

L3 Lead Examiner Report 1901

January 2019

**L3 Qualification in Information
Technology
Unit 1 Information Technology
Systems**

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Grade Boundaries

What is a grade boundary?

A grade boundary is where we set the level of achievement required to obtain a certain grade for the externally assessed unit. We set grade boundaries for each grade, at Distinction, Merit and Pass.

Setting grade boundaries

When we set grade boundaries, we look at the performance of every learner who took the external assessment. When we can see the full picture of performance, our experts are then able to decide where best to place the grade boundaries – this means that they decide what the lowest possible mark is for a particular grade.

When our experts set the grade boundaries, they make sure that learners receive grades which reflect their ability. Awarding grade boundaries is conducted to ensure learners achieve the grade they deserve to achieve, irrespective of variation in the external assessment.

Variations in external assessments

Each external assessment we set asks different questions and may assess different parts of the unit content outlined in the specification. It would be unfair to learners if we set the same grade boundaries for each assessment, because then it would not take accessibility into account.

Grade boundaries for this, and all other papers, are on the website via this link:

<http://qualifications.pearson.com/en/support/support-topics/results-certification/grade-boundaries.html>

Unit 1: Information Technology Systems

Grade	Unclassified	Level 3			
		N	P	M	D
Boundary Mark	0	10	21	33	45

Introduction

This was the fourth series of the new specification for Information Technology Systems, and as such, the fourth time that assessment has been via an externally set examination rather than via centre based internal assessment.

The question paper followed the same format as the June 2018 paper and the sample assessment materials published on the Pearson website. Four scenarios were used for assessment; each scenario broken down into a number of questions which assessed a range of specification topics. Learners were expected to demonstrate knowledge and understanding of the specification topics and apply this knowledge to the given scenarios.

The intention is to offer as broad a coverage as possible for all areas of the unit content. Questions have varying weightings attached to them, with 2 to 6 marks for the lower demand questions and 6 to 12 marks for questions where an extended response was required, such as discussion, analysis or evaluation.

Extended response questions were marked using a 'levels based' approach to assessment. The overall quality of the response was considered rather than the specific number of points gained. There was also a focus on the use of suitable technical and vocational language and terminology within each response. In line with the June 2018 paper there were only five extended questions on the paper.

In this series there was one diagram question, marked using a level based approach.

The remainder of the questions on the paper were assessed using a 'points based' approach, where learners gained marks by identifying, for example, a benefit or drawback related to the scenario and then gaining additional marks for giving appropriate expansion(s).

Introduction to the Overall Performance of the Unit

In general learners are coping slightly better with this type of external assessment, although trends identified in June 2018 are still in evidence.

Learners often failed to read the questions carefully and provided responses which did not answer the question set and were therefore not mark worthy.

Others failed to gain all of the marks available on short response questions by not looking carefully at the number of marks available for a question. The marks shown in brackets on the paper indicate the number of points required in the response.

As in June 2018 only a minority coped well with the long answer questions, where clear and detailed answers covering all sides of an argument or scenario were required and in many instances learners showed lack of knowledge of the overall specification content with some blank responses.

Individual Questions

Question 1

The scenario for this question was based around a student in the final year of a three-year graphic arts course. He works on a second-hand laptop which was given to him five years ago, and he is now thinking of replacing it. The operating system is no longer supported by the manufacturer, which might cause security issues.

Q01a

Learners were asked to explain two security issues that may arise from using an unsupported operating system.

The question was marked using a points-based system, learners gaining one mark each for identifying the problems and an additional mark for each expansion. Many learners were able to expand on the two issues but were unable to identify the issues. Majority of learners gained 1 or 2 marks.

Very few learners mentioned patches were not provided by the manufacturer, up-to-date virus checkers may not be compatible and hackers are aware of software vulnerabilities.

This candidate gained 1 mark. The first response gains a mark for allowing hackers to access Joseph data but does not identify patches are not provided by the manufacturer. The second response was not mark worthy.

1 First security issues that may arise ~~is~~ is uninsured ~~for~~ data and personal information, it will allow hackers to access Joseph's data ~~more~~ easily.

2 The speed of the ^{operating} system ~~is~~ my affect, ^{Joseph} the work ~~rate~~ ~~of~~ work rate, and also it ~~may~~ might crash when trying to open multi-tasks at the same time, and it affect Joseph when doing his graphic arts course.

The following work was awarded four marks. In the first response the learner identifying there are no security updates from the manufacturer, and the expansion that it can lead to the computer getting infected. The second response the learner identifies it will be vulnerable to hackers, and the expansion that the operating system can easily get hacked.

(4)

1 ~~First issue that Joseph may encounter is the~~ unsupported operating system can mean there are no security updates from the manufacturer. This can lead to the computer getting infected by the viruses and malware. This will ~~be~~ lead to Joseph's information stored on the laptop either getting deleted ~~or~~ or corrupted.

2 second issue is that it will be vulnerable to the hackers which means that ~~it~~ ~~the~~ the operating system can easily get hacked by hackers as a result Joseph's data stored on the computer may either be lost ~~or~~ or stolen.

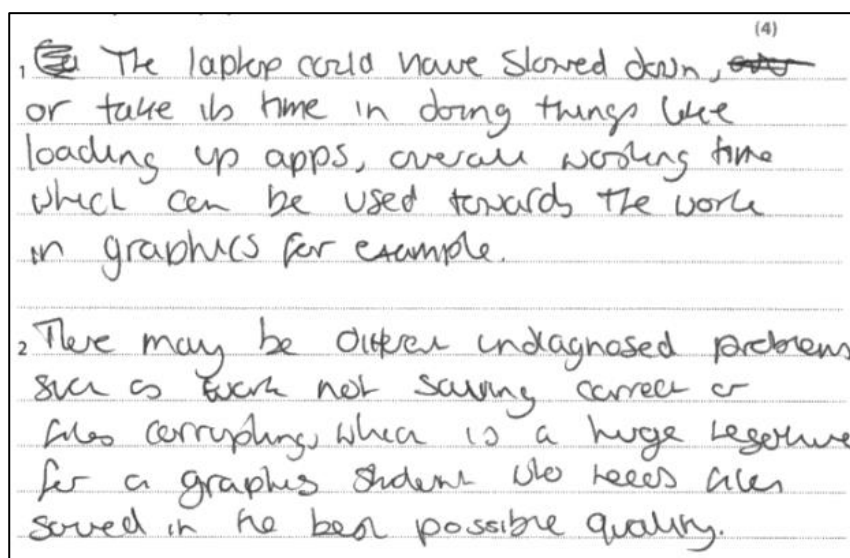
Q01b

Learners were required to explain two issues, other than security, that may arise from using a five-year old laptop.

