Candidate surname | Other names

**Pearson BTEC
Level 1/Level 2
Award**

Centre Number

Learner Registration Number

**Sample assessment material for first teaching
September 2018**

Time: 1 hour 30 minutes | Paper Reference **21193L**

Digital Information Technology
Component 3: Effective Digital Working Practices

You do not need any other materials. | Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and learner registration number.
- Answer **all** questions.
- Answer the questions in the spaces provided
  – *there may be more space than you need*.
- This booklet contains material for the completion of the assessment under supervised conditions.
- This booklet is specific to each series and this material must only be issued to learners who have been entered to undertake the task in the relevant series.
- This booklet should be kept securely until the start of the 1 hour 30 minute supervised assessment period.

Information

- The total mark for this paper is 60.
- The marks for each question are shown in brackets
  – *use this as a guide as to how much time to spend on each question*.

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ▶

S 6 3 2 9 6 A 0 1 1 2

Pearson

Answer ALL questions. Write your answers in the spaces provided.

1 Clare is a designer for a games development company.

She works from home and in public places such as cafés, train stations and airports.

Clare uses her laptop to prepare designs.

(a) Give **two** ways Clare could connect her laptop to the internet when she is working away from home.

(2)

1 ....

....

2 ....

....

(b) Clare uses cloud storage for her designs.

One benefit to Clare of using cloud storage is that she can access her designs anywhere that has internet access.

State **two** other benefits to Clare of using cloud storage.

(2)

1 ....

....

2 ....

....

(c) Clare is concerned about malware. She knows a virus is a type of malware.

Give **two** other types of malware.

(2)

1 ....

2 ....

S 6 3 2 9 6 A 0 2 1 2

(d) Clare has recently been a victim of phishing.

Describe **one** way that this could have happened.

(2)

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....

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(e) Clare's laptop has been infected with a virus.

Explain **two** ways Clare's laptop could have been infected with a virus.

(4)

1 ....

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2 ....

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Total for Question 1 = 12 marks

2 A local travel agency sells holidays through high street shops and online.

(a) The travel agency currently uses biometrics to secure its computer systems.

Give **two** other ways the travel agency can restrict user access.

(2)

1 ....

....

2 ....

....

(b) There has been a security breach of customers' data.

Explain **one** impact the security breach might have on the travel agency.

(2)

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....

(c) The travel agency has produced a form to allow customers to search for holidays.

Annotate the form to show **four** improvements that could be made to make it more user friendly and effective. An example has been provided.

(4)

Holiday Search Form

Region

Departure Date

Length of Stay

Number of Guests

Number of Rooms

make each text box an appropriate size for the input data.

S 6 3 2 9 6 A 0 4 1 2

(d) The travel agency has an Acceptable Use Policy.

Explain **two** purposes of this policy.

(4)

1 ....

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2 ....

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Total for Question 2 = 12 marks

3 Piccalilli Shoes sells shoes through its nationwide shops and telephone orders.

(a) The company records transactional data from all sales.

Explain **one** way that Piccalilli Shoes could use this data

(2)

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(b) Staff from different shops work together to produce reports about the company's sales.

Explain **two** collaboration tools that can be used to help staff work together on these reports.

(4)

1 ....

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2 ....

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Piccalilli Shoes has created a website to allow customers to buy online.

(c) One reason for the company to have a website is to increase sales.

Explain **two other** reasons why Piccalilli Shoes has a website.

(4)

1 ....

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2 ....

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(d) **Figure 1** shows part of the process of purchasing shoes through the company's website:

> - The customer order is submitted.
>
> - The customer card payment details are checked with the credit card company.
>
> - The payment is either approved or rejected.
>
> - A confirmation of the order is sent to the customer with a delivery date or a notification that the card payment has not been accepted.

Figure 1

Draw a top level (Level 0) Data Flow Diagram showing the process Piccalilli Shoes uses for online orders.

