mark point (Max 2) MP1 To convert the high-level source code / program into a sequence of tokens MP2 ... that can be sent to the parser for syntax analysis MP3 To create a symbol table MP4 To remove the unnecessary white space and comments from the code
8(b)	One mark 2 6 - One mark 13 7 + * 5 / Complete answer 2 6 - 13 7 + * 5 /

8(c)	One mark per ring (Max 4)
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9(a)	Variables must begin with a letter / not a digit
9(b)	<code><operator> ::= + - * / ^</code>
9(c)	One mark per mark point MP1 Two variable boxes added to diagram MP2 One operator box added to diagram and all boxes in correct order MP3 Connections, arrows and return loop correctly added and no additional boxes or connections
9(d)	Answer must begin with a valid letter. It can then be followed by any number of valid digits and/or letters, as long as it is at least four characters in length. Example answer AC768

9(a)	The second character must come from either lower or digit. It can't be upper.
9(b)	Max 3 One mark MP1 <code><upper> ::= J K L V X Z</code> Either: fully written out answer MP2 Any two correct options for <code><passcode></code> MP3 Remaining two options correct for <code><passcode></code> Example answer <code><passcode> ::=</code> <code><upper><lower><lower><digit> </code> <code><upper><lower><digit><digit> </code> <code><upper><digit><digit><digit> </code> <code><upper><digit><lower><digit></code> Or: answer with interim expression MP4 <code><passcode> ::= <upper><middle><middle><digit></code> MP5 <code><middle> ::= <lower> <digit></code>
9(c)	One mark per mark point MP1 Box for upper in correct place with correct connections MP2 Correct repetition arrow for final digit

10(a)	One mark per mark point (Max 4) <code><operator> ::= + - * /</code> <code><label> ::= <letter><digit> <letter><digit><digit></code> <code><equation> ::= <label> =</code> <code><label><operator><label></code>
10(b)(i)	One mark per mark point (Max 3) MP1 begin with either a letter or a symbol MP2 end with either one or two symbols MP3 digit and all other connections and label correct.

10(b)(ii)	One mark per mark point (Max 2) <code><password> ::= <letter><digit><symbol> </code> <code><letter><digit><symbol><symbol> <symbol><digit><symbol> </code> <code><symbol><digit><symbol><symbol></code> <code><password> ::= <letter><digit><symbol> </code> <code><letter><digit><symbol><symbol> <symbol><digit><symbol> </code> <code><symbol><digit><symbol><symbol></code> Alternative Answer One mark per mark point (Max 2) - All three lines correct - Any two lines correct <code><first> ::= <letter> <symbol></code> <code><last> ::= <symbol> <symbol><symbol></code> <code><password> ::= <first><digit><last></code>
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