Mark Scheme (Results)

Summer 2022

Pearson Edexcel International
Award In Lower Secondary Computing (LCP11)
Paper 01

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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Section A

Question number	Answer	Mark
1a	Award **one** mark for any from: • Backup • Compression • Defragmentation • To prevent malware / Anti-malware • File management / disk repair	**(1)**

Question number	Answer	Mark
1b	**The only correct answer is A** *B is not correct because RAM stores programs (instructions) temporarily before they are fetched to be executed in the CPU* *C is not correct because ROM stores programs (instructions) permanently before they are fetched to be executed in the CPU* *D is not correct because WAN is a type of network infrastructure.*	**(1)**

Question number	Answer	Mark
1c	**The only correct answer is A** *B is not correct because open source code still has to be written and how it is distributed does not affect how easy this process is* *C is not correct because the availability of the source code does not make it more secure* *D is not correct because open source code does not take any longer to download than code distributed under any other terms*	**(1)**

Question number	Answer	Mark
1d	An explanation such as: To store data **permanently** (1) because main memory loses data when the power is turned off / main memory is volatile (1) OR So that data is not lost (from main memory) (1) when the power is turned off (1) OR To act as virtual memory (1) if main memory is full (1)	**(2)**

Question number	Answer	Mark
1e	**The only correct answer is D** *A is not correct because it is a type of connectivity* *B is not correct because it is an output device* *C is not correct because it is an output device*	**(1)**

Question number	Answer	Mark
2a	Award **one** mark for any from: • Leaking chemicals when disposed • Mining for chemicals (e.g. lithium) • Use of non-renewable energy to manufacture/recharge	**(1)**

Question number	Answer	Mark
2b	**The only correct answer is C** *A is not correct because it is not affected by the change of setting* *B is not correct because it is related to protecting the rights of artists* *D is not correct because it is decreased by changing the setting*	**(1)**

Question number	Answer	Mark

2c	Award **one** mark for any from:
	• To make society fairer
	• Reduces inequality
	• Provides access to a wider range of people
	• Example of what people can do e.g.:
	    ○ find bargains when shopping online
	    ○ improved education
		(1)

Question number	Answer	Mark
2d	Piracy	(1)

Question number	Answer	Mark
3	**The only correct answer is C** *A is not correct because 10 mm is less than the maximum range* *B is not correct because 10 cm is less than the maximum range* *D is not correct because 10 km is more than the maximum range*	(1)

Question number	Answer	Mark
4	Award one mark for each up to a maximum of two marks: - Lower bandwidth / slower (data transfer) - Increased latency - Affected more by interference e.g. electrical appliances - Affected by obstacles (walls etc.) - Limited range - Less secure - Negatively affected by rain/humidity (accept: weather)	(2)

Question number	Answer	Mark
5	Award one mark for each up to a maximum of two marks: - Sender's/source address - Receiver's/ destination address - Sequence/packet number - Checksum - Version of IP - Number of packets / packet size - Packet length - Protocol - Expiry time (time to live) Award 'IP address' for MP1 or MP2	(2)

Question number	Answer	Mark
6	**The only correct answer is C** *A is not correct because 192.168.0.1 is an IP address* *B is not correct because computing@pearson.com is an email address* *D is not correct because index.html is a file name*	(1)

Question number	Answer	Mark
7		(3)

Storage device — Reason for use

- Hard-disk drive → Most cost efficient for large storage
- Optical disc drive → Not affected by power surges
- Solid state drive → Not affected by vibrations
- Compresses all data when writing
- Most compatible with anti-malware

Question number	Answer	Mark
8	**The only correct answer is D**	(1)
	A is not correct because collaboration is not provided by the OS *B is not correct because a filter is a networking utility* *C is not correct because hypertext is not provided by the OS*	

Question number	Answer	Mark
9a	Award **one** mark for each correct description.	(2)

