



Oxford Cambridge and RSA

# **Cambridge Technicals IT**

## **Unit 2C: Essentials of cyber security**

Level 2 Cambridge Technical in IT

**05883 - 05884**

## **Mark Scheme for June 2023**

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This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

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**PREPARATION FOR MARKING****TRADITIONAL**

Before the Standardisation meeting you must mark at least 10 scripts from several centres. For this preliminary marking you should use **pencil** and follow the **mark scheme**. Bring these **marked scripts** to the meeting.

**MARKING**

1. Mark strictly to the mark scheme.
2. Marks awarded must relate directly to the marking criteria.
3. The schedule of dates is very important. It is essential that you meet the traditional 40% Batch 1 and 100% Batch 2 deadlines. If you experience problems, you must contact your Team Leader (Supervisor) without delay.
4. If you are in any doubt about applying the mark scheme, consult your Team Leader by telephone or by email.
5. Work crossed out:
  - a. where a candidate crosses out an answer and provides an alternative response, the crossed out response is not marked and gains no marks
  - b. if a candidate crosses out an answer to a whole question and makes no second attempt, and if the inclusion of the answer does not cause a rubric infringement, the assessor should attempt to mark the crossed out answer and award marks appropriately.
6. Always check the pages (and additional lined pages if present) at the end of the response in case any answers have been continued there. If the candidate has continued an answer there then add an annotation to confirm that the work has been seen.
7. There is a NR (No Response) option. Award NR (No Response)
  - if there is nothing written at all in the answer space
  - OR if there is a comment which does not in anyway relate to the question (e.g. 'can't do', 'don't know')
  - OR if there is a mark (e.g. a dash, a question mark) which isn't an attempt at the questionNote: Award 0 marks - for an attempt that earns no credit (including copying out the question)
8. Assistant Examiners will email a brief report on the performance of candidates to your Team Leader (Supervisor) by the end of the marking period. Your report should contain notes on particular strength displayed as well as common errors or weaknesses. Constructive criticism of the question paper/mark scheme is also appreciated.

Question		Answer	Marks	Guidance
1	(a)	<ul style="list-style-type: none"> <li>• Networks (1)</li> <li>• Computers (1)</li> <li>• Programs (1)</li> <li>• Information (1)</li> </ul>	2 LO1.1	Two from list  Do not accept data as this is given in the question  These are taken from the unit specification
	(b)	<ul style="list-style-type: none"> <li>• Hacker (1)</li> <li>• Cyber Criminal (1)</li> </ul>	1 LO1.5.1.c	
1	(c)	<ul style="list-style-type: none"> <li>• Individuals (1)</li> <li>• Data (1)</li> <li>• Information (1)</li> <li>• Equipment (1)</li> </ul>	2 LO1.3	Two from list.  DNA <b>organisations</b> as this is given in the question
2	(a)	<ul style="list-style-type: none"> <li>• Only the people with the correct (1) user name/password (1) will be able to access the laptop (1)</li> <li>• If the incorrect (1) user name / password is entered (1) access will be denied (1)</li> <li>• Any other valid suggestion</li> </ul>	3 LO3.1.8	Up to 3 marks for an explanation of how user name / password will increase the security of the laptops
	(b)	<ul style="list-style-type: none"> <li>• Access rights / permissions (1<sup>st</sup>)</li> <li>• People can <u>only</u> access files (1) where permission has been granted (1)</li> <li>• Editing rights (1) are based on the permissions set (1)</li> <li>• Any other valid suggestion</li> </ul>	3 LO3.1.1	1st mark for measure, up to 2 for description

Question		Answer	Marks	Guidance
	(c)	<ul style="list-style-type: none"> <li>The locks disable (1) the USB ports (on the laptop) (1) meaning no external storage media can be used (1)</li> <li>Physical protection (1) prevent the laptop being stolen (1) by attaching it to a desk (1)</li> <li>Any other valid suggestion</li> </ul>	3 LO3.2.6b	Up to 3 marks for an explanation of how device locks can protect the data stored on the laptop.
	(d)	<ul style="list-style-type: none"> <li>Data modification (1)</li> <li>Data manipulation (1)</li> <li>Any other valid suggestion</li> </ul>	1 LO1.4	1 from list:
	(e)	<ul style="list-style-type: none"> <li>Computer Misuse Act / CMA (1)</li> </ul>	1 LO1.6	CAO The year is not required or ignore if incorrect DPA / GDPR is also a valid answer
	(f) (i)	<ul style="list-style-type: none"> <li>A program (1) that replicates itself (1) to spread to other computers (1)</li> <li>Type of malware (1)</li> <li>Any other valid suggestion</li> </ul>	3 LO2.1.2	Up to 3 marks for a description of a worm
	(f) (ii)	<ul style="list-style-type: none"> <li>Accidentally (1) by downloading files (1) from fraudulent / unauthorised websites (1)</li> <li>Accidentally (1) by clicking (1) an unsafe link in an email (1)</li> <li>Any other valid suggestion</li> </ul>	3 LO2.2.1	Up to 3 marks for an explanation of how the threat could have started

