

**Cambridge Technicals  
IT**

**Unit 2: Global Information**

Level 3 Cambridge Technical in IT

**Mark Scheme for June 2019**

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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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Annotations - These are the annotations to be used when marking Unit 2:

<b>Annotation</b>	<b>Meaning</b>
NAQ	Not answered question
TV	Too vague
BOD	Benefit of doubt
NBOD	No benefit of doubt
✓	Correct / acceptable response
X	Incorrect response

### **Subject-specific marking instructions**

When marking the Level of response questions (3 & 7(c)) please identify the band (L, M or H) as well as the mark awarded.

Question			Answer	Marks	Guidance
1	(a)	(i)	<ul style="list-style-type: none"> <li>• Text (1)</li> <li>• String (1)</li> </ul>	1	<p><b>For 1 mark</b> Correct answer only (CAO)</p> <p>Do NOT accept number / numeric as contact numbers have a leading 0</p>
1	(a)	(ii)	<p><b>Possible explanations of why this information style has been used include:</b></p> <ul style="list-style-type: none"> <li>• Contact numbers begin with a 0 (1)</li> <li>• They may include spaces (1)</li> <li>• No calculations are performed on a telephone number (1)</li> <li>• The numerical type would remove the leading 0 (1)</li> <li>• Any other valid suggestion</li> </ul>	3	<b>Up to three marks for valid explanation.</b>
1	(b)		<ul style="list-style-type: none"> <li>• Charity (1)</li> </ul>	1	<b>CAO</b>

Question	Answer	Marks	Guidance
2	<p><b>Possible explanations of issues include:</b></p> <ul style="list-style-type: none"> <li>• Power may have been disrupted / power failure (1) so computer records (1) may not be accessible (1)</li> <li>• Storage devices / computer systems (1) containing information about the affected area (1) may have been destroyed (1)</li> <li>• <u>Buildings</u> (containing computer systems) (1) may have been damaged / destroyed (1) so the computer systems / storage devices may have been damaged/ destroyed (1)</li> <li>• Information stored on the Cloud (1) may be inaccessible (1) due to damage to infrastructure (1)</li> <li>• Damage to infrastructure / roads (1) may mean areas affected by the disaster (1) are inaccessible (1)</li> <li>• Any other valid suggestion</li> </ul>	6	<p><i>Up to three marks for each of two valid explanations.</i></p> <p><b>DNA answers referring to the digital divide.</b></p> <p><b>The focus of the question is the cause / effect of the disaster rather than the situation prior to the disaster.</b></p>

Question	Answer	Marks	Guidance
3*	<p><b>Indicative Content</b></p> <ul style="list-style-type: none"> <li>• Incorrect equipment and disaster aid supplies may have been taken by the teams</li> <li>• Incorrect details about number of people affected may mean that not enough supplies will have been taken to disaster area</li> <li>• The location of the disaster may have been reported incorrectly so teams may go to the incorrect area</li> <li>• Incorrect specialisms may have been included in the team</li> <li>• Extra teams / equipment / supplies may have to be sent to area, so relief may be delayed</li> <li>• Any other valid suggestion</li> </ul>	10	<p><b>Level 3 [7-10 marks]</b> The learner has explained <b>more than one</b> consequence. At the top of the mark band they will have considered both PHDA <b>AND</b> the people.</p> <p>Subject specific terminology and knowledge will be clearly used to support and inform the explanations.</p> <p><i>There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated.</i></p> <p><b>Level 2 [4-6 marks]</b> The learner has described <b>at least one</b> consequence to PHDA <b>OR</b> the people.</p> <p>At the bottom of the mark band, the learner may describe generic aspects of consequences.</p> <p><i>There is a line of reasoning presented with some structure. The information presented is for the most part relevant and supported by some evidence.</i></p> <p><b>Level 1 [1-3 marks]</b> The learner has identified generic points in relation to the consequences.</p> <p>Subject specific terminology may be limited or missing.</p> <p><i>The information is basic and communicated in an unstructured way. The information is supported by limited evidence and the relationship to the evidence may not be clear.</i></p> <p><b>0 marks = Nothing worthy of credit.</b></p>