(6)

Total for Question 3 = 16 marks

4 An online company designs and sells gadgets.

(a) The company uses cookies to gather information about visitors who use the website.

Describe **one** way the company could use cookies to help promote its gadgets.

(2)

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....

(b) The company needs to ensure access to all its offices is secure.

It uses a fingerprint system to allow access.

Describe how a fingerprint system improves security.

(3)

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(c) The company wants staff to use digital systems responsibly.

Discuss how staff can use digital systems responsibly to help protect the environment.

(6)

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(d) The company wants some staff to work remotely.

Assess the impact of remote working on the company and its staff.

You must provide a conclusion as to whether or not you think remote working is a good idea.

(9)

Total for Question 4 = 20 marks

TOTAL FOR PAPER = 60 MARKS

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S 6 3 2 9 6 A 0 1 2 1 2

Mark Scheme

AddSAM

Pearson BTEC Level 1/Level 2 Firsts Award in Digital Information Technology

Component 3 (21193L)

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Component 3: Effective Digital Working Practices - Sample mark scheme

General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgment is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Question Number	Answer	Additional Guidance	Mark
1(a)	Any **two** from the following: ● An open Wi-Fi network ● Tether her laptop to her phone/use her mobile data/use her personal hotspot ● Mobile/Personal/Portable Wi-Fi device Accept any other appropriate response		**2**

Question Number	Answer	Additional Guidance	Mark
1(b)	Any **two** from the following: ● Automatic backup in place (1) ● Synchronisation across devices (1) ● Cloud service providers provide extra layers of security (protocols) (1) ● Clare can invite people to view the folders/files (1) Accept any other appropriate response		**2**

Question Number	Answer	Additional Guidance	Mark
1(c)	Any **two** from: ● Worms (1) ● Trojan (1) ● Botnet (1) ● Ransomware (1) ● Rootkit (1) ● Spyware (1) Accept any other appropriate response		**2**

Question Number	Answer	Additional Guidance	Mark
1(d)	A description to contain **two** from: ● Clare received an email which asked for personal details ● Clare clicked on a link in an email she received ● Then she provided her personal information. Accept any other appropriate response	Accept any other form of phishing e.g. social media posts, telephone and text message.	**2**

Question Number	Answer	Additional Guidance	Mark
1(e)	An explanation such as: ● Clare could have shared portable storage devices with colleagues/other people (1) that hadn't been checked using up to date anti-virus software (1) ● Clare used an unencrypted Wi-Fi network (1) which allowed a hacker to install a virus on her laptop (1) ● Clare downloaded files from the internet (1) where she used sources from a site that was not genuine/a trusted organisation that contained a viruses (1) ● Clare could have downloaded an email attachment (1) which ran a malicious program (1). Accept any other appropriate response	● Award one mark for an identification and one mark for a linked justification Identification and justification may be reversed. Do not accept just hacking on its own	**4**

Total for Task 1 = 12 marks

Question Number	Answer	Additional Guidance	Mark
2(a)	Any **two** from: ● Password protect systems / Username(s) and passwords ● Use two factor authentication ● Set levels of permitted access ● Physical security (locks) Accept any other appropriate response		**2**

Question Number	Answer	Additional Guidance	Mark
2(b)	Any **one** explanation such as: ● Loss of data (1) as unauthorised people can delete it (1) ● Damage public image (1) as if customers and the public find out they won't book holidays/ financial loss (1) ● Legal action (1) as people whose data has been lost/stolen will sue and this will cost the company (1) ● Lose customers (1) because people will not be willing to give personal data in future / will lose trust in company (1) Accept any other appropriate response	● Award one mark for an impact and one mark for a linked justification Impact and justification may be reversed.	**2**

Question Number	Answer	Additional Guidance	Mark
2(c)	Any **four** from: • Larger font for the title • Calendar for the date • Length of stay/Number of guests/Number of rooms to include a dropdown/spinner • Help/Instructions • Search option • Navigation • Accessibility Options/Features Accept any other appropriate response	Accept alternative / appropriate wording	**4**