The question was marked using a points-based system, learners gaining one mark each for identifying the problems and an additional mark for each expansion. Majority of learners gained 1 or 2 marks.

Most correct responses were linked to compatibility with some learners not specifying whether they were talking about hardware or software. Not many expanded the answer to explain about using new hardware or installing new software. Some other learners mentioned the laptop being slow, but did not talk about the processor or uploading/downloading files. A number of learners focused on batteries in older computers were not efficient, and the due to the age the laptop could be damaged.

This response gained a mark for takes time in doing things like loading up apps but, as with many, failed to gain the identification mark. The second response was not mark worthy



This response gained all four marks, two clear identification marks and expansion marks.

The first response gains marks for compatibility with other devices and to transfer his work across different devices using a peripheral. The second gained marks speed of the CPU, and making it harder/longer to open files or transfer data.

(b) Explain **two** issues, other than security, that may arise from using a five-year-old laptop. (4)

1. The compatibility with other devices. Since Joseph is a graphics art student, he may need to transfer his work across different devices using a peripheral such as a USB. If this is not supported, Joseph may find it hard to transfer the data.
2. The performance may also cause issues. If since the laptop is old, the speed of the CPU or size of RAM may be limited/deteriorating which could affect how fast his laptop is, making it harder/longer to open files or transfer data.

Q01ci

Learners were required to explain two benefits, other than the initial cost, of using open source operating system.

The question was marked using a points-based system, learners gaining one mark each for identifying the benefits and an additional mark for each expansion. Majority of learners gained 0 marks, with a few gaining 1 or 2 marks.

Many learners did not score well on this question with the majority not gaining any marks. Knowledge of open source software is limited and lots of responses given with regards to proprietary software which demonstrates limited understanding.

Access to source code and customization were popular options, as well as security and support is provided by the community.

The following gained 1 mark for the first response for identifying that bug fixes are quicker. The second response was not mark worthy.

1. Open source allows users/ the community to update / upgrade the software quicker than proprietary. This means bug fixes are quicker, making user experiences better.
2. Open source allows users to freely share files / data which allows for good collaborative work between students, teachers, employees etc.

This response gained four marks. The first response identifies the code can be edited (access to source code), and explains they can add in or take away a feature for the expansion mark. The second response identifies bugs in the software, and explains they don't have to ask customer support, which implies users not restricted by large organisation's procedures.

- 1 one benefit is that you are able to freely edit the code of the operating system, so if there is something you don't like or you want to add in or take away a feature, you can just edit the code and add it in without breaking the law or voiding any warranty
- 2 another benefit is that if there is a bug in the software, such as you can't open a certain file or program, you can go into the code and fix it without even having to ask customer support or ~~wait~~ waiting for a new update

Q01cii

Learners were required to explain two drawbacks of using an open source operating system.

The question was marked using a points-based system, learners gaining one mark each for identifying the drawbacks and an additional mark for each expansion. Majority of learners gained 0 marks, with a few gaining 1 mark.

The question was poorly answered with some students repeating answers from Q01ci without understanding the question and getting open source and proprietary mixed up. Clear misconception as to the downsides of 'Open Source' software, with many learners pointing out it is less secure. Hardly any learners identified the operating system must be compatible with existing applications or that he should check that the operating system was compatible with the college's system.

Although access to the source code was not mentioned by many in their answers to Q01ci it was a frequent answer to this question with the focus being that because the source code was accessible it would be more prone to viruses and more vulnerable to hackers.

The response shown below gained one mark. The first response identifies the operating system has less features but fails to expand and explain it might be difficult to carry out specific tasks or additional features could cost. The second response is not mark worthy.

- (4)
1. open source operating system doesn't have less feature compared to proprietary operating system
 2. open source operating system are less secure because they can be edited and changed by anyone who knows how to

The response shown below gained four marks. The first response identifies the operating system doesn't have enhanced functionality or features, and has explained that it limits what the user is able to do for the expansion. The second response identifies there is no professional support and everything is done by the community, and has explained that updates may take a long time for the expansion.

1. ~~It doesn't~~ It doesn't have enhanced functionality or features as proprietary software. This can limit what the user is able to do.
2. Updates or fixes can take a long time as there is no professional support, everything is done by the community, so updates may take long time to fix any bugs.

Q1d

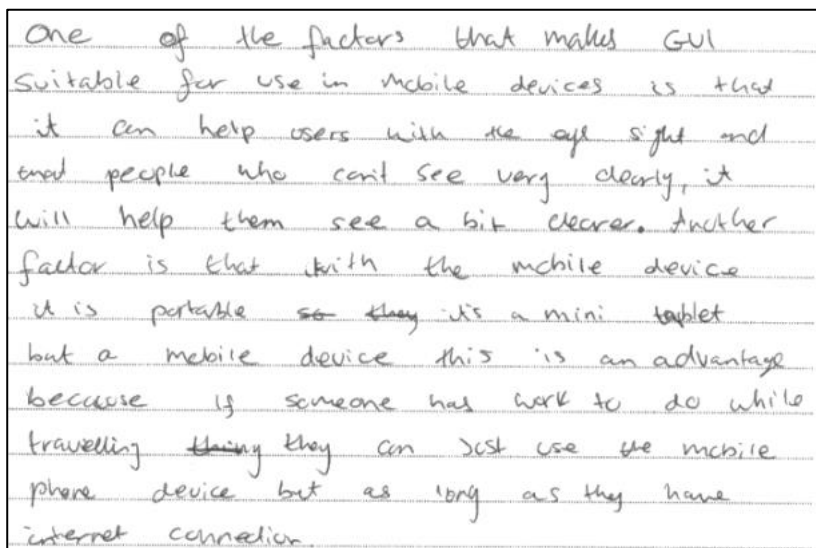
This was the first level based extended question on the paper. Learners were asked to discuss factors that make a GUI suitable for use in mobile devices such as tablet computers.

