



Examiners' Report Principal Examiner Feedback

Summer 2025

Pearson Edexcel International GCSE
In Information and Communication
Technology (ICT) (4IT1)
Paper 01R

Edexcel and BTEC Qualifications

Edexcel and BTEC qualifications are awarded by Pearson, the UK's largest awarding body. We provide a wide range of qualifications including academic, vocational, occupational and specific programmes for employers. For further information visit our qualifications websites at www.edexcel.com or www.btec.co.uk. Alternatively, you can get in touch with us using the details on our contact us page at www.edexcel.com/contactus.

Pearson: helping people progress, everywhere

Pearson aspires to be the world's leading learning company. Our aim is to help everyone progress in their lives through education. We believe in every kind of learning, for all kinds of people, wherever they are in the world. We've been involved in education for over 150 years, and by working across 70 countries, in 100 languages, we have built an international reputation for our commitment to high standards and raising achievement through innovation in education. Find out more about how we can help you and your students at: www.pearson.com/uk

Summer 2025

Publications Code 4IT1_01R_2506_ER

All the material in this publication is copyright

© Pearson Education Ltd 2025

Introduction

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

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

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

Comments on individual questions

Question 1

Q1 (a) – Generally well answered by learners, demonstrating a general understanding hardware components relating to storage. Weaker responses referenced memory instead of storage or reference the media (hard disk) rather than the device/component (hard disk drive).

Q1 (d) – Learners demonstrated a basic understanding of the issue. Many responses referred to the range using descriptors such as “short”. Stronger responses were able to link this to Bluetooth not allowing a connection to the Internet, which would be required to access cloud storage. Weaker responses did not go into this depth nor link it back to the context. Others attempted to consider bandwidth, however, weaker responses simply stated that it was “not strong enough”. Responses to this question would be improved with the use of clearer terms and subject specific language, such as limited bandwidth and protocols.

Q1 (e) – Generally well answered by learners, demonstrating an excellent understanding of different types of network. Most responses stated “LAN” and “WAN”. Weaker responses stated “LAN” and WLAN”. These both reference “local area networks” so are the same marking point in the mark scheme. Responses to this question would be improved if learners ensure the responses they give are discrete from each other.

Q1 (f) – This question was attempted by most learners. Responses to this type of question would be improved if learners are clear about the use/purpose of different network hardware. One-way responses to this style of question could be improved is if the lines linking the elements are clearly defined and any that the learner no longer requires are crossed out clearly.

Q1 (g)(i) – Many learners demonstrated a good understanding of the role of a router, sending or forwarding data by the quickest path. Weaker responses stated “shortest path” incorrectly.

A router will look for the route with the least amount of traffic making it the quickest route, this may not always be the shortest. Responses to this type of question would be improved if learners are clear about the use/purpose of different network devices.

Q1 (g)(ii) – Generally well answered by learners.

Q1 (g)(iv) – Many learners understood that tethering was a method of sharing an Internet connection. However, weaker responses used the term “Wi-Fi” instead of “Internet”. It is important to remember that the Internet is the global network / interconnected networks which they are accessing, whereas Wi-Fi is the method of connection (wireless protocol) that is being used. When describing methods of connecting to a network, weaker responses often used the term “hotspot”. Although this shows a real-world example, it did not clearly explain the underlying technology or use. Therefore, responses to this question would be improved if learners describe what was being connected and how or why it was being connected.

Q1 (g)(v) – The question appeared to be particularly challenging for many learners. Responses identified a “SIM” or “SIM card” in the process, but then stated it was using the MAC / IP address or phone number rather than the number of SIM card to uniquely identify it. Few responses went onto detail how this is then authenticated against a database. Responses to this question would be improved if learners are clear about the function of hardware addresses in mobile devices.

Q1 (h)(i) – Very well answered by learners. Many learners answered “reduce file size” or a description equating to the same idea.

