



Cambridge Technicals IT

Unit 2: Global Information

Level 3 Cambridge Technical in IT

Mark Scheme for January 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:

Annotation	Meaning
	Tick – correct answer
	Cross – incorrect answer
	Plus – use for positives
	Minus – use for negatives
L1	Level 1
L2	Level 2
L3	Level 3
BOD	Benefit of doubt
^	Omission mark
V	Too vague
R	Repeat
 or 	Noted but no credit given

Question			Answer	Marks	Guidance
1	(a)	(i)	<ul style="list-style-type: none"> Graphic / image / picture (1). 	1	<i>For one mark.</i>
1	(a)	(ii)	<p>Possible explanations of why this information style has been used include:</p> <ul style="list-style-type: none"> To show the flowers that are available/so customers can see what they'll be getting (1). Can be stored in a high resolution (1). Can be taken by a camera (1) and uploaded to the website (1). Stored as individual files (1) so can be edited/ deleted (1) when a new photograph needs to be uploaded (1) A graphic is more effective than text / e.g. to indicate the colour of the flowers (1). Makes the website more appealing / exciting (1) than just having text (1) Any other valid suggestion. 	3	<p><i>Up to three marks for valid explanation.</i></p> <p>Mix and match approach across bullet points is possible.</p> <p>Read whole answer and mark to candidates best advantage.</p>
1	(b)		<ul style="list-style-type: none"> Business (1). 	1	<p><i>For one mark.</i></p> <p>DNA organisation</p>

Question		Answer	Marks	Guidance
2	(a)	<p>Possible cost impacts to PH Your Flowers of keeping customer details securely include:</p> <ul style="list-style-type: none"> • Software (1st) encryption/security (1) software may have to be bought (1). • Hardware (1st) dedicated (1) hard drives/storage media (1). • Training (1st) staff (1) who will access/use the account information (1). • Security (1st) increased security will be needed (1) to conform with legislative requirements (1) • Any other valid suggestion. 	6	<p>1st Mark – Identification of valid cost impact. 2nd and 3rd Marks – Description of cost impact to PH Your Flowers.</p> <p>The cost impact must be correct to enable marks for the description to be awarded.</p> <p>Read all answer. If cost impact not clearly defined then 2 marks can be awarded for description.</p>

Question		Answer	Marks	Guidance
2	(b)	<p>Possible logical security methods that could be used to keep customer details secure include:</p> <ul style="list-style-type: none"> • Firewall (1st) to monitor traffic (1) into and out of PH network (1) to prevent unauthorised access (1). • Tiered level of access (1st) customer accounts are only accessible (1) to staff who need access/as part of their job role (1) limits the number of staff who have access (1). • Passwords (1st) Can be set on the accounts data file/ storage device (1) strong passwords (1) can slow down unauthorised access (1). • Encryption (1st) can be at rest/in transit (1) accounts data can be scrambled (1) and cannot be read without the encryption key (1). • Antivirus (1st) To detect a virus (1) trying to enter the system (1) and quarantines / removes the detected virus (1) • Any other valid suggestion. 	4	<p>1st Mark – Identification of valid logical security method. 2nd, 3rd and 4th Marks – Description of logical security method.</p> <p>The logical security method must be correct to enable marks for the description to be awarded.</p>

Question		Answer	Marks	Guidance
3	(a)	<p>Possible explanations as to why postcode is checked during the ordering process include:</p> <ul style="list-style-type: none"> • To autofill address (1) taken from postcode for <u>delivery</u> address (1). • To calculate (1) accurate delivery costs (1). • To schedule delivery route (1). • To ensure flowers are delivered to the correct address (1). • To check the postcode is valid (1) so errors can be identified (1) and rectified (1) • Any other valid suggestion. 	3	<p><i>Up to three marks for valid explanation.</i></p> <p>Mix and match approach across bullet points is possible.</p>
3	(b)	<ul style="list-style-type: none"> • Private/sensitive/confidential (1). 	1	<i>For one mark.</i>

Question		Answer	Marks	Guidance
3	(c)	<p>Possible reasons why PH Your Flowers uses a trend and pattern identification data analysis tool include:</p> <ul style="list-style-type: none"> • To identify the most popular flowers (1). • To identify most popular additions/options (1). • To chart the sales of flowers/additions/options (1) over a given time scale/example of time (1). • To chart the number of same day delivery flowers (1) against the number of delivered flowers (1) over a given time scale/example of time (1). • Any other valid suggestion. 	3	<p><i>Up to three marks for valid explanation.</i></p> <p>Two reasons with one expansion would gain full marks. One reason expanded MAX two marks.</p> <p>Allow examples of types of chart.</p>
4	(a) (i)	<ul style="list-style-type: none"> • Privacy and Electronic Communications Regulation / PECR (1). • GDPR (1) • DPA (1) 	1	<p><i>For one mark.</i></p> <p><i>Ignore dates for DPA</i></p>

