



Examiners' Report
Principal Examiner Feedback

Summer 2024

Pearson Edexcel International GCSE in
Information & Communication Technology
Paper 1 (4IT1_01)

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Publications Code 4IT1_01_2406

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Introduction

The examination for this unit requires students to explore how current and emerging digital technologies impact on the lives of individuals, organisations and society. This is an untiered paper that has been specifically designed so that easier questions are more prevalent earlier in the paper, becoming progressively more difficult later on. This paper has been designed to be accessible, so that candidates of all ability ranges will find questions that are both challenging and interesting throughout. Candidates will find that 'command words' are used consistently in the paper to indicate the type of response expected. It is hoped that candidates will demonstrate the knowledge, understanding and skills required to be confident users of ICT.

Successful candidates often provided more detailed responses, providing more than just simple statements, including examples and reasons where expansions or explanations were required.

In the extended questions, candidates must demonstrate a better understanding of the requirement to 'discuss'. Candidates should develop their use of subject-specific and technical language, and avoid giving generic responses, responding in the context of the question.

REPORT ON INDIVIDUAL QUESTIONS

Question 1

1 (c) – Responses sometimes related to live streaming and answers at times focused on how Joe would live stream his show to his audience.

1 (e) – Not all responses mentioned the Copyright law but articulated the need to gain Joe's permission to use or distribute his recording. Responses mentioned that audience need to pay Joe if they use his work if they use it or want to use it, or the audience cannot use it or that it is illegal for them to use it.

1 (f)(i) - Misconceptions included using 8000 instead of 8192 and using the expression $300/8 * 100$. Most put 300 in the denominator.

1 (f)(iii) – Responses often mentioned that RAM is volatile therefore not retaining data when switched off, therefore the need for storage. Responses identified that storage allows Joe to save more radio shows. Only a small proportion of responses included that RAM affects processing speed or decreases space left for running applications.

1 (f)(v) – A large proportion of responses explained the difference between RAM and ROM.

1 (g)(i) –A range of different responses provided from the mark scheme. A few answered with Mbps confusing this with MHz.

1 (g)(ii) – Many responses related to adding extra storage and extra equipment such as microphones. Some answered USB but very few answered with firewire.

1 (h)(i) –A lot of reference was made to pharming, phishing and stealing data via these methods. Most correct answer provided were unauthorised access, leaking of person data. Some reference is made to theft, but mainly identity theft. No answered provided for data being damages or deleted.

1 (h)(ii) – Responses included keeping profile private and not using real names and using avatar as part of the profile to secure personal information. Common answers were using password combining characters, capital letters, and symbols, very few developed this further for authentication. Encryption and use of VPN were other common answers provided and gained full marks. Other answers provided in the mark scheme were not provided, demonstrating a lack of understanding around this topic.

1 (h)(iii) - Responses mostly gave two legal requirements but they were not explained.

1 (h)(iv) – A well answered question, demonstrating a good understanding of the use of cookies and how companies match and provide similar content. Most answers gained full marks.

Question 2

2 (a) – There were few correct responses.

Incorrect answers mentioned using faces in videos for cyber bullying. Also mentions of copyright for videos and plagiarism.

A lot of responses talked about latency/lag from uploading videos.

2 (c)(i) – Most common responses related to cyberbullying, trolling and foul languages. Some provided the answer of misrepresentation, but very few provided data breach. A good understanding of one threat of online communities.

2 (c)(ii) – Most responses gained half marks as they were able to identify actions moderators should take but not all were able to comment on a moderator being able to monitor posts/users. A common wrong answer was to use filter system that help pick up blocked words to help block and remove inappropriate people and comments.

2 (c)(iii) - Many responses incorrectly stated it enforces rules.

2 (d) – A range of answers provided. Some were able to identify the need to upload and post information helping to match with users with common interests. Some provided incorrect answers such as profile, chatting, messaging functions allow them to be matched to people with same interests.

2 (e)(ii) – Overall, most gained at least 1 mark for this. Most were able to provide the correct answer of checking information with other sources and checking date of information, but common incorrect answers were checking for bias, asking a profession person, posting on other platforms and checking people comments.

2 (f) – Most provided the answer of sharing with friends/ family and others, second most common answer was to like/ post, so it appears on other people's feeds. It was rare to see the answer of paid promotion to match with specific users.