Question	Answer	Marks	Guidance
4	<p><b>Possible type of software and justification include:</b></p> <ul style="list-style-type: none"> <li>• <b>Spreadsheet (1st)</b></li> <li>• Weight of cargo (1) can be calculated (1) to ensure transport is not overloaded (1)</li> <li>• Calculations can be made (1) using dimensions (1) and number of items required (1)</li> <li>• Number of seats (1) can be calculated (1) based on the number of charities / organisations (1)</li> <li>• Modelling can be carried out (1) example of modelling (1)</li> <li>• A template can be created (1) with saved formulas (1) that can be used over again (1)</li> <li>• Charts / graphs can be created (1) to enable clearer analysis (1) visually (1)</li> <li>• The spreadsheet can be emailed (1) to charity (s) to increase speed of team building (1)</li> <li>• Any other valid suggestion</li> </ul> <ul style="list-style-type: none"> <li>• <b>Database (1<sup>st</sup>)</b></li> <li>• Pre-saved (1) information on plane types / equipment (1)</li> <li>• Calculations (calculated fields) can be made (1) using dimensions (1) and amount of items required (1)</li> <li>• Calculations (1) for cargo (1) number of seats (1)</li> <li>• Weight of cargo (1) can be calculated (1) to ensure transport is not overloaded (1)</li> <li>• Queries (1) can be used to search allocated planes (1) for cargo / people spaces (1)</li> <li>• Reports (1) detailing allocation of cargo / people space (1)</li> <li>• The database can be emailed (1) to charity (s) to increase speed of team building (1)</li> <li>• Any other valid suggestion</li> </ul>	5	<p><b>1<sup>st</sup> Mark – Identification of valid cost impact.</b>  <b>2<sup>nd</sup> / 3<sup>rd</sup> / 4<sup>th</sup> / 5<sup>th</sup> Marks – justification of type of software selected</b></p> <p>Read whole answer and mark to candidates advantage.</p> <p>1 mark can be awarded for a point related to calculations if this has not already been awarded relating to cargo / seats.</p>

Question			Answer	Marks	Guidance
5	(a)		<p><b>Possible explanation as to the importance of maintaining integrity of the records include:</b></p> <ul style="list-style-type: none"> <li>• The records need to be up to date (1) in case there's an emergency (1)</li> <li>• If the records/ example are not accurate (1) could lead to delays in contacting emergency contact (1)</li> <li>• If passports are lost / damaged (1) then if details are inaccurate (1) may lead to a delay in issuing emergency travel documents / passports (1)</li> <li>• Incomplete records can lead to delays in travel (1) meaning team members may not get to disaster area (1)</li> <li>• Team members may have gained extra specialisms (1) and PHDA won't be able to take advantage of these if they haven't updated their records (1)</li> <li>• Team member allocated to more than one location (1) because system is not up to date with where people are (1)</li> <li>• Any other valid suggestion</li> </ul>	4	<p><b>Up to three marks for valid explanation.</b></p> <p>Mix and match approach across bullet points is possible.</p> <p>Read whole answer and mark to candidates advantage.</p> <p>1 mark can be awarded for:</p> <p>'Records need to be accurate / up to date / complete and fit for purpose'</p> <p>if this has not already been awarded in context.</p>
5	(b)		<ul style="list-style-type: none"> <li>• External source/Secondary (1<sup>st</sup>)</li> </ul> <p><b>Possible justification of the type of source selected include:</b></p> <ul style="list-style-type: none"> <li>• Provided by the UK based embassy of the country (1) the natural disaster has occurred in (1)</li> <li>• The visa number comes from outside PHDA (1)</li> <li>• Any other valid suggestion</li> </ul>	3	<p><b>1<sup>st</sup> mark for correct type of source and Up to two marks for valid justification.</b></p> <p>The type of source must be correct to be awarded the justification marks.</p>
6	(a)	(i)	<ul style="list-style-type: none"> <li>• Tablet / smart phone / mobile phone / satellite phone (1)</li> <li>• Digital camera / helmet camera / body-mounted camera (1)</li> <li>• Any other valid suggestion</li> </ul>	1	<p>Device must be handheld / wearable and able to record videos.</p> <p>There is no mention of how long the videos are.</p>



Question			Answer	Marks	Guidance
6	(a)	(ii)	<p><b>Possible advantages of using the handheld device include:</b></p> <ul style="list-style-type: none"> <li>• Light / portable (1) so can be carried in disaster zone easily / can fit into a pocket (1)</li> <li>• Does not need to be attached to a power source (1) at all times / can run off battery power (1)</li> <li>• Enables communication between team members / PHDA (1) to ensure that all team members are safe (1)</li> <li>• Videos can be shot (1) with little disruption (1)</li> <li>• Can connect to Internet (1) so videos can be sent back quickly (1)</li> <li>• Does not need a lot of equipment (1) to record a video (1)</li> <li>• <u>Satellite phones</u> are more robust (1) and do not need a tower signal (1)</li> <li>• Any other valid suggestion</li> </ul> <p><b>Possible disadvantages of using the handheld device include:</b></p> <ul style="list-style-type: none"> <li>• May have a short battery life (1) and there may be limited opportunity to recharge (1)</li> <li>• Small devices can be easily lost (1) so the video could also be lost (1)</li> <li>• Some devices are easily damaged / broken (1) which may mean videos cannot be recorded (1)</li> <li>• Videos may be in low resolution (1) so may not be able to clearly show disaster (1)</li> <li>• May not be able to store as much video (1) due to small memory capacity / compared to a dedicated video device (1)</li> <li>• May not be able to get a signal (1) in area due to destruction caused by disaster (1)</li> <li>• Weather conditions (1) might affect use of the device (1)</li> <li>• Any other valid suggestion</li> </ul>	4	<p><b>Up to 2 marks each for a description of an advantage and disadvantage.</b></p> <p>Allow mix &amp; match across mark points</p> <p>Read whole answer and mark to candidates best advantage</p> <p>Advantages / disadvantage MUST relate to device identified in a(i)</p>

