



# Examiners' Report/ Lead Examiner Feedback

Autumn 2016

NQF BTEC Level 1/Level 2 Firsts in  
Information and Creative Technology

Unit 1: The Online World (20560\_E05)

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## Introduction

This report has been written by the Lead Examiner of Unit 1: The Online World. It is designed to help you understand how learners performed on this test. The report provides an analysis of learner responses for each question. You will also find examples of learner responses, with commentary to show where marks were awarded.

The external assessment for this unit is an onscreen, on-demand test. A number of tests are live within the 'test bank' at any one time and learners are allocated tests randomly. Whilst not all learners will have sat this particular test, the Lead Examiner's comments provide valuable feedback, relevant across different tests for this unit.

We hope this will help you to prepare learners for the external assessment for this unit.

## Grade Boundaries

### Introducing external assessment

The new suite of 'next generation' NQF BTECs now include an element of external assessment. This external assessment is an onscreen, on-demand test conducted under controlled conditions.

### 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 (Distinction, Merit, Pass and Level 1 fallback).

### Setting grade boundaries

When we set grade boundaries, we look at the performance of every learner who took the 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 should be for a particular grade.

When our experts set the grade boundaries, they make sure that learners receive grades which reflect their ability. We have awarded grade boundaries for our new next generation BTECs, so this means that a learner who receives a 'Distinction' grade on a particular test will have similar ability to a learner who has received a 'Distinction' grade on another onscreen test. Awarding grade boundaries is conducted to ensure learners achieve the grade they deserve to achieve, irrespective of variation in the external assessment.

### Variations in externally assessments

Each test 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 test, because then it wouldn't take into account that a test might be slightly easier or more difficult than any other.

The grade boundaries for this test are shown below.

Grade	Unclassified	Level 1 Pass	Level 2		
			Pass	Merit	Distinction
Boundary Mark		11	21	31	41

## General comments

Most learners were able to respond effectively to the questions early on in this test. However, some of the later questions were designed to be more challenging and as such, fewer correct responses were evident.

The most successful learners scored highly across the whole test including the differential questions where they could demonstrate a depth of knowledge.

The less successful learners tended to give minimal responses and often only answered multiple choice questions. It appeared many learners were not confident in understanding the requirements of the command verbs in open response questions, but were able to use the different mechanisms available to answer multiple choice questions.

One such example was the way in which learners responded to questions which used 'explain' as a command word (explain one drawback....).

When achieving marks for this type of question, the first mark is awarded for identification of the drawback, with the second mark awarded for the expansion as to why it is a drawback.

When responding to such questions, learners tended to either include one drawback without the expansion or two drawbacks instead of expanding on one – only one mark could be awarded where this occurred.

It was encouraging to see, for this test, that learners used their own experiences to provide responses. As is encouraged in the Delivery Guide for this unit, learners' reflection on their 'online life' can be beneficial.

It is important to stress that learners need to not only understand what technologies do, but also how they work by providing examples, where appropriate, to explain.

From having practical experience of these aspects of the unit, learners will be better placed to apply their knowledge and understanding to the applied situations in the assessment and gain credit for their responses.

The responses to open response questions were on occasion rather minimal and it was clear that a number of learners did not make full use of the stimulus material provided in the question. The emphasis in this assessment is on learners' application of their knowledge to a variety of practical ICT-related situations.

Stronger responses to extended response questions should demonstrate application along with theory. It is important for learners to have practice in doing this in their preparation for the assessment. Learners who were able to access higher marks for these questions were able to apply their knowledge and understanding to the stimulus and provide realistic and appropriate suggestions.

As Unit 1 is a vocational ICT-related unit, the external assessment seeks to put the learners in applied situations and ask them to respond to these. It is essential that centres stress to learners the need to read the stimulus information carefully before they answer questions, and be prepared to use that information within their responses.

Learners appeared to manage their time effectively and appeared to be able to complete the assessment in the time available.

### Question 1

**Targeted Specification Area: Learning Aim B.6  
Worldwide Web**

The majority of learners understood that HTML is used to create the source code for a web page.

### Question 2

**Targeted Specification Area: Learning Aim A.2  
Online documents**

Most learners identified read only and full control as the two correct types of file permission.

### Question 3

**Targeted Specification Area: Learning Aim C.1  
Possible threats to data**

3a

Learners were asked to give one way to protect data when online. The most popular responses were anti-virus, passwords and encryption.

3b

This part of the question required learners to state one way a firewall protects data. The most popular response was monitoring information/data entering the computer.

