

# Pearson BTEC Level 1/Level 2 Tech Award in Digital Information Technology

First teaching September 2018

Sample Assessment Materials: Component 3: Effective Digital Working Practices Version 2.0

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The Department for Education (DfE) is currently considering this qualification for inclusion in performance tables in England.

These draft sample assessment materials show our proposed approach to the external assessments. During the DfE approval process, we may be asked to make changes to any aspect of the qualification including content, assessments or first teaching and assessment dates.

When the DfE gives final approval for inclusion in performance tables in England, we will:

- confirm first teaching date
- confirm the first external assessment date
- issue the final version of the sample assessment materials.

References to third-party material made in this specification are made in good faith. We do not endorse, approve or accept responsibility for the content of materials, which may be subject to change, or any opinions expressed therein. (Material may include textbooks, journals, magazines and other publications and websites.)

### Write your name here

Surname					Other names						
Centre	Numbe	r				Learnei	r Regist	ration N	lumber		

Pearson BTEC Level 1 / Level 2 Award

## Digital Information Technology

Component 3: Effective Digital Working Practices

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

Sample assessment material for first teaching September 2018

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. Level

1/2

**Total Marks** 

60

Assessment time

1 hour

30 mins

Paper Reference (s) XXXX/XX PXXXXXA

### Answer ALL questions. Write your answers in the space provided.

(c) Explain one accessibility feature that the improved website could use for a specific customer need.	С
	(2)
The park has recently lost data due to an employee accidentally deleting customer rec	cords
(d) Explain <b>one</b> way that the deletion of records could have been prevented.	
	(2)

Andrea has now decided to back up her data using cloud storage. She will be using a service provider to store her data.

(e) Explain **two** benefits to the park of using a service provider.

1	(4)
2	

Total for Task 1 = 12 marks

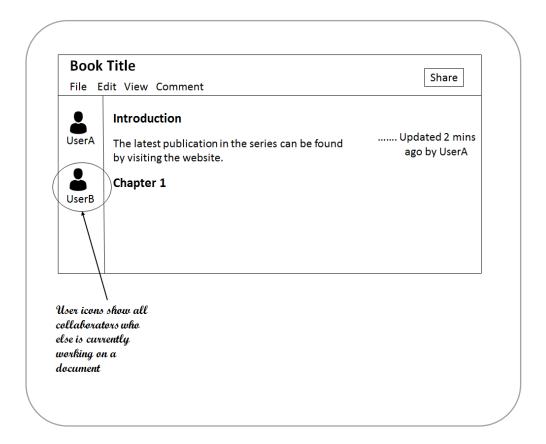
### Task 2:

PublishShare works with writers from all over the world. They use cloud computing technologies for employees and writers to collaborate.

(c) Annotate the diagram to explain how **two** different features of this cloud computing system can be used to aid collaboration.

Your annotation should include the identification of each feature and an explanation to show how the feature can be used to aid collaboration. An example has been provided

(4)



The use of collaborative technologies will allow PublishShare's employees to work from

home.

### Task 3:

Chocawoca is a confectionary manufacturer that makes high quality sweets and chocolates that they sell in their shops and online.

Chocawoca's recipes are protected by intellectual property rights.

(a) Explain how <b>one</b> method of intellectual property rights protection will help Chocawoca protect its recipes.	
	(2)
Chocawoca's recipes are kept on secure servers in their secret recipe rooms and only certain staff have access to these recipes. They are concerned about the internal threats to this vital data.	
(b) Explain <b>two</b> possible internal threats to Chocawoca's recipes.	
	(4)
1	
2	

At present, staff who work at Chocawoca use a card entry system to gain access to their secret recipe rooms, cards are swiped at the entrance. They are considering changing this to use a biometric system as they think this will improve security.

(c) Explain two benefits of biometric systems to Chocawoca.

(4)

(d) Chocawoca want to find the average number of chocolate bars eaten per week by children in different parts of the country.

Figure 1 shows a completed data collection form that they used for their online survey.

### Chocawoca Limited

Help us find the nation's favourite chocolate bar by answering a few questions.

Name	Fred	l Wilson		Date		15-06-201	18	
Address	19 P	ine Close		•				
Post Code	PS39 4AB m			Data	Date of birth:			
Gender (m/f)				Date	Date of birth:			
Weight (Kg)	420			D		M	Υ	
Height (cm)	150			22		11	1985	
		e bars did you eat l			4			
lick the box, if	you e	at this type of cho	colate	e bar.				
Fruity Bar		Coconut Bar	✓					
Nutty Bar	✓	Cookie Bar						
Plain Bar	✓	Toffee Bar						

Figure 1

Chocawoca is concerned that this form breaches data protection principles.					
Discuss the changes they could make to the form to comply with data protection principles.					
(6)					
Total for Task 3 = 16 marks					

### Task 4:

TechnoWhizz is a technology development company based in London that makes a range of digital systems, devices and apps.

