

Subject: Digital Technologies

Level: 1

Standards: 91886, 91887

Report on standards

91886: Demonstrate understanding of human computer interaction

Examination

The structure of the questions focusing on specific activities (e.g., setting up an account) allowed candidates more freedom in their choice of heuristics. The new layout helped guide candidates to demonstrate enough understanding for an Achieved grade. The use of timestamps and clear indication of each activity meant candidates could easily locate particular parts of the video. The inclusion of the scenario gave candidates some context when answering questions. Providing candidates with two similar interfaces encouraged better answers in the comparison as the websites had many shared features.

Observations

There is evidence that some candidates did not understand the meaning of the heuristics. Some responses focused on defining the heuristic instead of applying it to the scenario.

Many candidates described when asked to evaluate. Understanding of what it means to evaluate and how to use evaluative language would benefit some candidates.

Grade awarding

Candidates who were awarded **Achievement** commonly:

- described the role of their chosen interface
- identified and accurately described four usability heuristics
- used screenshots to illustrate their responses.

Candidates who were awarded **Not Achieved** commonly:

- identified less than four heuristics
- repeated heuristics in their response
- did not name the heuristic they described
- provided screenshots and descriptions but did not display understanding of the heuristics
- provided screenshots but did not describe the heuristics they illustrated

- confused the meanings of specific heuristics (in particular ‘error prevention’ and ‘help users recognise, diagnose, and recover from errors’)
- did not support their answers with evidence or screenshots.

Candidates who were awarded **Achievement with Merit** commonly:

- evaluated two or more usability heuristics
- used evaluative comments or gave a mark out of ten with justification for why
- provided multiple examples of the usability heuristics supported by screenshots.

Candidates who were awarded **Achievement with Excellence** commonly:

- compared the two interfaces in terms of three or more heuristics, demonstrating an insightful and comprehensive understanding of the heuristics
- used findings from the compare / contrast section to suggest improvements
- suggested improvements related to usability heuristics
- supported their answers with appropriate screenshots
- stated which website performed better for each usability heuristic and backed up their response with appropriate commentary.

91887: Demonstrate understanding of compression coding for a chosen media type

Examination

Most candidates attempted all parts of the question this year, with few papers turned in with missing or extremely short responses. Few answers appeared to be prepared in advance.

In part (b), many candidates gave general answers from examples they would have studied in class (such as professional photographers) rather than specific examples from their own experiences using compression.

Some candidates assumed that all lossy-compressed images would be of poor quality and did not appear to realise that good quality could be maintained while still significantly reducing the file size.

Observations

Many candidates could explain why their selection of compression method was appropriate but missed out on higher grades because they did not identify the limitations of the other methods.

Grade awarding

Candidates who were awarded **Achievement** commonly:

- encoded and / or decoded text using a lossless compression method but were unable to answer questions about a lossless compression method
- gave at least one reason why files of a chosen media type might be compressed
- gave at least one example of a time when they had used lossy or lossless compression and justified their choice of compression method by describing its benefits
- selected a compression method for the scenario and explained why their choice was more appropriate than an alternative method
- gave a general explanation of how their choice would affect the end-user.

Candidates who were awarded **Not Achieved** commonly:

- could not encode or decode text using a lossless compression method
- gave weak examples of when files of a chosen media type might be compressed
- gave explanations that were too short and didn't provide any evidence that they understood how compression works
- gave an example of a time they had used compression, but did not justify their choice of method
- gave examples of using compression, but the answers were general examples that they had studied in class and not examples from their own experience
- provided responses which had clearly been prepared in advance and did not answer the questions
- described JPG as a compression type
- left some response areas blank or incomplete
- mixed file types; described RAW as lossless, PNG as lossy
- did not count commas in the cost of a RLE-compressed image.

Candidates who were awarded **Achievement with Merit** commonly:

- wrote responses about lossless compression which demonstrated an understanding that went beyond simply encoding or decoding text
- gave multiple reasons, including potential benefits, for why files of their chosen media type might be compressed
- gave personal examples of times when they had used compression, contrasting their choice of compression with the alternative and clearly identifying the pros and cons of each method
- selected an appropriate compression method for the scenario and justified their choice by contrasting it against the alternative.

Candidates who were awarded **Achievement with Excellence** commonly:

- gave examples of alternative LZW dictionaries that were more efficient than the one provided
- explained that lossless compression works by representing the data in a different way
- explained that lossy compression algorithms like JPG enable users to compress by different amounts, balancing file size with quality.