

6(a)	1 mark for correct answer Type of compression: lossy Justification: There will be fewer samples per second, so data will be permanently lost // There will be fewer samples per second, so the original sound cannot be re-created																																													
6(b)	1 mark for correct words in the correct order <table><tr><td>Binary Value</td><td>0011 1000</td><td>0011 1100</td><td>0011 1110</td></tr><tr><td>Word</td><td>Science</td><td>is</td><td>Amazing!</td></tr></table>	Binary Value	0011 1000	0011 1100	0011 1110	Word	Science	is	Amazing!																																					
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6(c)(i)	1 mark for correct answer parity bit ↓ <table><tr><td>0</td><td>1</td><td>0</td><td>1</td><td>1</td><td>1</td><td>0</td><td>0</td></tr></table>	0	1	0	1	1	1	0	0																																					
0	1	0	1	1	1	0	0																																							
6(c)(ii)	1 mark for correct answer parity bit ↓ <table><tr><td></td><td>1</td><td>0</td><td>1</td><td>1</td><td>0</td><td>1</td><td>1</td><td>1</td></tr><tr><td></td><td>0</td><td>1</td><td>1</td><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td></td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>1</td><td>1</td></tr><tr><td></td><td>0</td><td>1</td><td>1</td><td>1</td><td>0</td><td>1</td><td>0</td><td>0</td></tr><tr><td>parity byte→</td><td>1</td><td>0</td><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr></table> [1]		1	0	1	1	0	1	1	1		0	1	1	1	0	0	0	0		0	0	0	1	1	0	1	1		0	1	1	1	0	1	0	0	parity byte→	1	0	1	0	0	0	0	0
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parity byte→	1	0	1	0	0	0	0	0																																						
6(d)	1 mark for the working 1 mark for the correct answer Working: $(1000 * 2000 * 16) / (8 * 1000 * 1000)$ // $(1000 * 2000 * 2 / (1000 * 1000))$ Answer: 4 megabytes																																													

6(a)	1 mark for identification 1 mark for matching description e.g. • ASCII • 7/8 bits per character // represents 128/256 characters // represents all characters from Latin alphabet • UNICODE • 8/16/32 bits per character // represents 256/65536+ characters // represents all characters in all languages
6(b)(i)	1 mark for: $256 // 2^8$
6(b)(ii)	1 mark for: Increased file size
6(b)(iii)	1 mark for each bullet point (max 2) e.g. • The change may not be noticeable // Data removed is usually not noticed by the human eye • ... for example, changes in shade/detail • It produces a larger decrease in file size compared to lossless // Lossy decreases file size considerably
6(c)(i)	1 mark for each bullet point (max 2) • Value/magnitude/size of the analogue sound wave is measured a set number of times each second/time / at set intervals • Each sample/reading/measurement is given the binary number and stored in sequence
6(c)(ii)	1 mark for each correct point and 1 mark for matching expansion e.g. • Decrease sample rate • ... fewer samples/readings/measurements stored per second // fewer bits per second stored • Decrease sample resolution • ... fewer bits per sample/reading/measurement // each sample has fewer bits • Sound outside of set/human hearing range is removed • ... fewer measurements are stored / decreases the number of possible binary values so fewer bits are stored

7(a)(i)	1 mark for each correct definition Colour depth: - the number of bits used to represent a colour // the number of colours that can be represented in an image File header: - stores data about the image file / metadata
7(a)(ii)	1 mark for each correct explanation Image quality: - Decreasing resolution means details within the image are lost because there are fewer pixels // Increasing resolution means the image is more detailed because there are more pixels File size: - Decreasing the resolution will decrease the file size because there are fewer pixels therefore less data // Increasing the resolution will increase the file size because there are more pixels therefore more data
7(a)(iii)	1 mark for correct method For example: Run-Length Encoding
7(b)	1 mark for each correct definition Property: - an attribute of a drawing object // data about a shape // defines one aspect of the appearance of a drawing object Drawing list: - all the drawing objects/shapes in an image // stores the commands/descriptions / mathematical equations required to draw each object