Question		Answer	Marks	Guidance
6	(b)	<p><b>Possible descriptions of the use of the video include:</b></p> <ul style="list-style-type: none"> <li>• To assess the damage in the disaster area (1) to inform of extra equipment / specialists (1)</li> <li>• On news programs (1) to inform audience of disaster (1)</li> <li>• To share between teams from different charities / organisations (1) to relocate specialists where they are needed (1)</li> <li>• Create training videos (1) to show specialist what to do in a specific situation/ what to expect (1)</li> <li>• Educate the team members (1) about situations they may face (1)</li> <li>• Give a realistic/accurate pic of the situation (1) than email/ word of mouth</li> <li>• Can see scale of issue (1) so can prioritise easier (1)</li> <li>• To show their work to public (1) to Increase donations / awareness of their work / increase volunteers (1)</li> <li>• Any other valid suggestion</li> </ul>	4	<p><b>Two descriptions for up to 2 marks for each.</b></p> <p>Mix and match across mark points</p> <p>Read whole answer and mark to candidates best advantage</p>

Section B				
Question		Answer	Marks	Guidance
7	(a)	<p><b>Possible explanation of one advantage of using separate tables to include:</b></p> <ul style="list-style-type: none"> <li>• Access to each table (1) can be given to different people / departments (1) e.g. Only HR will have access to staff records (1)</li> <li>• All teachers will be able to access student records (1) staff records will be limited (1) to personnel / HR staff (1)</li> <li>• Allows school to limit access to the staff table (1) to those who need to see the information (1) such as HR staff (or other relevant example) (1)</li> <li>• Can differentiate between staff &amp; students (1) as the same names may be for staff and student (1) so searching may have a higher confidence rate (1)</li> <li>• Any other valid suggestion</li> </ul>	3	<b><i>Up to three marks for valid explanation.</i></b>
7	(b)	<p><b>Possible explanation of what is meant when classifying information as private include:</b></p> <ul style="list-style-type: none"> <li>• Information that relates to an individual / student / teacher (1)</li> <li>• Should not be available (1) to anyone (1) without permission from data subject (1)</li> <li>• Covered by the DPA / GDPR (1)</li> <li>• Needs to be stored in a way (1) that ensures compliance (1) with DPA / GDPR (1)</li> <li>• Example – e.g. gender / date of birth / disability / health issues (1)</li> <li>• Any other valid suggestion</li> </ul>	4	<p><b><i>Up to four marks for valid explanation including example.</i></b></p> <p>To be awarded full four marks an example must be provided.</p> <p>Example must relate to database given in scenario of question</p>

Question		Answer	Marks	Guidance
7	(c)*	<p><b>Indicative Content</b></p> <ul style="list-style-type: none"> <li>• It protects staff from discrimination when going for promotion</li> <li>• Staff cannot be treated any differently because of a protected characteristic.</li> <li>• Protected characteristics are stored in the database records</li> <li>• If a staff member is the best candidate, then they must be given the promotion regardless of any protected characteristics</li> <li>• If application forms need to be completed, then these must be supplied in a format as requested by the applicant</li> <li>• Protected characteristics must not influence any shortlisting of staff for consideration for promotion</li> <li>• Any protected characteristics shown on the records must be ignored when selecting shortlisted staff</li> <li>• Any other valid suggestion</li> </ul> <p><b>Protected characteristics:</b></p> <ul style="list-style-type: none"> <li>• age</li> <li>• disability</li> <li>• gender reassignment</li> <li>• marriage and civil partnership</li> <li>• pregnancy and maternity</li> <li>• race</li> <li>• religion or belief</li> <li>• sex / sexual orientation.</li> </ul>	10	<p><b>Level 3 [7-10 marks]</b> The learner has explained more than one consideration of how the EQA should be considered when the school is using the records to select staff for interview.</p> <p>Subject specific terminology and knowledge will be clearly used to support and inform the explanations.</p> <p><i>There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated.</i></p> <p><b>Level 2 (4 – 6 marks)</b> The learner has described at least one consideration of how the EQA should be considered when the school is using the records to select staff for interview.</p> <p>At the bottom of the mark band, the learner may describe generic aspects of considerations.</p> <p><i>There is a line of reasoning presented with some structure. The information presented is for the most part relevant and supported by some evidence.</i></p> <p><b>Level 1 (1 – 3 marks)</b> The learner has identified points relating to how the EQA should be considered when the school is using the records to select staff for interview.</p> <p><i>The information is basic and communicated in an unstructured way. The information is supported by limited evidence and the relationship to the evidence may not be clear.</i></p> <p><b>0 marks = Nothing worthy of credit.</b></p>