### Question 4

**Targeted Specification Area: Learning Aim B.1  
The internet**

4a

Most learners correctly identified router as one component of the internet infrastructure.

4b

Most learners correctly identified that a client connects to a web server.

### Question 5

**Targeted Specification Area: Learning Aim B.2  
Worldwide web**

This question required learners to identify two components of a Uniform Resource Locator (URL). Most candidates achieved both marks for this question for identifying path name and domain name.

## Question 6

**Targeted Specification Area: Learning Aim B.1 & B.2**  
**The internet and worldwide web**

This question asked learners to identify two internet protocols. Most learners correctly identified TCP and HTTP.

## Question 7

**Targeted Specification Area: Learning Aim A.2**  
**Online documents**

This question was made up of part (a) and part (b). Both required learners to provide two responses for each part to gain the total of four marks.

7a

The question asked learners to give two advantages of using online software to create documents. Files can be shared was removed as a response as it was provided in the stem of the question.

Structure response:

One advantage is online software can be accessed from anywhere with an internet connection. Another advantage is the software will not take hard drive space on the computer.

The most popular responses were those in the example provided – ‘accessed anywhere there is internet connection’ and ‘saving space on the computer’.

7b

Learners were required to give two reasons why it is important to control levels of access when sharing files.

Structure response:

One reason is so that unauthorised or untrained users are not able to make changes or accidentally delete a file.

Another reason is so that the file is always up to date and the latest version. For example when one person is using and altering a file with read and write or full access to a file. If another user attempts to access and change the file, levels of access can prevent the other user from making changes to the file, by changing the file access to read only.

The most popular responses were those shown in the example – ‘prevent unwanted changes being made to the file by unauthorised people’ and ‘different users having different access to files’.

## Question 8

**Targeted Specification Area: Learning Aim B.4**  
**Data exchange**

This question included images of a digital camera, a router, a mouse and a smart phone. Learners were required to identify the device that uses a simplex transmission mode. Most learners correctly identified the image of the mouse as the correct answer.

## Question 9

**Targeted Specification Area: Learning Aim C.1  
Possible threats to data**

This question asked learners to explain one reason why an employer might monitor employee communication.

The response shown achieved two marks – see what employees are saying in their emails (1) if they are saying anything bad about the business which could affect their reputation (1).

## Question 9, 2 marks

Technology can be used to monitor employee communications in the workplace.

Explain **one** reason why an employer might monitor employee communications.

Type your answer in the box.

An employee might want to monitor employee communications so that they can see what their employee's are saying, for example, in their work emails. This can show the business how well employees are communicating and if they are also saying anything bad about the business which could affect their reputation.

Some learners were only awarded one mark for this question as they provided two identification points such as reading emails and ensure workers are on task. To achieve two marks, learners must provide one identification point and then expand on the same point to provide the explanation.

## Question 10

**Targeted Specification Area: Learning Aim B.5  
Data storage**

This question was a direct lift from the specification on databases. Learners were asked to identify two terms used as part of a database structure. Most learners achieved both marks for identifying relationship and table but some only achieved the mark for table.

## Question 11

**Targeted Specification Area: Learning Aim C.1  
Possible threats to data**

Most learners correctly identified phishing and identity theft as two security issues associated with the use of email.

## Question 12

### Targeted Specification Area: Learning Aim C.1 Possible threats to data

Four marks were available for this question. Learners should have provided two identification points with an explanation of each. Prior to sitting the tests, learners should spend time going through exam techniques for this type of question. One mark is awarded for the identification, the second is awarded for expansion on the given identification. This issue is evident in most of this type of question where learners achieve the first mark but fail to continue the response to achieve the second mark.

However, the response shown achieved the full four marks.

Learners were requested to explain two factors a school would need to consider when backing up data.

Structure response:

The school will need to consider how often they want to back up their data, and whether these backups will be full (backing up all of the data) or incremental (backing up only the new data that has been updated, added to or changed). Since the school is quite big there will be a lot of data, so starting with a full backup and then doing regular incremental back ups may be suitable. They would also have to consider if they wish to keep to back up on or off site. They may wish to back their data up on a physical external hard drive (rather than online) so keeping this hard drive off site may be ideal as then if accidental damage, such as a natural disaster, befalls the school the data will still be safe as it's backed up in another location and can now be recovered. They'll also have to make sure their data can actually be recovered from the backups they have in case something happens to the original copies.

Marks were awarded for:

Incremental backup (1) backing up only the new data that has been updated, added to or changed (1)

Consider if they wish to keep backup on or off site (implying location of backup) (1) could be on an external hard drive then off site (1)

Learners tend not to use the exact wording on the mark scheme but if their response implies the correct answer, in their own words, marks are awarded.