Question			Answer	Marks	Guidance
4	(a)	(ii)	<p>Possible actions that should be taken by PH Your Flowers to comply with this regulation include:</p> <ul style="list-style-type: none"> • To only contact customer (1) if box has been ticked (1) /not to contact customer (1) if box has not been ticked (1). • To use only (1) the methods (1) that have been selected by customer (1). • To display (1) their telephone number (1) if contacting a customer by phone (1). • if cookies (1) are set on the website (1) explaining what they will do and why (1). • Any other valid suggestion. 	3	<p><i>Up to three marks for valid explanation.</i></p> <p><i>If (i) incorrect do not mark (ii)</i></p> <p><i>Allow general points relating to compliance with the identified regulation for a MAX 2 marks.</i></p>

Question	Answer	Marks	Guidance
4 (b)	<p>Possible benefits to PH Your Flowers of using Green IT include:</p> <ul style="list-style-type: none"> • Increase in brand image (1) customers may increase due to the perception that PHYF are a conscientious company (1). • Reduced energy costs (1) computer equipment will be switched off when not in use (1). • Increase in recycling (1) toners/batteries/example can be recycled (1). • Reduction in use of paper (1) documents can be stored and accessed online/example (1). • Any other valid suggestion. 	4	<p>Up to two marks for each of two valid descriptions.</p> <p>Two from list. MAX two marks per benefit.</p>
5*	<p><u>Indicative Content</u></p> <p>Advantages:</p> <ul style="list-style-type: none"> • Increased online presence. • Increased contact with customer. • Updates to range of flowers/options/additions can be shared on the page. • Good comments left by customers can be seen by a wide audience. • Customers can post pictures of the flowers/additions that have been delivered. 	10	<p>Level 3 [7-10 marks] The learner has explained the advantages AND disadvantages to PH Your Flowers of using social media to promote the business.</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>Level 2 [4-6 marks] The learner has described the advantages AND/OR disadvantages to PH Your Flowers of using social media to promote the business.</p>

Question	Answer	Marks	Guidance
	<ul style="list-style-type: none"> • People can like posts/pictures. • Posts/pictures can be shared so increasing number of people who see them. • Any other valid suggestion. <p>Disadvantages:</p> <ul style="list-style-type: none"> • May need to employ a member of staff to manage the social media account, so increasing wages. • Page needs to be monitored and maintained. • May become a victim of trolling. • Negative comments/posts will be seen very quickly. • Posts may be altered to become negative. • Any other valid suggestion. 		<p>At the bottom of the mark band, the learner may describe generic aspects of social media.</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>Level 1 [1-3 marks] The learner has identified generic points in relation to social media.</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>0 marks = Nothing worthy of credit.</p>

Section B

Question		Answer	Marks	Guidance
6	(a)	<p>Stages of data analysis include:</p> <ul style="list-style-type: none"> • Identify the need (1). • Identify potential sources (1). • Source and select information (1). • Process and analyse data (1). • Record and store information (1). • Share results (1). 	3	<p>For three marks.</p> <p>These stages are taken from the unit specification.</p> <p>It is possible to link 2 answers</p>
6	(b)	<p>DFD components include:</p> <div style="display: flex; align-items: center; margin-bottom: 10px;"> <div style="border: 2px solid black; width: 100px; height: 30px; margin-right: 10px;"></div> External Entity </div> <div style="display: flex; align-items: center; margin-bottom: 10px;"> <div style="border: 2px solid black; border-radius: 15px; width: 100px; height: 40px; margin-right: 10px;"></div> Process </div> <div style="display: flex; align-items: center;"> <div style="border-top: 2px solid black; width: 80px; margin-right: 10px;"></div> → Data Flow </div>	4	<p>Max two marks per symbol.</p> <p>Symbol must be labelled to award full marks.</p> <p>No marks if symbol is not drawn.</p> <p>These are the symbols shown in the textbook, allow others if correct.</p>

Question		Answer	Marks	Guidance
6	(c)	<p>Possible benefits and limitation to the dental practice of using a contact management system include:</p> <p>Benefits</p> <ul style="list-style-type: none"> • Patients' details are stored (1) and can be edited (1). • Searches can be carried out (1) on specified criteria/ example (1). • Appointments can be made (1) against the patients' details (1). • Search/Sort facility (1) speeds up data finding (1) • Any other valid answer. <p>Limitations</p> <ul style="list-style-type: none"> • If there is no back-up (1) then patient's details can be lost (1). • Data must be correctly (1) input (1). • The DPA must be considered (1) as holding personal details (1). • Any other valid suggestion. 	4	<p><i>Up to two marks for each of two valid descriptions.</i></p> <p>Two from list. MAX two marks per benefit/limitation.</p>