The majority of learners scored 1, 2 or 3 marks, and the learners who scored higher marks gave structured responses and were able to distinguish between GUI and CLI.

Learners were confused by GUIs and thought they were used for producing graphics for his course. The main confusion came when some students compared the use of mobile technology rather than the interface. Very generic responses such as they icons are easy to see were given.

The following response was placed in the lower mark band. Several of the points made are irrelevant/incorrect in the context of the scenario e.g. the impact on clients. The discussion shows isolated elements of knowledge and understanding with major gaps.

This response was assessed in the lower mark band, and although the learner discusses 'helping users with eye sight and that people who can't see very clearly', they demonstrated isolated elements of knowledge and understanding that the GUI can be adapted to aid impairments.



One of the factors that makes GUI suitable for use in mobile devices is that it can help users with the eye sight and that people who can't see very clearly, it will help them see a bit clearer. Another factor is that with the mobile device it is portable so they it's a mini tablet but a mobile device this is an advantage because if someone has work to do while travelling they can just use the mobile phone device but as long as they have internet connection.

This response was assessed in the higher mark band, and the learner demonstrates mostly accurate and detailed knowledge and understanding with minor gaps / omissions. Most of the points are relevant to the context in the question, and the learner has developed logical discussion.

A GUI is much more user-friendly than something like a CLI. This makes it suitable for use in tablet computers as majority of users are not highly IT literate to code out commands which is time consuming & can be daunting for new users. It provides iconography so users are able to deduce what an application will do and its functions. A GUI is also more accessibility-friendly which means users with a disability can still use the tablet computer for every-day tasks as the user interface can adapt to their needs, e.g. large font so text can be read more clearly. A GUI is much more easier to navigate & doesn't require a large learning process as it is easy to use which is beneficial for new users so they won't get confused with varying functions & can complete their tasks with ease.

Question 2

The scenario for this question was based around scientist working as part of a team studying the British Weather using an unmanned data logging system that has been set up in the mountains of Scotland to monitor weather conditions such as temperature and rainfall.

Q2ai

This question requires the learners to explain what is meant by the term 'data logging'.

In general learners made a good attempt at the question, with many candidates gaining at least one mark for capturing data. Where learners scored two marks it was generally for analysis rather than being an automated system. The focus

needs to be on using specific terminology to ensure higher pass rate, especially with a 2-mark question.

The following candidate gained one mark for a computer/system picks up data.

Data logging is when a computer/ system ~~pick up~~ picks up data it will instantly input the data into the system.

The following candidate gained two marks for recording data and patterns are analysed.

Data logging is the recording of certain data which by humans or technology which is later transferred to a database where patterns are analysed and predictions are made.

Q02b

Following on the theme from **Q02a** learners were asked to explain two benefits of using a data logging system to monitor weather conditions in a remote area.

Learners found this question overall quite tricky with most being awarded 0, 1 and 2 marks. Most popular correct answers were linked to use in harsh areas so that people's safety is not at risk, accuracy of reading and 24/7 monitoring.

Lots of responses discussed the cost savings of not travelling to the remote weather station and others discussed the need to have the system away in a remote location but not link this with reasons why.

This response was awarded 2 marks. The first response identifies the data collected will be more accurate, and the second response identifies remote areas can be difficult to get to.

(b) Explain **two** benefits of using a data logging system to monitor weather conditions in a remote area. (4)

- 1 the data collected would be more accurate as the data would go from the sensors to ~~the~~ storage quickly and the data would not be subjected to human error.
- 2 remote areas ~~can~~ can be difficult to get to and so a data logging system can be ~~sen~~ deployed and the data can be transmitted out of the ~~or~~ remote area.

This response was awarded 4 marks. The first response identifies the data logging system is useful in hostile environments and explains there is no possible hazards to human staff for the expansion. The second response identifies there is no human errors and data is correct, and explains the data is reliable for a scientist's use for the expansion.

- 1 Unmanned - meaning no possible hazards to human staff - No possible problems for them. Very useful in hostile environments, since the safety of human life is a priority.
- 2 No errors or problems - fully auto-made system no human errors. meaning all data is correct with no flaws, all data reliable and standard for a scientist use.

Q02c

This was the second level based extended question on the paper. Learners were asked to describe how a data logging system would be used to monitor weather conditions.

The majority of learners scored 1, 2 or 3 marks, and the learners who scored higher marks gave structured responses. Majority of marks linked into L1 or L2 band rather than L3, due to lack of depth or lack of developed process. Discussions seemed to be too general, missing out key terms.

Most candidates do not appear to have understood what was being asked in this question. Most answers focus on why weather would be monitored rather than how.

Many learners did not link 'data capture' with use of sensors but often gained marks in the middle mark band with references to examples of weather monitored at regular intervals being stored for later analysis. Few learners identified that sensors would take readings, however identified the different weather conditions, future analysis and that data would be stored in a database.

This response was awarded Level 1, 2 marks. The learner has demonstrated isolated knowledge and understanding with major gaps or omissions. There were three generic points included, which is relevant to the context in the question, but has given no consideration to different aspects.

A data logging system can be used to monitor weather conditions as it stores data about temperature and weather. It will allow you to predict the weather conditions by knowing roughly the climate and therefore people are able to prepare themselves for that climate.

This response was awarded Level 3, 5 marks. The learner has demonstrated accurate knowledge and understanding with some key features that relate to the scenario.