Question Number	Answer	Additional Guidance	Mark
2(d)	Any **two** explanations such as: ● So staff know what items are covered (hardware, documents) (1) and how they should be treated. (1) ● So staff are aware of how they should behave (1) and what they shouldn't do when dealing with other staff and customers. (1) ● So all staff can sign to say they will agree to all conditions set in the policy (1) and are aware of any sanctions that may be put in place if the agreement is breached (1) ● So the company will be able to monitor their staff (1) and if there are issues they can be reprimanded/dealt with. (1) Accept any other appropriate response	● Award one mark for a purpose and one mark for a linked explanation of that purpose ● Purpose and justification may be reversed. ● Each purpose can only be awarded a maximum of two marks	**4**

Total for Task 2 = 12 marks

Question Number	Answer	Additional Guidance	Mark
3(a)	Any **one** explanation such as: • Used for personalised marketing (1) which is based on existing customers purchase history (1) • Can be used for stock control (1) so they can order items accordingly (based on previous sales/ seasonal trends) (1) Accept any other appropriate response	• Award one mark for an identification and one mark for a linked justification Identification and justification may be reversed.	**2**

Question Number	Answer	Additional Guidance	Mark
3(b)	Any one explanation such as: • Shared documents (1) where all users can highlight sections/make comments (1) • Live chat (1) where users login and discuss changes in real time (1) • Scheduling (1) where the authors of a document can allocate resources and work to deadlines (1) Accept any other appropriate response	• Award one mark for a collaboration tool and one mark for a linked justification Identification and justification may be reversed.	**4**

Question Number	Answer	Additional Guidance	Mark
3(c)	Award **one** mark for each identified reason (to a maximum of two marks) and for correctly identifying an advantage (1) • Convenience for customers/available all the time (1) rather than them having to travel to a shop (they might not live in the area), park etc (1) • Higher profit margin for sales (1) as sales made online will have less overheads (1) • Competitors will have one (1) so potential customers will go to them instead (1) Accept any other appropriate response	● Award one mark for an identification and one mark for a linked justification Identification and justification may be reversed.	**4**

Question Number	Answer	Additional Guidance	Mark
3(d)		**Notation** Appropriate symbols with correct entities (customer, credit card company) and the process (shop) **Connections** Direction of flow and labels	**6**

Mark Scheme (award up to 6 marks) refer to the guidance on the cover of this document for how to apply level-based mark schemes*.		
Level	**Mark**	**Descriptor**
Level 0	0	No rewardable content
Level 1	1-2	- limited use of appropriate notation - limited use of appropriate connections and direction of data/ information flow - limited coverage of scenario requirements
Level 2	3-4	- some use of appropriate notation - some use of appropriate connections and direction of data/ information flow - some coverage of scenario requirements
Level 3	5-6	- mostly accurate use of appropriate notation - mostly accurate use of appropriate connections and direction of data/ information flow - mostly accurate coverage of scenario requirements

Total for Task 3 = 16 marks

Question Number	Answer	Additional Guidance	Mark
4(a)	A description to contain **two** from: ● Use recent browsing/search history ● Identify user preferences / key words ● Compare user preferences to their own gadgets/database ● Show advertisements of similar/related gadgets Accept any other appropriate response		**2**

Question Number	Answer	Additional Guidance	Mark
4(b)	A description to contain **three** from: • Fingerprints are unique • Hard to forge • Needs the person to be present • Can't be forgotten/guessed like passwords • No updates required unlike passwords Accept any other appropriate response		**3**