They are considering using ethical hackers to help protect their systems, devices and apps.

Hackers are categorised using a range of hat colours.

(a) Explain <b>one</b> benefit of using a white hat hacker.	
(2	)
	•

for their devices. (b) Describe how 'Net neutrality' will help TechnoWhizz compete with more established video streaming services. (3) TechnoWhizz also have offices in New York, Hong Kong and Sydney. Their latest project is developing a new smartphone and designers from all offices will be involved. (c) Discuss how modern technologies can be used to help the company manage this project. (6)

TechnoWhizz wants to introduce a video streaming service to provide content

roject 3	
Conclusion	

Total for Task 4 = 20 marks

**Total for Assessment = 60 marks** 

### 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	Answer	Additional Guidance	Mark
Number			
1(a)	Any two from the following:		
	<ul> <li>Personal information can be stolen (1)</li> <li>Customers identification can be used for other purposes (1)</li> <li>Payment details can be replicated (1)</li> </ul>		
	Accept any other appropriate response		2

Question	Answer	Additional Guidance	Mark
Number			
1(b)	<ul> <li>An explanation such as:</li> <li>Add HTTPS to the website (1) so that data is encrypted when processing payments/ personal information (1)</li> <li>Add two factor authentication to the website (1) so that personal information/ payment details are always confirmed by the customer (1)</li> </ul>	<ul> <li>Award one mark for a feature and one mark for a linked justification of that feature</li> </ul>	
	Accept any other appropriate response	feature and explanation may be reversed	2

Question Number	Answer	Additional Guidance	Mark
1(c)	<ul> <li>An explanation such as:</li> <li>Change font/text size (1) so that visually impaired customers can read the screen (1)</li> <li>Change the size of the buttons/widgets (1) so that customers with a disability can access the website</li> </ul>	<ul> <li>Award one mark for a feature and one mark for a linked justification of that feature</li> </ul>	
	Accept any other appropriate response	feature and explanation may be reversed	2

Question Number	Answer	Additional Guidance	Mark
1(d)	<ul> <li>A explanation of a way such as:</li> <li>Setting levels of permissions/access (1) so that employees cannot delete data (1)</li> <li>Onscreen warning prompt to employees when they are deleting data (1) requiring employees to confirm deletion of records(1)</li> <li>Provide staff training on responsible use of IT systems (1) so that they fully understand the impact of deleting records(1)</li> <li>Accept any other appropriate response</li> </ul>	Award one mark for a way and one mark for a linked explanation of that way way and explanation may be reversed	2

Question	Answer	Additional Guidance	Mark
Number			
1(e)	<ul> <li>An explanation such as:</li> <li>No need to hold an internal disaster recovery policy (1), because the service provider would have their own policy (1).</li> </ul>	<ul> <li>Award one mark for a benefit and one mark for a linked explanation of that benefit</li> </ul>	
	The data will be backed up at a different location (1) which protects it if local systems are damaged (fire, flood etc) (1)  Assess to data 24/7 (1) so that backups can be made (restore at any).	Benefit and explanation may be	
	<ul> <li>Access to data 24/7 (1) so that backups can be made/restore at any time (1)</li> <li>No need for maintenance (1) so there is no need to employ IT staff (1)</li> </ul>	reversed.  Do not accept just benefits of	
	<ul> <li>Support available (1) so that technical issues can be resolved quickly</li> <li>(1)</li> </ul>	cloud	
	Accept any other appropriate response		4

Total for Task 1 = 12 marks

Question	Answer	Additional Guidance	Mark
Number			
2(a)	Any <b>one</b> explanation such as:	Award one mark for an	
	<ul> <li>Use cookies(1) to collect customers data/web browsing history (1)</li> </ul>	identification and one mark for a linked	
	<ul> <li>Allow customers to create user accounts(1) to gather personal information(1)</li> </ul>	justification	
	Accept any other appropriate response	identification and justifcation may be reversed.	2

Question	Answer	Additional Guidance	Mark
Number			
2(b)	<ul> <li>Any one explanation such as:</li> <li>The company would need to seek / express consent from its customers (1) because it is sharing personal data / making a change to its terms and conditions (1)</li> <li>Alert the customer that there has been a change in the way their data will be used (1) and</li> </ul>	Award one mark for an identification and one mark for a linked justification  identification and justification	
	ask them to give consent to share their information (1)  Accept any other appropriate response	may be reversed.	2

