



Mark Scheme (Results)

February 2023

Pearson BTEC Level 1 / Level 2 Firsts Award in
Digital Information Technology
Component 3 (21193L)

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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 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 a 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 about applying 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.
- Phonetic spelling should be accepted.

Question Number	Answer	Additional Guidance	Mark
1(a)	<p>Any two from the following:</p> <ul style="list-style-type: none"> • Social media (Facebook, Twitter, LinkedIn, YouTube, TikTok etc.) • Email • VOIP (Teams, Zoom, GoogleMeet, Skype, WhatsApp etc.) • Direct messaging (WhatsApp, Teams, Messenger etc.) 	<p>Accept any other appropriate response.</p> <p>Accept proprietary names.</p> <p>Accept only one example of each platform.</p> <p>Microsoft Teams can be accepted either VoIP or direct messaging but only once e.g. VoIP and Teams or direct messaging and Teams</p> <p>Do not accept 'video' on its own</p>	2

Question Number	Answer	Additional Guidance	Mark
1(b)	<p>Any two from the following:</p> <ul style="list-style-type: none"> • Available 24/7 • Used for advertising • Cheap/cost effective • Track visits/analytics • Global audience / wider reach • Client can provide feedback/reviews 	<p>Accept any other appropriate response.</p> <p>Responses must be benefits to the nursery and not the clients.</p> <p>Do not accept 'free', asking questions, or being able to update information.</p>	2

Question Number	Answer	Additional Guidance	Mark
1(c)	<p>Any two from the following:</p> <ul style="list-style-type: none"> • Donate • Sell • Recycle/reuse • Return them to the supplier/trade-in 	Accept any other appropriate response.	2

Question Number	Answer	Additional Guidance	Mark
1(d)	<p>Any two from the following:</p> <ul style="list-style-type: none"> • Unauthorised access (hacking) • DOS • Phishing • Pharming • Social engineering • Shoulder surfing • Man in the middle attack • Theft of device • Natural disaster 	<p>Accept any other appropriate response.</p> <p>Do not accept 'malware' – this was the example given in the question.</p>	2

Question Number	Answer	Additional Guidance	Mark
1(e)	<p>Any four from the following:</p> <ul style="list-style-type: none"> • Anti-virus runs in the background (1) • It automatically updates its database of threats (1) • It scans files/sources/emails (in real time) (1) • Then compares to known threats (stored in its database) (1) • Then quarantines/refuses to download/removes suspicious files/emails (1) • And informs the user (1) 	Accept any other appropriate response.	4

Question Number	Answer	Additional Guidance	Mark
2(a)	<p>Any two from the following:</p> <ul style="list-style-type: none"> • Savings on travel/transport cost • No travel time/don't need to travel • More flexible start/finish times/ work anytime • Can work around family/friends/social commitments • Saving on clothes for work • Can be a more relaxed working environment • No dress code • Can improve productivity/efficiency • Can improve morale/mental health • Can work globally/anywhere 	<p>Do not accept 'more comfortable'</p> <p>Remember this is about benefits to staff and not the company</p> <p>Accept any other appropriate response</p>	2

Question Number	Answer	Additional Guidance	Mark
2(b)	<p>Any one explanation from the following:</p> <ul style="list-style-type: none"> • Interruptions/distractions (1) as this can stop staff concentrating/make mistakes (1) • Stress/anxiety (1) because the company may expect staff to work outside their normal hours (1) • Isolation/loneliness (1) as there is a lack of face-to-face interaction with other staff/customers (1) • Poor work life balance (1) as staff have 24/7 access to work emails/cloud storage/video conferencing (1) • Need reliable/adequate internet connection (1) as constant connection is needed to complete work (1) • Rise in household bills (1) as they will be using more electricity/energy to run devices/increase internet usage/speed (1) 	<p>Award one mark for the drawback and one mark for a linked explanation of that drawback.</p> <p>Drawback and explanation may be reversed.</p> <p>Remember this is about drawbacks to staff and not the company</p> <p>Accept any other appropriate response</p>	2