Question Number	Indicative content	Additional Guidance	Mark
4(c)	Discussion of how using digital systems responsibly can help the environment. Discussion may include: Store and communicate digitally to save on the use of paper that saves forest resources – fewer documents will need to be printed especially when working on documents to check – comments can be added and viewed on screen Ensure computers are set up to use the highest power saving features – power settings set to maximise battery life and the use of screen brightness If computers are not in use but are 'on' they give off a lot of heat and can lead to the use of air conditioning – if power saving features are used this reduces heat and the need for a/c units to be on constantly Recycle old computers – ensure hard drives are 'cleaned' and pass on to schools in other countries where they don't have the same resources available Dispose of equipment safely – recycle, resell or donate (ensure system is cleaned first) or use a legal disposal company (protects landfill) When upgrading computers/laptops ensure power friendly replacements are purchased		**6**

Level	Mark	
	0	No rewardable material
1	1-2	• Demonstrates isolated elements of knowledge and understanding, with major gaps or omissions • Few of the points made will be relevant to the context in the question • Limited discussion which contains generic assertions rather than considering different aspects and the relationship between them
2	3-4	• Demonstrates some accurate knowledge and understanding, with only minor gaps or omissions

		• Some of the points made will be relevant to the context in the question, but the link will not always be clear • Displays a partially developed discussion which considers some different aspects and some consideration of how they interrelate, but not always in a sustained way
3	5-6	• Demonstrates mostly accurate and detailed knowledge and understanding • Most of the points made will be relevant to the context in the question, and there will be clear links • Displays a well-developed and logical discussion which clearly considers a range of different aspects and considers how they interrelate, in a sustained way

Question Number	Indicative content	Additional Guidance	Mark
4(d)	An assessment of the impact of remote working for the organisation and staff Assessment may consider: **Positives - Organisation** • Lower overheads – less office space required • Better productivity – staff work better away from a stressful office environment • No need to employ local staff – staff from anywhere can work remotely • Need fewer management staff – saving on higher salaries • Sickness days are less likely as staff can continue to work from home even if they are unable to get into the office **Negatives – Organisation** • Costly to set up – may need to purchase devices for staff, install broadband/Wi-Fi in staff homes • May have security issues – organisation deals with personal information which has legal implications • Staff may leave – staff do not like working alone, find it isolating, prefer company • Difficult to manage staff – hard to make sure that staff are working efficiently/staff may be too relaxed **Positives - Staff** • Saving on travelling costs – no longer any need to travel to work, better for the environment • Saving on travel time – no longer any need to spend long periods of time getting to and from work, shortens the working day • Saving on clothing costs – no need to have a work wardrobe, can wear what you like • Flexible working – can fit work around family life, better work life balance, more leisure time • Stress free working environment/ better job satisfaction – staff can work at their own pace • Take breaks when it suits – no need to have formal breaks for lunch etc.		**9**

Negatives - Staff
- Higher household bills – gas/electricity costs could go up as staff are at home more
- Lack of routine – no set time to start or finish, lack of motivation
- Lack of self-confidence – no one there to have face to face feedback on performance
- No work social life – separation from colleagues can lead to loneliness, feeling 'out of the loop'
- Distractions – can get easily distracted by family members, trouble concentrating on work
- May have an issue with work/life balance as the work is always there and they might not switch off

Conclusion

This should include a summary of the impacts of remote working for the organisation and staff, with an overall opinion on whether this would be a good or bad move.

Level	Mark	
	0	No rewardable material
1	1-3	• Demonstrates isolated knowledge and understanding, there be major gaps or omissions • Few of the points made will be relevant to the context in the question • Limited assessment which contains generic assertions rather than considering the factors or events and their relative importance, leading to a conclusion which is superficial or unsupported
2	4-6	• Demonstrates some accurate knowledge and understanding, with few minor omissions/any gaps or omissions are minor • Some of the points made will be relevant to the context in the question, but the link will not always be clear • Displays a partially developed assessment which considers some of the factors or events and their relative importance leading to a partially supported conclusion.
3	7-9	• Demonstrates mostly accurate and thorough/detailed knowledge and understanding • Most of the points made will be relevant to the context in the question, and there will be clear links • Displays a well-developed and logical assessment which clearly considers the factors or events and their relative importance, leading to a supported conclusion.

Total for Task 4 = 20 marks