MODULE C DATA REPRESENTATION · C11

Compression, lossy and lossless

Original practice questions · 20 marks · ~25 minutes · OCR J277 spec 1.2.5

Name _____ Date _____

Instructions. Answer all questions in the spaces provided. No calculator. The marks for each part are shown in brackets [ ]. The total for this worksheet is **20 marks**.

1

Total: 2 marks

A design agency sends large image and document files to its clients every day.

(a) Give **two** benefits to the agency of compressing these files. **[2]**

1

2

2

Total: 4 marks

(a) Tick (✓) **one** box in each row to show whether each statement describes lossy compression or lossless compression. **[4]**

Statement	Lossy	Lossless
Data is permanently removed from the file		
The original file can be restored exactly		
The quality of the file may be reduced		
Usually gives the larger compressed file of the two types		

3 **Total: 6 marks**

A housing association compresses files before uploading them to its website.

(a) The association uploads a tenancy agreement stored as a text file. Identify the most suitable type of compression for this file. Justify your choice. **[3]**

Type: .....

(b) The association also uploads photographs of its buildings for visitors to view. Identify the most suitable type of compression for the photographs. Justify your choice. **[3]**

Type: .....

4 **Total: 2 marks**

(a) Give **one** disadvantage of lossy compression. **[1]**

(b) Give **one** disadvantage of lossless compression. **[1]**

5 **Total: 2 marks**

A software company compresses the program file for its new app before people download it.

(a) Explain why the company must **not** use lossy compression for the program file. **[2]**

6 **Total: 4 marks**

A music streaming service sends songs to listeners' phones over the internet. It is deciding whether to compress its song files with lossy or lossless compression.

(a) Explain the advantages and disadvantages of using **lossy** compression for the song files. **[4]**

Total for this worksheet: 20 marks