The data logging system would be placed in an area and the investigator will have to calibrate it so it is set to zero. Once the system has been set up, information on the weather would be stored and monitored into the systems storage device such as a micro SD card or a SD card. This data would be transferred onto a desktop and stored onto a database. However when setting up the data logger must be in a place where there are no restrictions such as trees or hills which can affect the connectivity. The logger should be placed in good connectivity to help with signal and range. The data logger should also be wireless so that data can be retrieved from the place to another.

Q02d

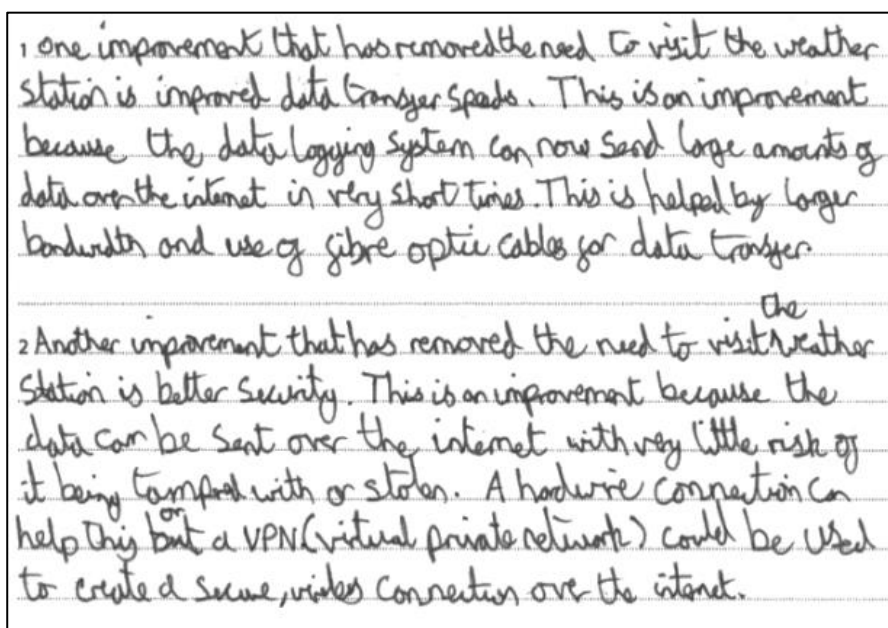
This question states that the data was collected by visiting the weather station, but due to improvements in communication technology a visit is not necessary.

Learners have to explain two ways in which improvements in communication technology have removed the need to visit the weather station.

This question was not too well answered. Most answers that did gain marks were for communication over a wider geographical area. The majority of learners seemed to confuse this question with general communication devices and methods, so linked the discussion incorrectly.

Candidates focused on the term 'weather station' which often meant that they focused more on how someone may use a device to contact an actual weather station for weather forecasts i.e. ringing a help desk, emailing, video conferencing, rather than using the information provided in the previous question.

This response was awarded 1 mark. The first response identifies improved data transfer speeds. The second response is not mark worthy.

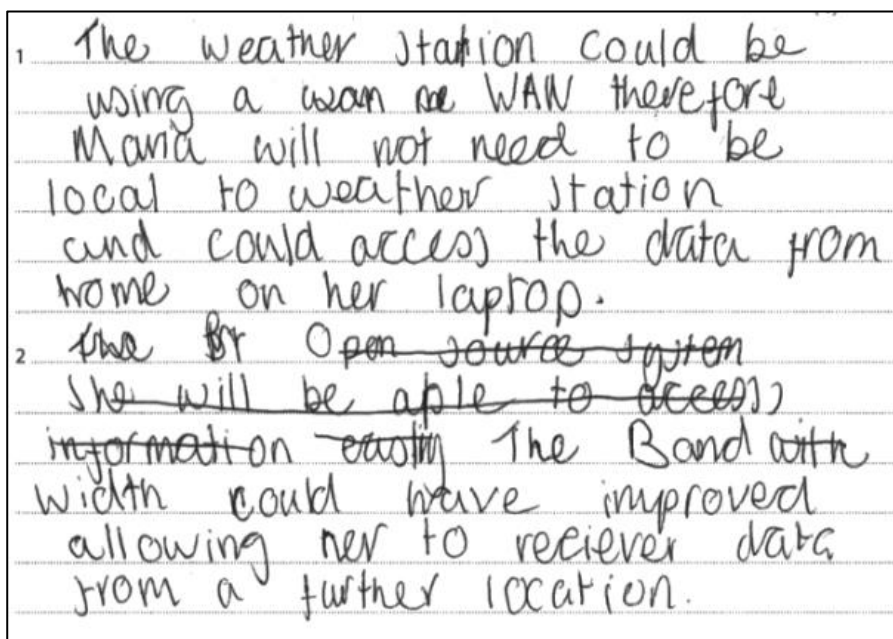


1 one improvement that has removed the need to visit the weather station is improved data transfer speeds. This is an improvement because the data logging system can now send large amounts of data over the internet in very short times. This is helped by longer bandwidth and use of fibre optic cables for data transfer.

2 Another improvement that has removed the need to visit ^{the} weather station is better security. This is an improvement because the data can be sent over the internet with very little risk of it being tampered with or stolen. A hardware connection can help this ^{or} but a VPN (virtual private network) could be used to create a secure, wireless connection over the internet.

This response was awarded 3 marks. The first response identifies the data could be accessed from home. The second response explains that bandwidth could

have improved for the expansion point, and identifies that data can be received from a further location.



Q02e

This was the third level based extended question on the paper. Learners were told data received from the weather station was used to analyse the data, display the results in an appropriate format, and produce a report for other scientists working in the team using spreadsheet and word processing software. Learners are to discuss how the features of spreadsheet and word processing software would help complete the tasks.