Question Number	Answer	Additional Guidance	Mark
2(c)	<p>From: help@fraudsquad.bank.org ← 1</p> <p>To: Jane Doe</p> <p>Date: 29 June 2022</p> <p>Subject: Confirm your Details</p> <p>Dear Customer ← 2</p> <p>We are writing to u to let u know that there is a problem with your log in to you online bank account.</p> <p>To make sure that their correct, we just need you to confirm that the information we have for you is correct and up to date. ← 3, 4, 5, 6</p> <p>Please follow this link to confirm your details Update Details</p> <p>Cheers ← 7</p> <p>Customer Services</p> <p>Fraudsquad Bank</p> <p>Any four from the following:</p> <ol style="list-style-type: none"> 1. Email - Suspect email address for the bank 2. Dear Customer - Not addressed to a person 3. 'u' – Spelling/informal/text speak/slang (you) 4. 'you' – Grammar/spelling (your) 5. 'acccount' – Spelling (account) 6. 'their' – Grammar/spelling (they are or they're) 7. 'Cheers' - Informal 	<p>Learners must circle or point at the issue and state the reason for the mark.</p> <p>Do not award a mark if they have only identified by circling or pointing the reason but not actually stated the reason.</p> <p>Do not award for the link, this was the example given in the question.</p>	4

Question Number	Answer	Additional Guidance	Mark
2(d)	<p>Any two explanations such as:</p> <ul style="list-style-type: none"> • Private/secure (1) because messaging apps use (end-to-end) encryption (1) • Staff can see if other staff are online/away/busy/available (1) as they can set their status (1) • You can have a real conversation (1) as it is in real time (1) • Record/backup of messages (1) as threads are kept for future use (1) • You do not need to repeat information (1) as you can use group chat (1) • Share files (1) which would aid collaborative working (1) • Can receive notifications (1) so important information can be shared/responded to quickly (1) 	<p>Award one mark for the identification of the benefit and one mark for a linked explanation of that benefit.</p> <p>Benefit and explanation may be reversed.</p> <p>Accept any other appropriate response</p>	4

Question Number	Answer	Additional Guidance	Mark
3(a)	<p>Any one explanation such as:</p> <ul style="list-style-type: none"> • Not send indecent images/text/video (1) as could be illegal/cause offence (1) • Not send chain/spam emails (1) as could include malware (1) • Not send information that is personal/can identify a donor/client/company (1) as could breach GDPR (1) • Not share copyrighted charity material (1) as could be fined (1) • Not use inappropriate language (1) to maintain the charity's good reputation (1) • Not to use for personal use (1) as staff could get distracted/waste time (1) 	<p>Award one mark for the identification of the rule and one mark for a linked explanation of that rule.</p> <p>Rule and explanation may be reversed.</p> <p>Accept any other appropriate response</p>	2

Question Number	Answer	Additional Guidance	Mark
3(b)	<p>Any two explanations such as:</p> <ul style="list-style-type: none"> • Use auto-power off/turn off (1) (so that equipment is switched off) when not in use (for a set period of time) (1) • Use power saving settings (1) to extend battery life (of portable devices)/reduce electricity consumption (1) • Use digital copies (1) so that files do not need printing off/download software not buy a disc (1) 	<p>Award one mark for the policy and one mark for a linked explanation of that policy.</p> <p>Policy and explanation may be reversed.</p> <p>Accept examples of power saving settings for MP2 identification e.g.</p> <ul style="list-style-type: none"> • set screen saver • screen timer • sleep mode • lower the brightness of screens • turn Bluetooth off • switch off background applications <p>Accept any other appropriate response</p>	4

Question Number	Answer	Additional Guidance	Mark
3(c)	<p>Any two explanations such as:</p> <ul style="list-style-type: none"> • (Ensure staff meet the) GDPR/DPA/legal requirements (1) as they could be in breach/fined/sued (1) • The data could be intercepted/hacked (1) which could lead to the data could be leaked/stolen (1) • Personal data may need to be anonymised (1) so that the donor's privacy is maintained (1) • (Ensure data is) not misused/wrongly used (1) as the donor could be upset that their personal data is being shared/known to others (1) 	<p>Award one mark for the drawback and one mark for a linked explanation of that drawback.</p> <p>Drawback and explanation may be reversed.</p> <p>Do not accept 'loss of data'</p> <p>Accept any other appropriate response</p>	4

Question Number	Answer	Additional Guidance	Mark
<p>3(d)</p>	<pre> graph TD Start([Start]) --> Search[Search for Item] Search --> Select[Select Item] Select --> Cart[Item in Shopping Cart] Cart --> SearchMore{Search for more items?} SearchMore -- Yes --> Search SearchMore -- No --> Checkout[Go to checkout] Checkout --> PayItem{Pay for Item?} PayItem -- Yes --> Payment[Payment made] Payment --> Email[Email confirmation sent] Email --> End([End]) PayItem -- No --> Cancel[Cancel order] Cancel --> End </pre>	<p>2 decisions –</p> <ul style="list-style-type: none"> • Search for more items – Y/N • Pay for item – Y/N <p>7 processes –</p> <ul style="list-style-type: none"> • Search for item • Select item • Item in shopping cart • Go to checkout • Cancel order • Payment made • Email confirmation sent <p>You may not see all 7 of the processes however, the important ones that are a logical part of the flow should be included in the drawing.</p> <p>Lines should be annotated with Y/N following a decision and going in the right direction</p> <p>Drawing should have 'start' and 'end' but top of Level 3 asks for 'most'</p> <p>Do not accept boxes with the descriptions taken from the paper.</p>	<p>6</p>