Operator	Description
<=	Less than or equal to
!=	Not equal to

Question number	Answer	Mark
9b	Award **one** mark for each correct operator.	(2)

Type of division	Operator
Modulus	%
Integer division	//

Question number	Answer	Mark
10	Iteration	(1)

Question number	Answer	Mark
11	Award one mark for any from: • To allow it to be used in calculations • To allow it to be used in arithmetic operations • To allow it to be used as a number • To prevent syntax errors	(1)
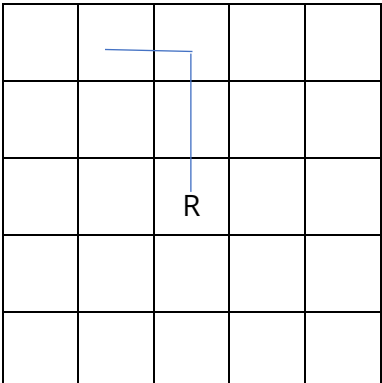
Question number	Answer	Mark
12	An explanation such as: So that the search could stop (1) when the length (of the string) has been reached / if the item is not found (1) To show the character Z has not been found (1) because you've reached the end of the string (1) To set the maximum number of comparisons (1) because the length of the string is the worst case (1) It allows the number of iterations to be set (1) in a FOR loop (1)	(2)

Question number	Answer	Mark
13a	**The only correct answer is C** *A is not correct because 1 byte is a byte* *B is not correct because 1024 bytes is a kibibyte* *D is not correct because 1024^3 bytes is a gibibyte*	**(1)**

Question number	Answer	Mark
13b	Award one mark for each nibble: 1100 1101	**(2)**

Question number	Answer	Mark
13c	71	**(1)**

Question number	Answer	Mark
13d	1011	**(1)**

Question number	Answer	Mark
13e	Award one mark for each: • A line from R extending into the square above R (0001 0101) • The line extending one further square (0101) • A line extending backwards one square (0100 1010) 	**(3)**

Question number	Answer	Mark
14a	Any one from: • 4 • 7	**(1)**

Question number	Answer	Mark
14b	7	**(1)**

Question number	Answer	Mark
14c	**The only correct answer is A** *B is not correct because there is no data input* *C is not correct because it is not a search algorithm* *D is not correct because no string operation is carried out*	**(1)**

Question number	Answer	Mark
15	Award **one** mark for any from: • USB sticks can be used to steal data / record keystrokes • USB sticks can contain spyware / keylogger software Do not accept: 'virus' for 'spyware'. Do not accept 'eavesdropping' for 'spyware'	**(1)**

Question number	Answer	Mark
16	Award **one** mark for any from: • Data can be transferred/sent/received more quickly • It is faster Do not accept: References to storage	**(1)**

Question number	Answer	Mark
17	Award **one** mark for any from: • To connect computers together • To direct traffic between computers • To provide extra sockets	**(1)**

Question number	Answer	Mark
18	Award **one** mark for any from: • Colour • Shaded/fill • (Number of) sides/corners • Angle • Outline/border	**(1)**

Question number	Answer	Mark

19 (a)	Line 2: > (1)
	Line 4: elif (1)
	Line 4: word2 **AND** word1 in the correct order (1)
	Line 8: longer (1)
	
	def compare(word1,word2):
	  if len(word1) **>** len(word2):
	    longer = "The first"
	  elif len(**word2**) > len(**word1**):
	    longer = "The second"
	  else:
	    longer = "Neither"
	  print(**longer**, "word has more letters.")
		(4)

Question number	Answer	Mark
19 (b)	Award **one** mark for any from: • To pass data/value into the subprogram • To receive an argument	**(1)**

Question number	Answer	Mark
19 (c)	An explanation such as: • Saves (programmers) time / Takes less time to write and test code (1) because they don't have to write them from scratch (1) • Programmers can be sure they are error free / no need to debug (that section) (1) because they are already tested (1) • Once they are written they can be used again (1) because they can be imported into any program (1)	**(2)**