Question		Answer	Marks	Guidance
7	(d)	<p><b>Possible security method used to keep information secure during transmission include:</b></p> <p><b>Encryption (of data in transit) (1<sup>st</sup>)</b></p> <ul style="list-style-type: none"> <li>information is encrypted at the school (1) this makes it unreadable if intercepted during transit (1) on arrival the information can be decrypted / the encryption key is sent to the new school (1)</li> <li>Any other valid suggestion</li> </ul> <p><b>Password protection (1<sup>st</sup>)</b></p> <ul style="list-style-type: none"> <li>is put on the information at the school (1) cannot be read without password (1) the password is sent to the new school (so the information can be accessed / viewed) (1)</li> <li>Any other valid suggestion</li> </ul>	4	<p><b>1<sup>st</sup> Mark – Identification of security method.</b>  <b>2nd, 3rd and 4th Marks – Description of security method.</b></p> <p>The method must be correct to enable marks for the description to be awarded.</p>
7	(e)	<p><b>Possible explanation of one impact to a student if data is not transmitted securely include:</b></p> <ul style="list-style-type: none"> <li>Identity theft (1) can result in financial loss / loans being taken out (1) so future credit may be affected (1)</li> <li>Identity theft (1) may not be able to take exams (1) so limiting accessibility to jobs / college (1)</li> <li>Any other valid suggestion</li> </ul>	3	<b>Up to three marks for valid explanation.</b>
8	(a)	<p><b>Possible explanation of the term quantitative data include:</b></p> <ul style="list-style-type: none"> <li>Data that can be measured (1)</li> <li>Includes numbers (1)</li> <li>Any other valid suggestion</li> </ul>	2	<b>Up to two marks for valid explanation.</b>

Question			Answer	Marks	Guidance
8	(b)		<ul style="list-style-type: none"> <li>Number of rooms (1)</li> <li>Number of guests (1)</li> <li>Number of nights for the stay (1)</li> <li>Hotel rating (1)</li> <li>Room price (1)</li> <li>Any other valid suggestion</li> </ul>	1	Example must relate to a hotel booking website
8	(c)		<p><b>Possible feature that could be included to comply with UNCRPD include:</b></p> <ul style="list-style-type: none"> <li>Screen reader (1st) reads the text (1) on the webpage (1) for people with sight problems (1)</li> <li>Alt Tags (1<sup>st</sup>) on images (1) reading software (1) can describe the image (1)</li> <li>Type of font (1) can be changed (1) as some fonts / example are easier (1) to read than others / example (1)</li> <li>Any other valid suggestion</li> </ul>	4	<p><b>1<sup>st</sup> Mark – Identification of feature</b>  <b>2nd, 3rd and 4th Marks – Description of feature.</b></p> <p>The feature must be correct to enable marks for the description to be awarded.</p>
8	(d)		<p><b>Possible explanation of the term ‘reducing carbon footprint’ include:</b></p> <ul style="list-style-type: none"> <li>The (positive) impact of organisations / individuals (1) on the environment (1)</li> <li>Reducing greenhouse gases / CO<sub>2</sub> (1) by using strategies such as recycling / turning lights off (1)</li> <li>Any other valid suggestion</li> </ul>	2	<p><b>Up to two marks for valid explanation.</b></p> <p>Allow example for 1 mark</p>
8	(e)	(i)	<ul style="list-style-type: none"> <li>Open (1)</li> </ul>	1	CAO

Question			Answer	Marks	Guidance
8	(e)	(ii)	<p><b>Possible description of benefit include:</b></p> <ul style="list-style-type: none"> <li>• Enables interaction with other systems (1) so customer can use the booking website (1)</li> <li>• Booking website can interact with payment websites (1) so payments / deposits can be taken (1)</li> <li>• Anyone can use the website (1) to make hotel bookings (1)</li> <li>• Any other valid suggestion</li> </ul> <p><b>Possible description of limitation include:</b></p> <ul style="list-style-type: none"> <li>• More susceptible to hackers (1) so is not secure / data/information may be stolen (1)</li> <li>• Security software will have to be used (1) when payment cards are being input (1)</li> <li>• Any other valid suggestion</li> </ul>	4	<i>Up to 2 marks each for a description of a benefit and limitation.</i>

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