Question		Answer	Marks	Guidance
3	(a)	<ul style="list-style-type: none"> <li>Phisher (1<sup>st</sup>)</li> <li>A link (1) will be included in the email (1) which will take the user to a fake website (1)</li> <li>The email will ask that bank security details (1) are input (1) into a fake website. (1)</li> <li>Any other valid suggestion</li> </ul>	4 LO1.5	<p>1st mark for measure, up to 3 marks for a complete description</p> <p>The identification mark must be awarded before marks can be considered for the description.</p>
	(b)	<ul style="list-style-type: none"> <li>Financial gain (1)</li> <li>Fraud (1)</li> </ul>	2 LO1.5.2	CAO
	(c)	<ul style="list-style-type: none"> <li>Cyber criminals (1)</li> <li>Cyber terrorists (1)</li> <li>Hackers (1)</li> <li>Scammers (1)</li> </ul>	1 LO 1.5	<p>1 from list for 1 mark.</p> <p>DNA phisher</p> <p>Allow: Script Kiddie Insider Vulnerability Broker</p>
	(d)	<ul style="list-style-type: none"> <li>To protect (1) the shop's data (1)</li> <li>To stay safe (1) online (1)</li> <li>To protect personal / staff (1) records / data (1)</li> <li>Legal responsibility (1) to avoid prosecution (1)</li> <li>Any other valid suggestion</li> </ul>	2 LO1.2.2b	Up to 2 marks for a description of why cyber security is important
	(e)	<ul style="list-style-type: none"> <li>To identify (1) any weak areas (1) in the shop's cyber security (1)</li> <li>To provide details (1) of where cyber security (1) needs to be improved (1)</li> <li>Any other valid suggestion</li> </ul>	3 LO3.3.8	<p>Up to 3 marks for an explanation of why a risk assessment was carried out.</p> <p>Max 2 for example of an improvement they can make.</p>

Question		Answer	Marks	Guidance
	(f)	<ul style="list-style-type: none"> <li>• Blagging (1)</li> <li>• Pharming (1)</li> <li>• Phishing (1)</li> <li>• Hacking (1)</li> <li>• Scamming (1)</li> <li>• Any other valid suggestion</li> </ul>	2 LO2.1.5	2 from list for one mark each  DNA shouldering as this is given in the question.
	(g)	<p><b>Indicative content</b></p> <ul style="list-style-type: none"> <li>• Attackers may have got bank account details</li> <li>• Bank accounts may have been accessed</li> <li>• Money may have been taken from the bank accounts</li> <li>• Security details will have to be changed</li> <li>• Shop may struggle to get money refunded from bank</li> <li>• Any linked bank accounts may have been accessed</li> <li>• Bills may not be able to be paid</li> <li>• Shop's credit rating may decrease limiting access to loans / overdrafts</li> </ul>	9 (LO2.4)	<p>Levels of response marking approach</p> <p><b>7-9 marks</b> Learner has shown a detailed level of understanding by explaining more than one financial impact following a cyber-attack. Relevant and appropriate examples are provided. Specialist terms will be used correctly and appropriately.</p> <p><b>4-6 marks</b> Learner has shown a good level of understanding by describing at least one financial impact following a cyber-attack. Descriptions may be limited in depth in the expansion(s). Some relevant examples are provided although these may not always be appropriate. Specialist terms will be used appropriately and for the most part correctly.</p> <p><b>1-3 marks</b> Learner has identified points relevant to the financial impact following a cyber-attack. This may take the form of a bulleted list. Examples, if used, may lack relevance. There will be little, if any, use of specialist terms.</p> <p><b>0 marks</b> Nothing worthy of credit.</p>

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