Section B

Question number	Answer	Mark
20a	Award one mark for each up to a maximum of two marks. • Hosted application • Hosted storage Accept **one** example of a hosted application Accept **one** example of hosted storage	(2)

Question number	Answer	Mark
20b	Award one mark for each up to a maximum of two marks. • Too much text • One image is of lions / not of a rhino • Some text is irrelevant • Font size too small • The slide should have a title • The order of the text is wrong (the introduction to the presenters names should be after the first sentence).	(2)

Question number	Answer	Mark
21	Text/images/content is added/selected/clicked (1) and linked to pages/content/URL/email (1) Use of href (attribute) (1) within anchor / <a> markup/tags (1)	(2)

Question number	Answer	Mark
22	Body	(1)

Question number	Answer	Mark
23	**The only correct answer is D** *A is not correct because HTTP is a protocol used to transfer data* *B is not correct because VLOOKUP is a spreadsheet function* *C is not correct because a WAP is network hardware*	**(1)**

Question number	Answer	Mark
24a	Any one from: • To send a (short) message (to employees/members of an organisation) • To keep employees/colleagues informed • To communicate internally	**(1)**

Question number	Answer	Mark
24b		**(1)**

Question number	Answer	Mark
24c	An explanation such as: • It will make sure text stays at the top (of the new page) (1) because the enter/return lines will overflow onto the new page (1) • If new text is added to the previous page/paragraph (1) it prevents blank lines overflowing onto the new page (1)	**(2)**

Question number	Answer	Mark
25a	Pixelated	(1)

Question number	Answer	Mark
25b	Coordinates	(1)

Question number	Answer	Mark
26a	Award one mark for each up to a maximum of two marks. • Button • Hyperlink	(2)

Question number	Answer	Mark
26b	Award **one** mark for any from: • Name of the dish • Price • Calories / Nutritional information • Ingredients • If it is vegetarian / vegan • Allergens • Reviews	(1)

Question number	Answer	Mark
27a	manufacturer_id	(1)

Question number	Answer	Mark
27b	Any one from: • model_id manufacturer_id	(1)

Question number	Answer	Mark
27c	RAM (1) AND (1) >2 or >=3 (either used as criteria for CPU_cores field) (1) Example of correct answers: **RAM** = 32 **AND** CPU_cores **> 2** or **RAM** = 32 **AND** CPU_cores **>= 3** Allow RAM> for first mark	**(3)**

Question number	Answer	Mark
28a	**The only correct answer is D** *A is not correct because axis labels allow the audience to understand what the axis values relate to* *B is not correct because axis values allow the audience to understand the scale* *C is not correct because the data points are necessary*	**(1)**

Question number	Answer	Mark

28b	Award **one** mark for any from:
	  • Rate of growth
	  • How growth changes over a period of time/years
	Accept any suitable title that refers to what the chart shows.
		(1)

Question number	Answer	Mark
28c	**The only correct answer is C** *A is not correct because a bar graph shows bars extending horizontally from the y axis representing values on the x axes* *B is not correct because a column graph shows bars extending horizontally from the x axis representing values on the y axes* *D is not correct because a scattergraph shows points (usually crosses) as intersections of the values at the x and y axes.*	**(1)**

Question number	Answer	Mark
29	Any one from: • To carry out calculations ("to do sums") • To process/analyse data • To model finances • To create charts	(1)

Question number	Answer	Mark
30a	Award first mark for use of MIN to left of brackets Award second mark for correct range in the brackets B3:B8 Complete answer =MIN(B3:B8)	(2)

Question number	Answer	Mark
30b	An explanation such as: It is easier to find/analyse data (for each subject) (1) because the data is more organised (1) A separate worksheet could be used to show averages for each student across subjects (1) because cross-sheet referencing can be used (1)	(2)