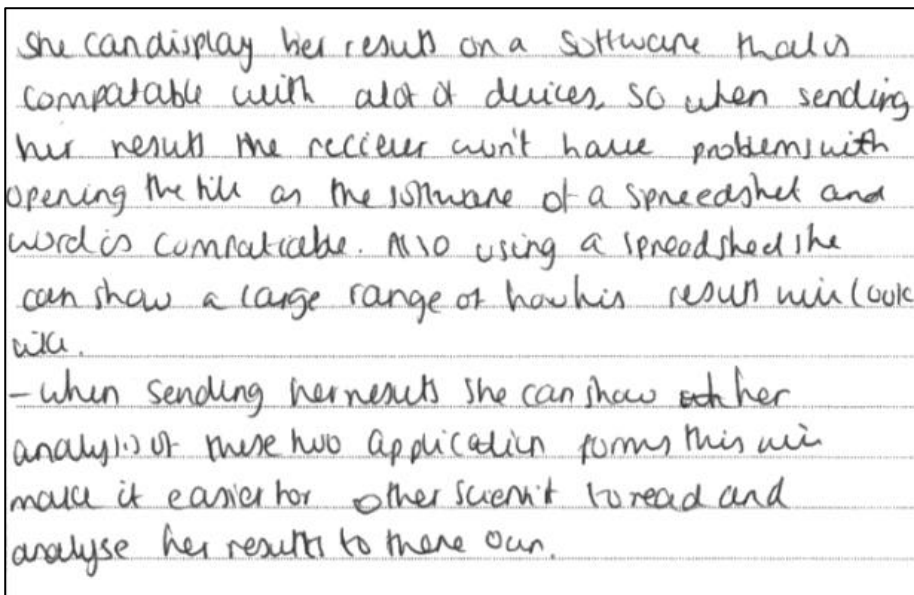
The majority of learners scored 1 – 4 marks, and the learners who scored higher marks gave structured responses. Majority of marks linked into L1 or L2 band rather than L3, due to lack of depth or lack of developed process. Discussions seemed to be too general, missing out key terms.

Most candidates showed a solid understanding of features present in both the applications with many learners highlighting how the two could be used together and how data could be transposed/copied from one to the other. This could be

down to the familiarity of the learners with the two pieces of software used within the question.

Not many were able to explain how the 2 could be integrated though and most scored within the middle mark band.

This response was awarded Level 1, 1 mark. The learner has demonstrated isolated elements of knowledge and understanding with major gaps or omissions. Only one point made which is relevant to the context in the question but there is limited discussion.



She can display her results on a software that is compatible with alot of devices, so when sending her results the reciever won't have problems with opening the file as the software of a spreadsheet and word is compatible. Also using a spreadsheet she can show a large range of how her results will look like.

- when sending her results she can show ~~at~~ her analysis of these two application forms this will make it easier for other scientist to read and analyse her results to there own.

This response was awarded Level 5, 6 marks. The learner has demonstrated mostly accurate and detailed knowledge and understanding with minor gaps or omissions. Most points raised are relevant to the context in the question with clear links. There is a well-developed, logical discussion that considers a range of different aspects for both spreadsheets and word processing.

A spreadsheet can present data and analyse it with ease as it has easy to use functions and ~~form~~ formulae that can do a number of tasks such as an 'average' function that can find the average of a column, row or range, or a formula consisting of multiple numbers, in seconds, like a calculator instead of Maria having to do it by hand. A spreadsheet also has chart options, making it easy to turn a chunk of data into a pie chart or graph, helping Maria present her data in an appropriate format, some spreadsheet applications even suggest what chart to use for ~~some~~ certain types of data, which Maria could find useful. A word processing software has a type face so that Maria can type up her report, and they also usually have the option to change text formats, so Maria can present her report in a professional way. A word processing ~~A~~ software also allows a user to add photos and to add clipart and flowcharts, as well as to import data and charts from a spreadsheet, so she can present her work appropriately.

(Total for Question 2 = 22 marks)

Question 3

The scenario for this question was based around an estate agency selling properties in the Lake District. There is a head office with a small number of PCs linked to a network server which is backed up using a cloud storage system.

Agents visit prospective sellers to gather information about their properties and use an online form to enter property details into a tablet computer. These forms are then submitted to head office using a virtual private network (VPN).

Sales packs are created for each property which are available online for prospective buyers to view. Head office staff contact sellers and buyers via email. Details of all properties and personal details of sellers and buyers are stored on the agency's server at head office.