Q1 (h)(ii) – Learners have a good understanding of copyright with some responses commenting about the legal protection of work or preventing use of the work without permission. There was a context applied to this question and some responses took the perspective of how Vasu could be in breach of copyright, as opposed to how copyright protects Vasu. Responses to this question would be improved if learners clearly linked the response to the focus / perspective of the question.

Question 2

Q2 (a)(ii) – Generally answered well with many responses stating “backup”. Weaker responses stated, “saving to cloud” or “storing data in cloud”. However, this is not clear enough to suggest this is a backup. Responses to this question would be improved if they are specific about it being a backup / **another copy** of the work being saved in a different location.

Q2 (a)(iv) – Learners appeared to have a basic understanding of disadvantages of optical media. Many responses covered the first three marking points from the mark scheme. Weaker responses stated “slower” on its own. Responses to this question would be improved if learners qualify responses such as “slower”. An example of an acceptable qualification would be “slower read-write speeds”. Another improvement would be if learners are clear that a disadvantage is in effect a comparison to other media types, for example “lower capacity”.

Q2 (a)(v) – Many learners were able to demonstrate their understanding of how defragmentation works. Weaker responses did not start in the leftmost box or grouped the

correct letter blocks (in order) together but left a gap between each set of blocks. This would not happen when a defragmentation utility has been run. Some responses showed additional or missing letter blocks. Responses to this question would be improved if learners chose an approach that could include checking off the blocks in the before state as they complete the after state.

Q2 (b) – Many learners demonstrated a sound understanding of what “convergence” is, with some also giving an example such as a smartphone adopting features such as a music player, navigation aid and fitness tracker. Weaker responses described “conversion” as in converting file types from one to another, instead of “convergence”.

Q2 (c)(i) – This was well answered. Most learners showed a good depth of understanding of the purpose of system software and were able to give linked descriptions over the range of marking points. Responses to this question would be improved if learners are aware that system software covers both the operating system **and** utilities.

Q2 (c)(ii) – Some good responses seen. The most popular responses related to vulnerabilities and features. Weaker responses relating to these two, did not tend to be specific, i.e. these vulnerabilities are exploited, or the features were not necessarily advanced, respectively. Some learners demonstrated a sound understanding and referenced the reliance on community support instead of a professional service. Other weaker responses stated that “anyone can sell and distribute it as their own”. This is more a drawback to the original creator, rather than of its use which was the focus of the question. Responses to this question would be improved if learners are clear about different types of software licensing and why developers might offer their software as open-source, rather than as proprietary.

Q2 (e)(i) – This question asked for an example of a secure password, which proved to be particularly challenging. Learners have an excellent understanding and can identify the features. However, many responses just stated what these features were rather than applying it to an actual example of a secure password. The examples given tended to be of a suitable length and contained a mix of case, letters, numbers and special characters. Weaker responses tended to miss the unpredictability aspect and included recognisable words or names.

Q2 (e)(ii) – This question appeared to be particularly challenging for many learners. Responses tended to focus on general ways to ensure data is secure, e.g. password protection, biometrics or encryption, rather than describing a file permission that could be set to ensure that data is secure, e.g. setting it as **read-only**. Responses to this question would be improved with familiarity of the different file permissions – read-only, read-write, executable; and what they allow a user to do or not do.

Q2 (e)(iii) – This question appeared to be particularly challenging for many learners. Responses tended to focus on biometrics being unreliable due to physical changes such as aging, injuries or accidents, rather than giving the benefits of using passwords. Responses to this question would be improved if learners focus on the advantage rather than attempting the reverse style response.

Q2 (f)(i) – A well answered question with most learners identifying “ROM” or “Read-Only Memory”. Weaker responses identified “RAM”. This example was given in the stem of the question; responses to this question would be improved if learners ensure the response they give is discrete from the given example.

