Chhetri Academy
chhetriacademy.com

GCSE COMPUTER SCIENCE

4.1

Edexcel 1CP2 | Specification point 4.1.4

How the characteristics of wired and wireless connectivity impact on performance (speed, range, latency,...

Untiered

Answers and examiner comments

2	2018-2019	Untiered
question groups	available papers	tier

Using this booklet

1. Answer numbers match the companion question booklet.
2. Follow the original question number on marking tables.
3. Examiner comments are included where available.

Name _____ **Date** _____

Some entries use full source marking material in an appendix. Any unavailable mark schemes are identified beside the relevant answer.

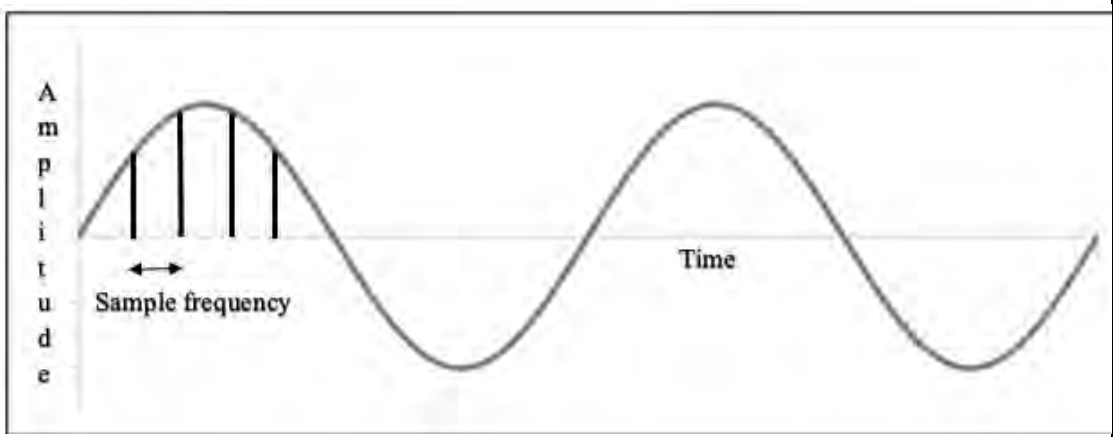
Question Number	Answer	Additional Guidance	Mark
3(a)(i)	Any two from different categories: • Share peripherals/devices (e.g. printers, scanners) (1) • Communicate (e.g. email, instant messaging, play games) (1) • Share data (e.g. files/music/videos/backups on servers) (1) • Deploy/update applications (1)		**2**

Question Number	Answer	Additional Guidance	Mark
3(a)(ii)	Any three from: • May not have space for cables to be installed (1) • Employees and visitors can move around the building without disconnecting (1) • Adding new users just means giving out the SSID and password (1)		**3**

Question Number	Answer	Additional Guidance	Mark
3(b)(i)	Most people do not notice (1) And one from: …because: • People have a limited hearing range (1) OR • Sounds (frequencies/amplitudes) can be masked by other sounds (1) OR • People's brains will 'fill in the blanks'	Max 1 mark without first statement.	**2**

Question Number	Answer	Additional Guidance	Mark
3(b)(ii)	May increase the file size / the file may not be compressed very much/at all (1) if characters are distributed randomly/not repeated/no runs of similar characters are found (1).		**2**

Question Number	Answer	Additional Guidance	Mark
3(c)	Total number of bits to transfer: 1 mark for 81 x 1024^2 1 mark for x 8 Speed in bits per second: 1 mark for 54 x 1000^2 Time = number of bits / bits per second: $\frac{81 \times 1024 \times 1024 \times 8}{54 \times 1000 \times 1000}$ 1 mark = number of bits in numerator 1 mark = number of bits per second in denominator	• No units required • Any equivalent expression to be awarded	**5**

Question Number	Answer	Additional Guidance	Mark
4(a) (i)	X axis correctly labelled (1) Y axis correctly labelled (1) Sample frequency indicated (1) Do not award marks if wavelength is labelled, rather than sample frequency. Accept for sample frequency if two points given that are shorter than the wavelength.  		**3**

Question Number	Answer	Additional Guidance	Mark
4(a)(ii)	The amplitude / original sound can be represented more accurately. Accept: • Better (sound) quality • Higher fidelity • Clearer (sound)		**1**

Question Number	Answer	Additional Guidance	Mark
4(b)	B – RAM **The only correct answer is B** ***A*** *is not correct because the ALU does not hold a program* ***C*** *is not correct because a hard drive does not hold a currently executing program* ***D*** *is not correct because the control unit does not hold a program*		**1**

Question Number	Answer	Additional Guidance	Mark

4(c)	Total number of bits to transfer: **1 mark for** 20×1024^2 **1 mark for** $\times 8$ Speed in bits per second: **1 mark for** 2×1000000 Numerator/Denominator: **1 mark for** $$\frac{bits\ to\ transfer}{bits\ per\ second}$$ e.g: $$\frac{\mathbf{20 \times 1024 \times 1024 \times 8}}{\mathbf{2 \times 1000000}}$$	Any equivalent expression to be awarded	**4**

Question Number	Answer	Additional Guidance	Mark
4(d)	A description such as: • Input from sensor (1) • The input level is compared against pre-set values (1) • Output to LED/speaker (1)		**3**

Question Number	Answer	Additional Guidance	Mark
4(e)	A. Copper cable B. Fibre optic		**2**