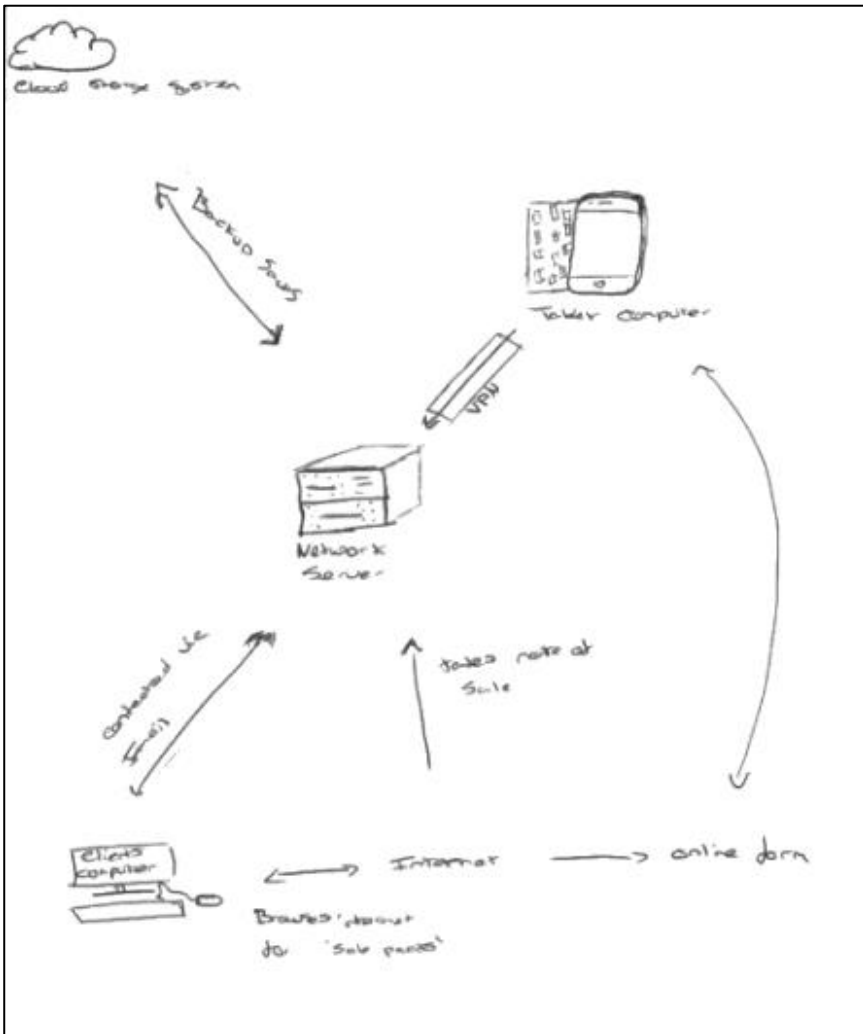
Q03a

Learners are required to draw a diagram to show the integration of systems used by the estate agency, that includes devices and systems, devices to be connected and connection types, flow of data through the system, and annotations indicating the information and data passed between the systems, devices and users.

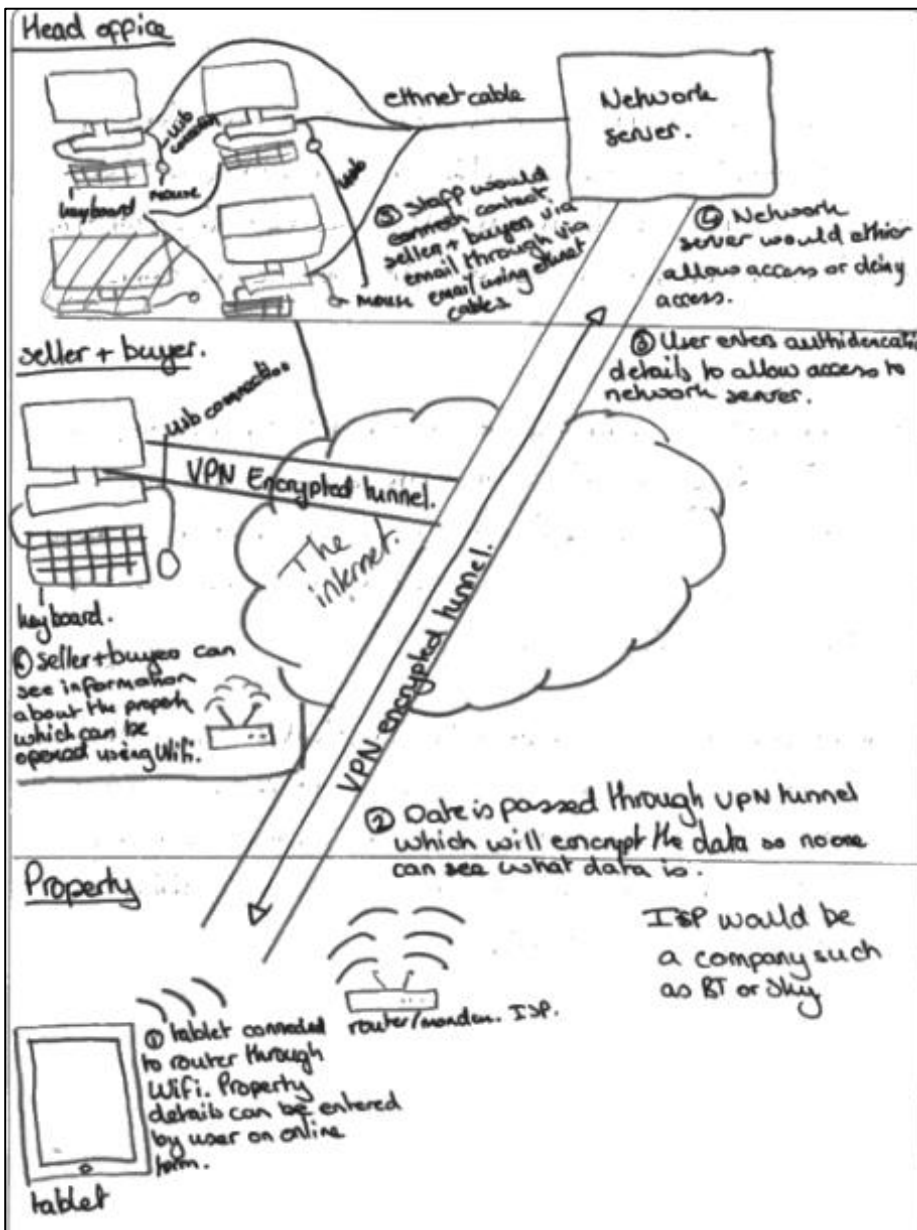
The majority of learners scored between 1 and 4 marks.

Majority of learners produced a diagram although not all identified types of connections or the fact that data would travel two ways. Some learners produced a flow chart instead of a network plan.

The following response gained Level 1, 2 marks. Diagram provides coverage of mostly appropriate devices. Connection types are given between Network Server and Agent's tablet only. Annotations are not included, and data flow between devices is not fully included.



The following response gained Level 3, 6 marks. Diagram provides thorough coverage of appropriate devices. Storage/data sharing and connection types are used to fully meet the requirements of the scenario. Diagram includes detailed and accurate annotations of the data that will be shared among components.



Q03b

The agents gather information about properties from sellers and use tablet computers to enter property details into an online form.

Learners have to explain three factors that the agency should consider when setting up the online form.

Although this question was quite well answered with most learners achieving between 1 and 4 marks, students seemed to focus on using the generic terms with basic discussions for expansion, e.g. ease of use, accessibility and security.

Some responses related to connectivity of the tablet rather than the factors that should be considered when setting up the online form, and some appeared confused with this question and spoke of the cost of selling houses rather than the creation of the sales pack.

Students showed a good understand of data protection, many referring to GDPR and its importance in protecting customer's information and suggesting that only appropriate information should be captured. This was a good indication of their knowledge of GDPR and how to put it into context of the requirements for this question.