Question 3

3 (a)(i) – Most were able to answer this correctly. Some incorrect answers include connecting to a network or to get faster Internet.

3 (a)(ii) – Common answers were router, ethernet cable, gateway, modem with a few providing the answer network card. A common incorrect answer was switch/ hub.

3 (a)(iii) - Not many got this question right. The most common response was sharing how a search engine works, not a web browser. The responses that did acknowledge the question was about a web browser, struggled to provide a technical answer and just stated it displayed a webpage.

3 (a)(iv) –Most answered this correctly. Most responses provided were identifying a device on a network. Very few provided the answer of data packets being sent to the correct router or device.

3 (a)(v) - Lots only gained the mark for a MAC address being hard/coded or unchangeable. This was not followed up to gain the second mark for this making it more reliable.

Responses also gained the mark for the address being unique but did not follow on to say that the last three hex pairs reference the individual devices NIC or that the first three hex pairs reference the manufacturer code.

3 (b)(ii) – Most were able to identify the role of a ISP, which was to provide the Internet. Some provided answers such as to provide fast Internet access, to connect Joe to a network, which were incorrect. Some more detailed correct answers recognised that ISP allows the use: Joe access to their network infrastructure to allow access to the Internet.

3 (d) – Responses commonly stated that a client server network allowed the user connect to a network and have access to the Internet. Correct answers were often centralised backup, so no need to backup individually, managing updates at once and not one by one. Some provided answers around security and storing data and handling requests.

3 (e) – A range of answers provided from the mark scheme. A common misconception is that a client server was faster than a peer-to-peer and easier to set up.

3 (f) - Most attempted mark point 1. However, many stated that the data was encrypted but not with an explanation to say that security is increased.

There were also lots of mentions of it changing the location so a wider geographical area could be reached. e.g. 'If he connects to a VPN he can prevent people from tracking his location as well as broadcasting it to different places' or 'Joe can access areas which are geo-blocked.

3 (g) – Responses often gained 1 mark answering this question. Most were able to identify the needs for tethering and hotspots but included linking to mobile broadband, which was incorrect. Some were able to identify the use of Bluetooth but more commonly Wi-Fi. A small number identified the use of 3G/4G and 5G when connecting via hotspot or tethering.

3 (h) – A large proportion gained at least 1 mark, referring to upload speed being low. Some were able to develop this into reasons why this would affect customer experience. A large number identified the stream as being smooth or having issues with buffering.

Question 4

4 (b) – Overall, responses related to resource or memory management. Some confused the question with utility tasks completed by an operating system such as compression and defragmentation.

4 (c) – Common incorrect responses assumed that open-source software would mean you can hear the sound better.

4 (d) - Some struggled to expand the answer to get all 4 mark and instead just stated two reasons e.g. new functions, to fix bugs.

4 (e) - Out of the two 8-mark questions this was answered the best. In most cases, responses provided examples of types of storage and share the benefits / limitations of each. Some just described the criteria (durability, capacity etc) and did not provide a type. Some also confused a digital device such as a laptop as being a storage device or referred to primary memory rather than secondary storage.

Question 5

5 (a) – Mostly gained at least 1 mark here. Religion, social restrictions, poverty, infrastructure were common correct answers. Common incorrect answer was location with no development, and information poor and information rich.

5 (b) - Some struggled to expand their answer to achieve all 4 marks e.g. reduces access to education, but not sharing how.

5 (c) - Out of the 4-mark questions marked, this question was answered the best. Responses managed to link their answers to achieve full marks e.g. increasing global warming because of the use of fossil fuels.

5 (d) - Most answers alluded to the fact that a broadcast is governed by the government where online there are less regulations due to the breadth of the Internet. Some shared that a broadcast can be verified by comparing to other broadcasters such as the BBC and that for online information you should check the source. Not many provided a summary / conclusion for this question.

Paper Summary

Based on their performance on this paper, students are offered the following advice:

- Expand and explain answers using examples and reasons, especially where more than a simple statement or list is requested
- Where a context or scenario is provided, respond with the context of the question in mind
- Read and interpret the question prompt to focus on the specific requirements and provide more relevant responses that address the critical aspects of the question.
- When required to give one other example/reason, ensure the response is discrete from the given example/reason
- Allocate time to plan responses to the extended questions