Some candidates only achieved the three marks for this question as they did not expand on the second identification point.

## Question 13

### Targeted Specification Area: Learning Aim B.1 The internet

This question focused on the use of FTP (File Transfer Protocol) to transfer files over the internet.

13a - Learners were required to identify one advantage of using FTP to transfer files. Most learners achieved the marks for identifying that large files could be transferred quickly.

13b - Learners were required to identify one drawback of using FTP to transfer files from a choice of four options. Very few learners achieved the mark for identifying that specialist software was required.

## Question 14

### Targeted Specification Area: Learning Aim B.1 The internet

Four marks were available for this question - two reasons why having a high bandwidth is important when using the internet. Learners were awarded mark for each reason then two additional marks for the expansion of each.

Most learners tended to achieve two marks for their response to this question. These marks were generally awarded for providing one reason with an expansion but learners tended not to provide a second reason.

The following response was awarded four marks

### Question 14, 4 marks

Explain **two** reasons why having a high bandwidth is important when using the internet.

Type your answer in the box.

High bandwidth is important as it increases the capacity of data that is transferred at once. If the bandwidth is high, the upload and download speed will also be quicker. Furthermore, with high bandwidth, if more than one person is connected to the internet at once in a house it won't affect the speed of their internet connection as much. Also, high bandwidth also allows lots of tabs to be open at once without affecting the internet speed as much.

Marks were awarded for:

Increases the capacity of data that is transferred (high data transfer rate) (1) so the upload and download speed will be quicker (1)

If more than one person is connected to the internet (1) it won't affect the speed of their internet (without affecting connectivity) (1)

Again, learners use their own language to show their understanding of a topic but as the correct answers from the mark scheme are implied from the responses provided, marks are awarded.

## Question 15

### Targeted Specification Area: Learning Aim A.3 Online communication

This question required learners to explain two advantages of using RFID chips over traditional barcodes.

Most learners were able to access two marks for two identification points. The most popular were 'more robust' and 'read/scanned from a distance'.

The response shown achieved two marks for:

More robust (1) there is no second mark as the learner had repeated the issue of being robust rather than explaining why being more robust is an advantage.

Tracked from a distance (1) but the explanation is not clear enough for the second mark.

Ubiquitous computing can make use of radio frequency identification (RFID) system chips.

Explain **two** advantages of using RFID chips over traditional barcodes.

Type your answer in the box.

Firstly, an RFID chip is alot more robust than a barcode therefore, it is a lot less likely to break which is more helpful when it is used because it is unlikely that it will have to be replaced. Also, the RFID codes can be tracked from a distance whereas, the barcodes have to be scanned so cannot be tracked from a distance whcih mean the RFID chips can be used to track things like taxis without having to be scanned and they also indicate the speed and milage of the taxi ect.

## Question 16

### Targeted Specification Area: Learning Aim B.3 Email

This question was broken down into parts a and b.

Part (a) required learners to explain one role of SMTP in sending messages

Part (b) required learners to explain one reason for using IMAP instead of POP3 for retrieving emails

The following response was awarded full marks

Structure response:

SMTP is an outgoing protocol used for sending emails. It transfers the email being sent to a mail server, where the reciever can then either download it onto their device, or view it on the server, depending on whether they're using IMAP or POP3. This is known as a store and forward system.

Structure response:

One reason for using IMAP over POP3 for rchieving emails is that each email can be viewed on all of an individuals' devices which are linked up to that email account. This isn't possible with POP3, as that protocol downloads the email to the device and deletes it from the server. As the email is being read on the server with IMAP, it is accessible on all of a users' devices which are linked up to that email account.

Marks for (a) were awarded for 'transfers email to a mail server where the recipient .....' (1 – transmits messages to recipient's email server) known as store and forward system (1)

Marks for (b) were awarded for 'email read on the server (implies stored on server – 1 mark) on all devices linked to the email account (1 – access on multiple devices)

Achieving full marks on this question was rare. Most learners were awarded one or two marks. Some learners showed little or no understanding of this topic.

## Question 17

### Targeted Specification Area: Learning Aim B.4 Data exchange

This question required learners to explain one benefit of using server side processing to submit a completed form on a webpage.

Few learners are showing any understanding of this topic yet it is on the specification with an example of its use. Very few marks were awarded for this question.