This response was awarded 1 mark. The first response is not mark worthy. The second response is not mark worthy. The third response identifies the form is easy to read and fill out which is just enough to award against 'Ease of Use'.

1. Should consider the sellers personal details like name, email and phone number so the agency can contact them, when a buyer is interested.

2. Should have details about the property, like address, features, how many rooms it has and other details customers would care about.

3. Should also consider if the form is easy to read and fill out, as you don't want to spend a lot of time, asking the seller questions as they may get bored and not interested.

This response was awarded 6 marks. The first response identifies intuitiveness, and the learner has explained the form needs to be set up in a suitable order, for the expansion. The second response identifies accessibility, and the learner has explained the user can adjust the view and size of fonts for the expansion. The third response identifies accuracy of data, and explains there is a need for validation for the expansion.

- 1 Intuitiveness whether its set up in a suitable order so that the form is not difficult to fill in. so it makes sure that details are filled in without confusion
- 2 Accessibility make sure that even people with disabilities can use the form so make sure you can adjust the view and size of fonts or be able to access the form on different platforms
- 3 Accuracy of details, include validation and suggestion that so that details arent typed in wrong example for name make sure there cant be a number also do two entries of information or two conditions to make sure its good read.

Q03ci

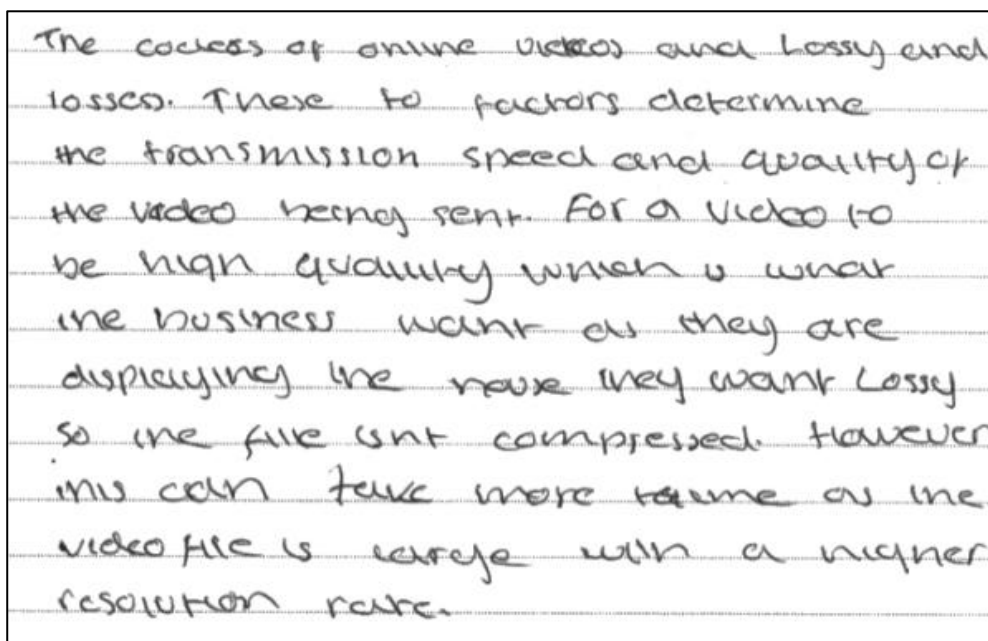
The online sales pack for each property includes PDF documents, photographs, and a virtual tour video.

Learners have to describe the use and implications of codecs when using video in digital format.

Very poorly answered, again candidates do not appear to have understood the question.

Very few gained learners gained more than 2 or 3 marks, with quite a few learners not answering the question. Many learners understood that codecs were needed to view videos. Common answers linked to file size and quality links, rather than showing understanding of what a codec is.

This response was awarded 1 mark for identifying that the video file is large. The learner mentions 'lossy' and 'lossless' but they have the explanations the wrong way round.



The codecs of online videos and lossy and lossless. These two factors determine the transmission speed and quality of the video being sent. For a video to be high quality which is what the business want as they are displaying the more they want lossy so the file isn't compressed. However this can take more time as the video file is large with a higher resolution rate.

This response was awarded 4 marks for identifying that codecs are a piece of software that can be used to compress digital video using lossy compression, and less storage space is used by the file.

Codecs are software that is used when compressing or decompressing digital video. It uses lossy compression, where data is removed permanently, and is not regained when the file is ~~then~~ decompressed. The amount of data that is removed is often unnoticeable to the eye, and only slightly reduces the image quality. Compression allows for smaller file sizes, resulting in quicker download speeds, faster upload speeds, and less storage space used by the file.

Q03cii

Learners have to discuss the factors that should be considered when making the sales packs available online.

Most learners achieved between 1 and 4 marks, with learners identifying use of different devices, cost and ease of use.

Lots of learners seemed to misread the question and spoke about selling houses and if they mentioned security they referred mostly to burglaries rather than personal data within the pack. Many learners seemed to think that the packs were for sale and focused on the cost of producing them to make a profit.

This response gained Level 1, 1 mark. The learner demonstrated isolated elements of knowledge and understanding with major gaps / omissions. Security was the only point made that was relevant to the context in the question, and the learner has given a limited discussion.

No lies. all the data needs to be kept up-to date so you are not selling your clients something fake. It has to be the correct and legal factors would be ~~important~~ important to ensure the data is correct and not been tampered with. The sales pack need to include all the

information. ~~Security~~
Security factor, data needs to be stored safely and unreadable to hackers. Using a https. may make the user feel more safe to be able to download and print a copy. or download a copy without having to feel that it may be infected by a virus or some malware.

This response gained Level 3, 6 marks. Learner demonstrates mostly accurate knowledge and understanding with minor gaps / omissions. All points are relevant to the context in the question, and the learner has given a well-developed logical discussion that contains a range of different aspects.