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	<ul style="list-style-type: none"> Diagram provides partial coverage of appropriate notation with limited connections. Diagram partially meets the requirements of the scenario.
Level 2	3-4	<ul style="list-style-type: none"> Diagram provides some coverage of appropriate notation with some connections. Diagram meets some of the requirements of the scenario.
Level 3	5-6	<ul style="list-style-type: none"> Diagram provides most coverage of appropriate notation with most connections. Diagram meets most requirements of the scenario.

Question Number	Answer	Additional Guidance	Mark
4(a)	<p>Any one explanation such as:</p> <ul style="list-style-type: none"> Financial loss/lack of profit/income (1) as they would not be able to sell products (1) Damage to public image/loss of reputation (1) which means they would lose customers/customers would not trust them (1) Reduction in productivity (1) as without the designs they would not be able to make products (1) Legal action (1) as customer information is personal data that is covered by GDPR/could be fined (1) Downtime (1) as they would need to rebuild the data/reinstall a backup (1) 	<p>Award one mark for the impact and one mark for a linked explanation of that impact.</p> <p>Impact and explanation may be reversed.</p> <p>Do not accept 'data loss' this is the example given in the question</p> <p>Accept any other appropriate response</p>	2

Question Number	Answer	Additional Guidance	Mark
4(b)	<p>Any description to contain three from:</p> <ul style="list-style-type: none"> • By law all internet traffic is treated equally (1) • (ISPs) must not favour wealthier companies over those who cannot afford to pay higher fees (1) • Responsibility for this is with ISPs (1) • (ISPs) cannot block access to sites (1) • Or slow down speed/throttle (1) • Net neutrality is enforced by Ofcom (1) 	Accept any other appropriate response.	3

Question Number	Indicative content	Additional Guidance	Mark
4(c)	<p>A discussion of the user access restrictions the company could use.</p> <p>Discussion may include:</p> <ul style="list-style-type: none"> • Use physical security measures e.g. door locks, keypads, swipe cards, fobs, security guards - to prevent physical access to areas where the system is located. • Users have passwords – only authorised users can log on securely to the systems. • Settings/levels of access – set up users with the correct access rights so only certain tasks can be done users e.g. read, read/write, full control. • Biometrics entry systems – e.g. facial, retina, iris, fingerprint, palm, as these are unique to the user and can't be forged. • Using two-factor authentication - users have to prove their identity using something that they are, what they know or what they have – methods of receiving authentication e.g. email, text etc. 	Accept any other appropriate response.	6

Level	Mark	Descriptor
Level 0	0	No rewardable material
Level 1	1-2	<ul style="list-style-type: none"> • 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.
Level 2	3-4	<ul style="list-style-type: none"> • 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.
Level 3	5-6	<ul style="list-style-type: none"> • 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)	<p>Assess the factors when choosing cloud technologies.</p> <p>An assessment that may include some of the following:</p> <ul style="list-style-type: none"> • Disaster recovery – what disaster recovery policies and insurance does the provider offer, is there a backup policy, where is the data stored. • Security - what are the security policies of the provider, are they robust enough, e.g. encryption, firewalls, antivirus, two factor authentication. • Compatibility – can the technology be used with the existing system, operating system, will they need additional software. • Storage – how much storage will they have, is it enough, can they offer more storage. • Maintenance – who will be responsible for the maintenance of the cloud technology, is there extra cost to this. • Customer support - is there technical support 24/7, what are the options, e.g. phone, email, live chat. • Implementation – how will it be implemented, can they do it themselves or will they need a specialist to do it for them. • Downtime – will the existing system be in use while the implementation is being completed. • Performance – will they need better internet speeds, will all the users be able to access the system at any one time. • Training – will staff need training on the new system, will this be delivered in house or outside. • Costs – e.g. upfront costs, service provision costs, implementation training, upgrade, extra features included in the price. 	<p>Accept any other appropriate response.</p>	<p>9</p>

Level	Mark	Descriptor
Level 0	0	No rewardable material
Level 1	1-3	<ul style="list-style-type: none"> • 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.
Level 2	4-6	<ul style="list-style-type: none"> • 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.
Level 3	7-9	<ul style="list-style-type: none"> • 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.