Question	Answer	Additional	Mark
Number		Guidance	
2(c)	Book Title  File Edit View Comment  Journal of the people to access the document via a hyperlink less thou change history/allows changes to be tracked (1)  Example provided- User icons: show all collaborators who else is currently working on a document  Any two from:  Share button allows of the people to access the document via a hyperlink (1)  Comment menu (1): item allows editors to add annotation to the document (for other people to see) (1)  Update times (1): show change history/allows changes to be tracked (1)	Descriptions should be clearly linked to the identified feature/tool  Accept alternative / appropriate wording  One mark should be awarded for the description of a feature and one mark for identifying the feature	4

Question	Answer	Additional Guidance	Mark
Number			
2(d)	<ul> <li>Any two explanations such as:</li> <li>Reduced need for office space (1) would mean that costs are reduced (1)</li> <li>Improved employee morale (1) which would result in higher productivity(1)</li> <li>Increased recruitment pool (1) as there is a wider geographical area that Publishare can select employees from(1)</li> </ul>	Award one mark for a benefit and one mark for a linked explanation of that benefit  Benefit and justification may be reversed.	
	Accept any other appropriate response		4

Total for Task 2 = 12 marks

Question	Answer	Additional Guidance	Mark
Number			
3(a)	<ul> <li>Any one explanation such as:</li> <li>Patents (1) would give Chocawoca exclusive rights to the recipes for a period of time (1)</li> <li>Trademarks (1) would allow Chocawoca to license their recipes to other manufacturers (1)</li> <li>Copyright (1) protects recipes from being used without permission (1)</li> </ul>	Award one mark for an identification and one mark for a linked justification identification and justification may be reversed.	
	Accept any other appropriate response		2

Question	Answer	Additional Guidance	Mark
Number			
3(b)	<ul> <li>Any one explanation such as:</li> <li>Unintentional disclosure of data (1), would involve staff passing on confidential information without meaning to(1)</li> <li>Visiting untrustworthy websites (1), could result in files with viruses or malware being installed onto computers (1)</li> <li>Use of portable devices (1), could lead to confidential information being mislaid/ being stolen (1)</li> <li>Accept any other appropriate response</li> </ul>	Award one mark for an identification and one mark for a linked justification identification and justification may be reversed.	4

Question	Answer	Additional Guidance	Mark
Number			
3(c)	Award one mark for each identified biometric method (to a maximum of two marks) and for correctly identifying an advantage (1)  Retinal scanning (1), there is no known way to replicate a retina(1)  Iris recognition (1), verification time is quick (1)  Hand geometry (1), the amount of data required to uniquely identify a user in a system is the smallest (1)  Accept any other appropriate response	Award one mark for an identification and one mark for a linked justification identification and benefit may be reversed.	4

Question Number	Answer	Additional Guidance	Mark
3(d)	Discussion of how the form does not conform with data protection and how it could be improved.		
	Discussion may consider:		
	<ul> <li>The form has errors in dates and numerical values and could therefore benefit from having validation added to these fields.</li> <li>This form could include a date range check to compare the date of birth with the date of the survey to ensure that the child's age is valid.</li> <li>It is important that data is accurate in order to meet the data protection requirements.</li> <li>The form also includes data such as height and weight. This is not necessary and does not comply with data protection rules as irrelevant data is being stored.</li> </ul>		
			6

Level	Mark			
	0	No rewardable material		
1	1-2	<ul> <li>Demonstrates isolated elements of knowledge and understanding, with major gaps or omissions</li> <li>Few of the points made will be relevant to the context in the question</li> <li>Limited discussion which contains generic assertions rather than considering different changes and the relationship between them</li> </ul>		
2	3-4	<ul> <li>Demonstrates some accurate knowledge and understanding, with only minor gaps or omissions</li> <li>Some of the points made will be relevant to the context in the question, but the link will not always be clear</li> <li>Displays a partially developed discussion which considers some different changes and some consideration of how they interrelate with content from across the specification, but not always in a sustained way</li> </ul>		
3	5-6	<ul> <li>Demonstrates mostly accurate and detailed knowledge and understanding</li> <li>Most of the points made will be relevant to the context in the question, and there will be clear links</li> <li>Displays a well-developed and logical discussion which clearly considers a range of different changes and considers how they interrelate with content from across the specification, in a sustained way</li> </ul>		

Total for Task 3 = 16 marks

Question	Answer	Additional Guidance	Mark
Number			
4(a)	<ul> <li>Any one benefit such as:</li> <li>The white hat hacker will stay within the law whilst hacking systems (1) which will ensure the company is acting lawfully (1)</li> <li>The white hat hacker will not violate ethical or moral boundaries (1) which will not result in the reputation of the company being damaged (1)</li> <li>TechnoWhizz will be able to oversee the white hat hackers activities (1) giving them greater control over which systems are being tested (1)</li> <li>Accept any other appropriate response</li> </ul>	Award one mark for a benefit and one mark for a linked explanation of that benefit  justification and benefit may be reversed.	
	Accept any other appropriate response		2