There are many factors to be considered before uploading files online. A major factor is the security of the sales packs. The information being transferred can be intercepted and important information may get deleted. Using a VPN to upload will create a secure tunnel through the internet ~~and~~ for the data and it will encrypt the data to prevent accessibility if the information is intercepted. The website

should use HTTPS protocol to ensure its safety as files are transferred using RTF protocol. This HTTPS only allows clients with digital certificate to access the web page. Another factor that should be considered is the computer system needs of the clients downloading the files. The files should use file types that ~~are~~^{are} accessible by most devices otherwise the clients can't view pieces of information. The cost of the website should be considered as it impacts the company. The initial cost and ongoing subscription costs will impact the ~~decision~~^{use} of the service. The file size of the sales packs should also be considered. If the packs are very large in file size, it will ~~req~~^{require} a high bandwidth and connection speed to download the packs. It will also require the company to have high bandwidth and upload speed to upload the files.

Question 4

The scenario for this question is based on a community centre which has a main office and meeting rooms that are used by members of the community. There is a Local Area Network (LAN) serving all areas of the centre with a mix of PCs and laptop computers which are connected to the LAN using Ethernet cables.

The computers vary in age and specification, many having been donated by members over the years. The centre has been given a grant to replace the computer system and it is considering replacing the system with wireless enabled laptops.

Q04a

The learners are required to analyse the implications of replacing the existing computers with wireless enabled laptops.

This question was generally well attempted by most candidates although, the breadth of answer was somewhat vague and learners gained between 3 and 6

marks. Many candidates appeared concerned about the amount and cost of Ethernet cables, as well as security with trip hazards.

This response was awarded Level 1, 3 marks. The learner has demonstrated isolated elements of knowledge and understanding with major gaps / omissions. Some points made are relevant to the context in the question with limited analysis.

The first implication of replacing existing computers with wireless enabled laptops is that wireless enabled laptops are easy to gain unauthorised access to this making it easier to hack the laptops and take important data.

Another implication with wireless enabled laptops is that connection could easily drop if the user was to take their laptop out of range, this could potentially mean that user lose all of his data. Interference with signals.

Wireless enabled laptops will work slower as there will be many ~~computer~~ laptops also using the same network hence making it slower as compared to ethernet which gave direct access to the internet, as it was one connection. Another implication could be trying to transfer data from the computer to the laptop this will take the community center time and so it could mean

people are without their work for some time.

This response was awarded Level 3, 10 marks. The learner has demonstrated mostly accurate and thorough knowledge and understanding. They have broken down the situation into component parts and most of the points are relevant to the context in the question. They display a well-developed and logical analysis which clearly considers interrelationships.

be limited to a particular area so and this result in having more space available for other activities.

The community needs to consider if the laptops are easy to use for the members and the implementation must be slow when there are less members using the centre.

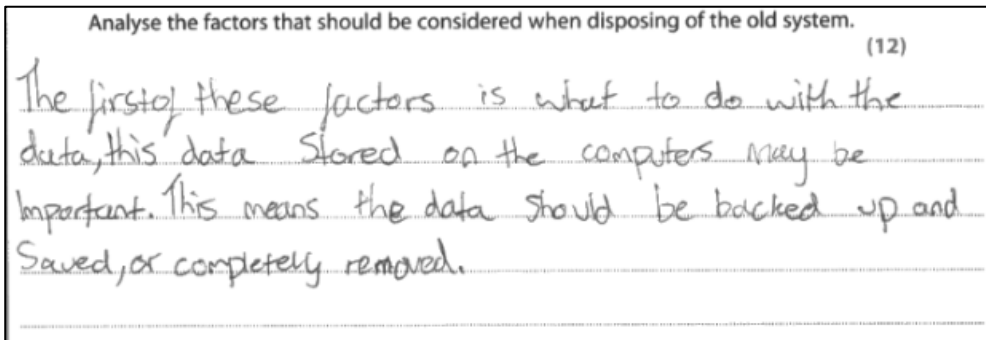
They must ~~also~~ ~~testing~~ test the new wireless laptops before allowing members to use as if there are issues members can lose valuable data. They also need to have a well planned implementation so they can provide information to the members on the amount of time that the centre will not be available or parts of it.

The factor is that the laptops must be compatible with the devices used by the community (printers, projectors). If it is not then they might need to change those devices as well which result in having extra costs.

They might also need to have an IT team to manage the new system, therefore ~~mean~~ hiring new staff or providing training to the existing staff, which again result in increasing the cost.

The laptops must be easy to use and understand so members can easily use them to complete their task.

This response was awarded Level 1, 1 mark. The learner has demonstrated isolated elements of knowledge and understanding with major gaps / omissions. The situation has been broken down into component parts and few points made are relevant to the context in the question with limited analysis.



This response was awarded Level 3, 12 marks. The learner has demonstrated mostly accurate and detailed knowledge and understanding. They have broken down the situation into component parts and most of the points are relevant to the context in the question. They display a well-developed and logical analysis which clearly considers interrelationships.

Analyse the factors that should be considered when disposing of the old system.

(12)

The moral factors that should be considered is how are the company is going to dispose of all of the hardware of the computers. The hardware has to be securely destroyed by an external organisation that has to be paid for the process.

The devices might have some personal and private information stored in them meaning that the Data Protection Act comes into this. The data stored has to be deleted and disposed of by destroying any SSD cards, hard drives and discs that might store that type of information, so no one can extract the data from these devices.

The parts have to be then given away to a special organisation that will get rid of them in the right way and not just in the bin to not harm the environment.

Some of the technical devices without storage like the graphics card or the RAM can also be given away to less fortunate people.

The cost of the disposal should also be considered and how are they going to transfer all of the needed information from the old devices to the new ones as well as the software. The operating system will also have to be moved to the new devices ~~as it is~~ if it is being paid for per device. The leasing/certificate for the operating system will have to be transferred or new will have to be bought.

In conclusion, the most important part is to get rid of the private and confidential data in a secure way by destroying it so no one can access it from the old storage.

(Total for Question 4 = 22 marks)

Summary

Based on their performance on this paper, learners should:

- Ensure they read the scenario to gain an understanding of the context of the question
- Ensure they read the questions carefully to enable them to answer the question fully and gain the higher mark bands

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