Q2 (f)(ii) – Generally answered well with most learners stating that RAM is “volatile”. Weaker responses mixed up volatile with non-volatile. Responses to this question would be improved if learners have a more thorough understanding of what these terms mean.

Q2 (f)(iii) – Generally well answered by learners referencing the number of programs open at the same time. Weaker responses stated “faster” or “quicker” on its own. Responses to this question would be improved if learners qualify responses such as “quicker”. An example of an acceptable qualification would be “programs will open quicker/more quickly”. A few weaker responses referenced improved processing power. It is important to be clear about the different ways in which performance of a device can be improved.

Q2 (g) – Generally well answered by many learners. Responses covered a range of acceptable functions of an operating system. Weaker responses identified “memory management”. This example was given in the stem of the question; responses to this question would be improved if learners ensure the response they give is discrete from the given example.

Q2 (h) – Many learners stated that Laptop 2 would carry out more instructions per second. Few referenced the specific numbers involved. Weaker responses stated “faster” or “quicker” on its own. Responses to this question would be improved if learners qualify responses such as “faster”. An example of an acceptable qualification would be “process data faster”.

Question 3

Q3 (a) – Learners demonstrated a good understanding of output peripherals, with most learners stating “monitor” and “speakers”. A few responses identified “printer” and although this is an output peripheral, it would not necessarily be used in the given context - designing a multimedia blog. Weaker responses stated “screen” and “monitor”, both of which come under the same marking point. Responses to this question would be improved if learners give responses that are specific to the context and clearly discrete from each.

Q3 (b) – Overall, responses were satisfactory with most learners identifying “an increased cybersecurity risk” and “increased competition” and the corresponding linked points. Fewer learners addressed weaker customer relationships. Weaker responses were not supported with fully developed explanations or unrelated areas to the context of the question, such as environmental concerns, copyright issues, or employee’s condition/behaviour. Responses to this question would be improved if learners clearly linked the response to the focus / perspective of the question.

Q3 (c) – Responses to this question were varied. The most popular response referenced that “an Internet connection is not required for local storage”. Better responses then linked this to “faster” with the appropriate qualification of “to access files”. A few responses mentioned “more secure” without a linked point. Weaker responses referenced that local storage could be “accessed anywhere”, this is a benefit of online storage rather than local storage. Responses to this question would be improved if learners are clear on the perspective of the question.

Q3 (d) – The question asks about protection against threats to data **when opening** and email attachment. Therefore, responses relating to not opening the email attachment were not accepted, as although they are sound cybersecurity advice, it is not targeted to the focus of the question. Many responses reference the use of “anti-malware”; however, weaker responses did not say this was to quarantine any viruses. Responses to this question would be improved if learners give responses that are specific to the context.

Q3 (e) – This question appeared to be particularly challenging for many learners. Many responses specified “greater access to information” without specifying the type or identified points such as “education”, “entertainment” or “work” without specifying it was greater access to them. These were all available prior to the Internet, it is the improvement to accessing them that is a positive impact. Responses to this question would be improved if learners consider this as a comparison and ensure responses qualified, e.g. **greater** access to **medical** information.

Q3 (f)(i) – Overall, learners performed well on this question. Most learners were able to identify valid examples of sharing information or real-time communication. However, some responses repeated points from the same category, such as listing both instant messaging and video conferencing. Responses to this question would be improved if learners give responses that are clearly discrete from each other.

Q3 (f)(ii) – Learners demonstrated sound knowledge of what a responsible use policy is and what it might contain by listing examples of specific rules and consequences or the result of (not) having the policy. The focus of the question was reasons why Vasu was given it. Responses to this question would be improved if learners are clear on the focus / perspective of the question.

Question 4

Q4 (a) – Generally well answered by learners with “Search” and “Edit” being the most popular features stated. Weaker responses gave examples of content, rather than features, or features that were already present in the image provided within the question. Responses to this question would be improved if learners ensure the response they give is discrete from any given examples.