Question		Answer	Marks	Guidance
6	(d)	<p>Possible reasons why the dental practice should have a disaster recovery policy relating to its contact management system include:</p> <ul style="list-style-type: none"> • A principle of the DPA (1) Personal details must be kept secure (1) having a recovery plan will ensure the details are safe (1) in case of any theft/unauthorised access (1). • Will detail how / when (1) the contact management system should be backed up (1). • Will detail the storage media to be used (1) and where this should be kept (1). • Personal details are being held (1) so the DPA must be considered (1). • So staff know what to do (1) when they have had a breach (1) to reduce errors when recovering data (1) and getting the dental practice up and running (1) • Any other valid suggestion. 	4	<i>Up to four marks for valid explanation.</i>

Question		Answer	Marks	Guidance
6	(e)	<p>Possible physical protection methods that could be used to reduce the risk of a disaster occurring to the contact management system include:</p> <ul style="list-style-type: none"> • Keypads / locks (1st) on workstations/rooms (1) only people with the correct codes (1) can access the hardware (1). • Biometrics (1st) scans are taken of characteristics/ example (1) these are matched to the records of authorised users (1) a match enables access (1). • Off-site backups (1st) provides a copy of the data (1) at the point of back-up (1) so data can be restored (1). • Putting equipment above ground level (1st) so equipment is out of reach of water (1) and not damaged (1) so business can keep operating (1) • Any other valid suggestion. 	4	<p>1st Mark – Identification of physical protection method. 2nd, 3rd and 4th Marks – Description of physical protection method.</p> <p>The physical protection method must be correct to enable marks for the description to be awarded.</p> <p>Allow examples for biometrics</p> <p>Read whole answer and mark to candidates best advantage.</p> <p>Max 3 marks for description with no identified of method</p>

Question		Answer	Marks	Guidance
7	(a)	<p>Possible explanations of how the dental practice could make use of animated graphics include:</p> <ul style="list-style-type: none"> • Can show processes (1). • Easier to understand (1) than reading text (1). • All ages can watch the animated graphic (1). • People who cannot read English well / English as a 2nd language (1) will be able to understand (1). • Example (1) e.g. How to clean your teeth. • Any other valid suggestion. 	4	<p><i>Up to four marks for valid explanation including example.</i></p> <p>To be awarded full four marks an example must be provided.</p> <p>The example must relate to a dental surgery/teeth.</p>

Question	Answer	Marks	Guidance
7 (b)*	<p>CMS = contact management system</p> <p><u>Indicative Content</u></p> <ul style="list-style-type: none"> • Validation routines can be set on the online form. • The format of the data / information on the form will match that of the fields in the CMS. • As completed form is submitted the details are automatically input onto the CMS. • New patient data can be retrieved by searching on a date joining field. • Patient numbers can be allocated to all patients. • This can be used to book appointments with an auto-fill on the online form to complete patients details. • These can be checked by a patient. • An edit facility can be provided for updating details by current patients. • Edits can be submitted and overwritten in the CMS. • Separate sub forms for new & existing patient • Any other valid suggestion. 	10	<p>Level 3 [7-10 marks] The learner has explained how the integration between form and system will allow the system to be more efficient in the collecting, retrieving and storing of patient data and information.</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>Level 2 [4-6 marks] The learner has described how the integration between form and system will allow the system to be more efficient in the collecting, retrieving and storing of patient data and information.</p> <p>At the bottom of the mark band, the learner may describe generic aspects of integration between the form and system</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>Level 1 [1-3 marks] The learner has identified generic points in relation to either the form or system.</p> <p>Subject specific terminology may be limited or missing.</p>

Question			Answer	Marks	Guidance
					<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>0 marks = Nothing worthy of credit.</p>
7	(c)	<p>Possible differences between data and information include:</p> <ul style="list-style-type: none"> • Data has no context (1) Information has context (1). • Data is raw facts and figures (before it has been processed) (1) information is data that has been processed (1). • Example – TM – treatment/TA – toothache/CU – Check-up (1). • Any other valid suggestion. 	3	<p><i>Up to three marks for valid description including example.</i></p> <p>To be awarded full three marks an example must be provided.</p> <p>The example must relate to a dental surgery/teeth.</p>	

Question		Answer	Marks	Guidance								
7	(d)	<p>Possible comparisons include:</p> <ul style="list-style-type: none"> Information about a data subject relates to the DPA (1) but FoI relates to information about a public authority (1). Only the data subject can request information about themselves (1) anyone can apply for information about a public body (1). Any other valid suggestion. 	4	<table border="1"> <tr> <td>4 marks</td> <td>2 complete comparisons</td> </tr> <tr> <td>3 marks</td> <td>1 comparison + 1 point about either side</td> </tr> <tr> <td>2 marks</td> <td>1 complete comparison</td> </tr> <tr> <td>1 mark</td> <td>1 point about either side</td> </tr> </table> <p>MAX 1 mark if answer in 2 distinct paragraphs.</p> <p>Allow examples.</p>	4 marks	2 complete comparisons	3 marks	1 comparison + 1 point about either side	2 marks	1 complete comparison	1 mark	1 point about either side
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