However, the following response was awarded full marks:

Structure response:

One benefit of using server-side processing to submit a completed form is how there is no browser specificity, compared to client-side processing where there is. A user may be using a web browser that processes scripts differently to the ones that the web page is coded for. This could cause incompatibilities with the web-page on some browsers if the site was using client-side processing. However, with client-side processing, this isn't an issue as the data is processed server-side, meaning there is no incompatibilities with submitting the form with any given web browser. This means the user can submit the form without any issues in regard to web browsers.

Although the response is disorderly, there are correct marking points included – 'no browser specificity (browser independent – 1 mark) then the learner goes on to mention 'data is processed server side (data processed on the server – 1 mark) – this is an expansion on the identification so the additional mark can be awarded.

Another correct response is shown for the same marking point:

Structure response:

There will be no problem viewing or sending the form as it will not be browser specific. This is because it is processed by a web server and it does not involve script running on a client's device/computer that may not work depending on the client's web browser.

Where marks were awarded, 'browser independent' tended to be the most popular response.

## Question 18

### Targeted Specification Area: Learning Aim C.1 Possible threats to data

Extended writing questions are designed to assess learners' ability to analyse, evaluate, make reasoned judgments and present conclusions.

Most learners achieved marks for this question with very few gaining no marks. However, some learners only achieved marks in Mark Band 1. This was due to them making a number of individual points without an expansion.

Overall, quality of written communication was similar to previous tests. There was some evidence from some learners of the use of connectives to help achieve a logical flow to their discussion, retaining focus and supporting better organisation of their response. This is a useful writing skill and should be practiced.

Learners were required to discuss the use of VoIP as a communication method for a coffee shop owner and his staff across the UK. The fact the owner had to travel long distances was included in the stem.

There are three mark bands for this question up to a maximum mark of eight marks. Learner responses generally tended to be in the lower two mark bands with few achieving marks in Mark Band 3.

The response shown was awarded marks at the top of Mark Band 2. The learner had described a few points which considered more than one viewpoint (positive and negative) but there was more emphasis on one of them (positive) although all were relevant to the situation in the question.

Structure response:

One of the major benefits with VoIP is that he can contact any of his staff at any time and from anywhere in the world and can even host a group conference call using a service such as Skype. Because VoIP is Internet based it means that it can be used anywhere in the world as long as he has an Internet connection, this is a benefit because he could even contact and host meetings with staff even if he is travelling or is abroad. Services such as Skype are also generally free and would therefore save him a great amount of time on travelling and also money spent on travelling, this would help to improve the overall efficiency of his business. Another benefit is that documents and files can be shared on screen during the conference call, for example Tom may want to show his restaurant manager's sales records and graphs, therefore he would be able to show them important information like that.

However because the service requires an Internet connection, if the service goes down - for instance Skype, or there is no Internet connection available in their location the conference call cannot take place. VoIP is also dependent on the Internet connection speeds and therefore if there is a low bandwidth speed then the call may also be laggy, interrupted and prone to interference. Using VoIP is also reliant on the service provider's hardware and also on the security they have in place. For example they may be using out of date anti-virus software meaning that company data can be corrupted or deleted, the service may not also have a firewall in place meaning that outgoing and incoming data is not being monitored so therefore data could be exposed to threats such as hackers, and could lead to identity theft if customer records are stolen.

The learner has covered the following points and made some descriptive comments:

#### **Positives**

- Host group conferences
- Accessed anywhere in the world with internet connection
- Save money on travelling as he can use services such as skype
- Can show documents – share with all staff

#### **Negatives**

- Needs a good connection speed – call may be laggy, interrupted

The mark scheme has been broken down into different areas which learners could cover. These are costs, features, convenience (positives) and some drawbacks. It is impossible to include all possible responses in the mark scheme so examiners are directed to accept any valid response that is not listed on the mark scheme.

## Summary points

- Where questions require an explanation of something (2 marks) make sure an initial identification is included and then go on to explain it.

Identification (1) explanation of the point identified (1)

Where learners are asked to provide two explanations then there should be two identifications with two expansions.

- If a scenario/stem is included for a question make sure this is read to ensure the response given relates to it and not just general comments. If an advantage of something relates to a teacher, then do not provide a response that relates to a student and so on.
- Where a question asks for learners to describe HOW something works they shouldn't provide a response that states WHAT it does. They obviously need to consider what it does but the response must state how it does it.
- If a question asks for two of something, learners need to ensure they provide two responses.
- Learners need to take part in sessions that introduce them to exam techniques – some of which have already been mentioned. Others should introduce learners to different terminology such as state, identify, give, describe, explain, evaluate, analyse and so on and what is expected for each.

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