End of topic test

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| Name: | Will Dargan |

1. James is a graphic designer. He has created an icon set of 20 icons for a project. The icons are uncompressed images of 96x96 pixels in 8-bit colour. Explain how the approximate file size can be calculated for the icon set. [3]

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| 96x96 for the number of pixels, multiplied by 20 for the number of icons.  The result would be 1.64MB |

1. State how many different colours can be stored using 8-bit colour. [1]

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| 256 |

1. James has also created a video clip to promote his work which is uploaded to a popular video streaming service. MP4 compression is used to store the video clip on the hard disk of the server. State what is meant by the term “compression”. [1]

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| Making the file size smaller while keeping the data the same. |

1. Describe two advantages of the streaming service using compression. [4]

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| Downloads would be much quicker so customers would not complain.  Storing the videos would take up much less space than uncompressed videos so less money would need to be spent on storage. |

1. State one potential disadvantage to the user of the streaming service using compression. [1]

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| Video quality would be decreased. |

1. Explain why an online software distributor cannot use the same type of compression as the video streaming service. [4]

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| The streaming service would use lossy compression which removes unnecessary pieces of data. This would not work for a software distributer as if part of a program is lost it may not work after being uncompressed. |

1. When a video clip is created, sound is sampled from a microphone. Describe what is meant by the term, “sound sampling”. [2]

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| The frequency of sound from the microphone is recorded at equal intervals to make up a sound file. |

1. State what is meant by the term, “sampling rate”. [1]

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| How many samples are taken a second. |

1. Describe the effect of increasing the sampling rate. [2]

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| The quality of the audio would increase and the file size would increase. |

1. State what is meant by the term, “bit depth”. [1]

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| The number of bits used to store a colour. |

**End of test**

**Total 20 marks**

**20 marks**