

Representing Sound

Data Representation

GCSE Computer Science Questions & Answers

Name:	
Score:	/

Q1	Calculate the file size in bits for a two minute sound recording that has used a sample rate of 1000 Hertz (Hz) and a sample resolution of 5 bits. You should show your working.	[3 marks]
AQA (2016 Spec) - Specimen Question Paper - Paper 1		/3

Q2	Tick two boxes to indicate the correct statements	[2 marks]												
<table><tr><th>Statement</th><th>Tick two boxes</th></tr><tr><td>Sound files need to be compressed to be stored on a computer.</td><td></td></tr><tr><td>Sound files store digital data.</td><td></td></tr><tr><td>Sound files are always stored on a computer using binary.</td><td></td></tr><tr><td>An increase in the number of levels used in a sound file will decrease the file size.</td><td></td></tr><tr><td>Images always take up less space to store than sound.</td><td></td></tr></table>			Statement	Tick two boxes	Sound files need to be compressed to be stored on a computer.		Sound files store digital data.		Sound files are always stored on a computer using binary.		An increase in the number of levels used in a sound file will decrease the file size.		Images always take up less space to store than sound.	
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AQA (2013 Spec) - 2017 Question Paper - Paper 2		/2												

Q3	Explain why a sound recording with a high sample rate will normally result in a better quality recording than one with a low sample rate.	[2 marks]
AQA (2013 Spec) - 2017 Question Paper - Paper 2		/2

Answers

Q1	<p>3 marks if the answer given is 600,000 bits (l. no units);</p> <p>If the answer is incorrect award then:</p> <p>1 mark for converting 2 minutes into 120 seconds; 1 mark for showing multiplication of the number of seconds (l. if not correct) by 1000 by 5 (A. multiplying just by 5000);</p>												
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Q3	<p>Maximum of two marks from:</p> <p>(The higher the sample rate) means more measurements are taken (per second); It will be a more accurate (representation of the original sound); There is less chance of missing parts of the original sound;</p> <p>A. Any other reasonable answer</p>												