Question	Answer	Additional Guidance	Mark
Number			
4(b)	<ul> <li>An description to contain three from:</li> <li>Net neutrality is the premise that everybody/all services are equal</li> <li>Stops content providers paying for greater bandwidth.</li> <li>Stops one company gaining an unfair competitive advantage over others.</li> <li>Users get a fair representation of service offered by all content providers.</li> <li>TechnoWhizz will be judged based on the quality of their content rather than the speed that it is delivered by the ISP.</li> </ul>	The description should be worded from the point of view of TechnoWhizz. It is not yet the case that consumers would pay their ISP directly. This may change in the future.	3

Question	Indicative content	Additional	Mark
Niconala		Guidance	
Number			
4(c)	Discussion of how the project leader could use digital systems to manage the project team to meet the		
	deadline.		
	Discussion may consider:		
	Collaboration		
	Use of online systems to store files		
	<ul> <li>Use of online development tools to enable simultaneous working</li> </ul>		
	<ul> <li>Central storage – allows time zones to work after the other has finished</li> </ul>		
	<ul> <li>Online testing documentation – allows immediate action</li> </ul>		
	<ul> <li>Use of online software to enable collaboration on documents – google docs</li> </ul>		
	Communication		
	<ul> <li>Range of communication methods – email, skype, instant messaging</li> </ul>		
	Easy mass communication between whole team		
	Global communications		
	<ul> <li>Communicate via a range of formats and media – screen capture of errors etc can facilitate fixing</li> </ul>		
	<ul> <li>Online meetings – staff won't have to travel – cost and time implications</li> </ul>		
	Scheduling/Planning		
	Use of centrally stored planning to track and monitor progress		
	<ul> <li>Can set up electronic project planning that allows all staff to input (and can be taken over at different times)</li> </ul>		
	• Timelines/deadlines can be automatically synched to calendars so all developers are aware of changes		
	Digital systems automatically allow for variations in time zones avoiding misunderstandings		
	Sharing of work across teams in different time zones allows for more work to be completed in a short		6
	time where deadlines have to be met.		

Level	Mark	
	0	No rewardable material
1	1-2	<ul> <li>Demonstrates isolated elements of knowledge and understanding, with major gaps or omissions</li> <li>Few of the points made will be relevant to the context in the question</li> <li>Limited discussion which contains generic assertions rather than considering different aspects and the relationship between them</li> </ul>
2	3-4	<ul> <li>Demonstrates some accurate knowledge and understanding, with only minor gaps or omissions</li> <li>Some of the points made will be relevant to the context in the question, but the link will not always be clear</li> <li>Displays a partially developed discussion which considers some different aspects and some consideration of how they interrelate, but not always in a sustained way</li> </ul>
3	5-6	<ul> <li>Demonstrates mostly accurate and detailed knowledge and understanding</li> <li>Most of the points made will be relevant to the context in the question, and there will be clear links</li> <li>Displays a well-developed and logical discussion which clearly considers a range of different aspects and considers how they interrelate, in a sustained way</li> </ul>

Question	Indicative content	Additional	Mark
Number		Guidance	
Number			
4(d)	An evaluation of the different projects and their risks.		
	Discussion may consider:		
	Risks		
	Project One     Loss of control of data     New devices may be portable and could be lost/stolen     New devices may not be compatible with existing systems Project Two     Potential loss of data if servers are powered off     May not work if employees are working outside normal office hours Project Three     Security of documents may be compromised if shared without encryption     Memory sticks can be lost		
	Positive Impact		
	Project One  Data is available anywhere through the cloud  Potential for remote working Project Two  Data will be backed up at a different location, minimising risk of data loss  Reduction in costs of electricity  Reduce environmental impact Project Three		
	<ul> <li>Reduce need for physical storage</li> <li>Reduction in printing requirements</li> <li>Quicker to share documents</li> </ul>		9

- Reduce environmental impact
- Transmission is safer and documents are encrypted.

### **Evaluation**

e.g. Project three will not only have a positive impact to Technowhizz but the environment. It will change the way that employees work as well as reduce the need for resources and storage. Documents can be shared quickly between employees and security of documents and intellectual property will be increased.

Level	Mark			
	0	No rewardable material		
1	1-3	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 evaluation which contains generic assertions leading to a conclusion that is superficial or unsupported		
2	4-6	Demonstrates some accurate knowledge and understanding, with few minor 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 evaluation that considers some different competing points, although not always in detail, leading to a conclusion which is partially supported		
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 evaluation that clearly considers different aspects and competing points in detail, leading to a conclusion that is fully supported		

Total for Task 4 = 20 marks