Q4 (b) – Generally, learners demonstrated a sound understanding of cookies and their use, with many providing a linked description. Weaker responses cookies storing usernames and passwords. Responses to this question would be improved if learners are aware of the different types of cookies, what they store and how they are used.

Q4 (c) – Learners tended to provide a response relating to the improvement of safety and its appropriate linked explanation. Weaker responses would identify “the identification of malicious users”; however, they did not link this to improved safety. Few responses related to the improved customer engagement element of the mark scheme.

Q4 (d) – Learners were able to identify that AI could save Vasu time. Responses to this question would be improved by reading around new and emerging technologies to be able to explain / discuss their impact both positively and negatively.

Q4 (e) – Learners could identify a disadvantage, mainly linked to security. Weaker responses did not then explain the disadvantage. The context of the question is also key. Some responses gave a disadvantage of a peer-to-peer network, but it was not linked to the sharing of files. Responses to this question would be improved if learners clearly linked the response to the focus / perspective of the question.

Q4 (f) – Many learners attempted a response to this question. Stronger responses were very clearly related to the perspective of the employer, covering the three points to consider from the question. The learners related employee satisfaction with flexible working and the elimination of travel time to aiding productivity which in turn benefitted the employer. Common themes related to the reduction in costs; stronger responses also made the counterpoint that costs could also increase with the provision of equipment to use at home. Responses discussed the lack of face-to-face supervision, with weaker responses not considering the use of technology and online workspaces to counteract this issue. Generally, the responses referred to the benefits and drawbacks to Vasu / the employee rather than the employer.

Responses to this question would be improved by:

- Avoiding repetition of the question at the start of a response. This is not necessary.
- Being clear about the perspective the response should take.
- Using the points to consider from the question stem to plan the response.
- Discuss the benefits and drawbacks for each point to consider aiding in the creation of a balanced response.

Question 5

Q5 (a) – Many learners focussed on educational and employment disparities. Weaker responses identified causes of the digital divide rather than its impacts. Responses to this question would be improved with the clear identification of the impacts (positive or negative) of unequal access to ICT.

Q5 (b) – Learners have good knowledge of the causes of the digital divide. Weaker responses gave a definition of the digital divide instead explaining the causes. Other responses identified the cause but did not go onto explain what this meant. Responses to this question would be improved with careful consideration of the command word used.

Q5 (c) – Generally well answered, showing learners had good knowledge of environmental impacts. Many learners focussed on “toxic substances” and how this then contaminates the environment. Weaker responses referenced “global warming”. This usually relates to manufacture, rather than disposal. It could link to disposal, but it is not immediate, and it would require further steps in the thought process to get there.

Q5 (d) – Responses to this question were very mixed. Learners generally stated that the results were biased. Weaker responses focussed on the aim of the search or the search terms, rather than the quality of the search results. Responses to this question would be improved with clear explanations of what it means to be bias, inaccurate, unreliable.

Q5 (e) – The question appeared to be particularly challenging for many learners. Responses did not include the use of web crawlers and ranked results. Many responses focussed on the user input into a search or used generic terms such as “search engine matching keywords”.

Responses to this question would be improved if learners are clear about the processes behind the search engine.

Q5 (f) – Learners demonstrated a good knowledge of data protection principles and the rights of an individual. However, beyond that, the question appeared to be challenging for many learners. Responses frequently did not go beyond listing the principles and/or the rights of the individual.

Responses to this question would be improved by:

- Avoiding repetition of the question at the start of a response. This is not necessary.
- Using the points to consider from the question stem to plan the response.
- Consider why the data might be collected, what is the lawful basis for processing and linking this to the legislation/legal requirements and the rights of the individual.

Paper Summary

Based on this paper, learners 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.
- Know the difference between key language in the specification – for example use, purpose, content, feature; to understand what is being asked for in the question.
- Allocate time to plan responses to the extended questions.

