Cambridge Technicals
IT

Unit 2: Global Information

Level 3 Cambridge Technical in IT
05838 – 05842/05877

Mark Scheme for January 2020

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 (This **does** count as a mark – so do not 'tick' as well)
^	Omission mark
V	Too vague
R	Repeat
SEEN or	Noted but no credit given

Question			Answer	Marks	Guidance
1	(a)	(i)	• Date (1) • Number / numeric (1)	1 (LO2.1)	*For 1 mark.*
1	(a)	(ii)	**Possible explanation could include:** • The data stored in the registration field (1) is a date (1) example provided (1). • The format (of the field) (1) can be set (1) to only accept data in a specified structure (1). • An input mask/ validation (1) can be used to ensure the data is entered (1) in the correct / consistent format (1). • Any other valid suggestion.	3 (LO2.1)	*Up to three marks for explanation.* To be considered for marks for this part of the question, marks MUST have been awarded in part (i).
1	(b)		**For one mark:** • Business / Confidential / Private / Sensitive (1ˢᵗ). **Possible justification of information classification to include:** • The table holds confidential details (1) about the cars such as registration numbers / VIN numbers (1) which could be cloned / used by criminals if found out (1). • The table holds data about product recalls (1) which could cause harm / decrease in business (1) to the manufacturer if released (1). • The car manufacturer is a business (1) which keeps information about its cars (1) such as registration numbers / VIN (1). • Any other valid suggestion.	4 (LO2.2)	*1ˢᵗ Mark – Identification of correct information classification.* *2ⁿᵈ / 3ʳᵈ / 4th Marks – Justification of choice method.*

Question			Answer	Marks	Guidance
2	(a)		**For one mark:** • Geographic information system (GIS) (1) • Location <u>mapping</u> (1) • Global positioning System (GPS) (1)	1 (LO3.5)	*For 1 mark.*
2	(b)		**Possible justification of the use of the tracking system to include:** • The response team can locate the car (to within 5 metres) (1) to be able to locate the nearest recovery and repair garage (1) to get assistance to the driver / passengers / car (1) as quickly as possible (1). • If the SOS button <u>automatically</u> connects (1) to the response team the location of the car (to within 5 metres) (1) can be given to the emergency services (1) to ensure help is sent quickly and to the correct location (1). • Any other valid suggestion.	4	*Up to 4 marks for a complete justification.* *Read whole answer and mark to candidates advantage.*
3	(a)		**Possible explanation of the use of the shared area include:** • Response team uploads results in the UK (1) which are then accessed by the recovery and repair garage (1) wherever in the world the car is located (1). • Any other valid suggestion.	3 (LO1.3)	*Up to three marks for an explanation.*
3	(b)		**Possible advantage of using a shared area for the diagnostic results include:** • Tests can be uploaded and downloaded / accessed (1) very quickly (1). • Test results can be accessed (1) from anywhere in the world / at any time (1). • Tests are kept secure (1) and can only be accessed by use of the emailed code (1).	4 (LO1.3)	*Up to two marks for each of two descriptions.* *1 advantage described.* *1 disadvantage described.* *Read whole answer & mark to candidates advantage*

Question			Answer	Marks	Guidance
			• Multiple people can gain access (1) if they have the code (1) • Any other valid suggestion. **Possible disadvantage of using a shared area for the diagnostic results include:** • If there is no internet access (1) the test results cannot be accessed (1). • If the email (containing the code) does not arrive (1) the test results cannot be accessed (1). • More susceptible to unauthorised access (1) compared to a physical storage device (1) • People may be able to see diagnostic tests (1) from multiple cars (1) • Any other valid suggestion.		
3	(c)		**Possible consequence to the owners of the car include:** • Longer wait to be recovered (1) as location of the car may not have been correctly recorded (1). • Repairs taking longer (1) as test results may be incorrect (1). • Parts may not be available / the wrong part (1) as incorrect VIN / Registration number may be provided (1). • Any other valid suggestion.	2 (LO2.3)	*Up to two marks for description of consequence to the owners.*

Question			Answer	Marks	Guidance
4*			**Indicative content** **Principles:** • Data integrity should be maintained to ensure the data / information is up-to-date, accurate, confidentially, complete and fit for purpose. • The information should only be accessed by members of the response team who are dealing with the car. • Only authorised SOS response team members should deal with the call for help. • Data should always be available to and usable by the Response Team and the recovery & repair garage. **Risks:** • Unauthorised access to data including hacking. • Accidental data loss. • Intentional data destruction. • Intentional tampering with the data. **Impacts:** • Loss of access to data meaning the response team cannot access the car records, so help cannot be given. • Loss of information. • Loss of reputation for the manufacturer / SOS team.	10 (LO6.1/2/3)	**Mark band 3 (7 - 10 marks)** The learner has shown a detailed level of understanding by explaining the principles of information security, including **the risks and impacts,** that should be considered by the response team when dealing with any SOS call. The learner is able to provide a clear explanation of more than one clear principle. Examples used to support discussion may be superficially related to scenario. Subject specific terminology and knowledge will be clearly used to support and inform the discussion. *There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated.* **Mark band 2 (4 – 6 marks)** The learner has shown a good level of understanding by describing the principles of information security including **the risks and / or impacts.** Descriptions may concentrate on one principle, with, at the lower end of the mark band, limited depth. Some examples / scenario may be used to support discussion but may not be relevant and may at times detract from fluency of narrative. *There is a line of reasoning presented with some structure. The information presented is in the most part relevant and supported by some evidence.*

Question			Answer	Marks	Guidance
					Mark band 1 (1 – 3 marks) The learner has identified points relevant to information security and ideas will be poorly expressed. Subject specific terminology may be limited or missing. *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.* **0 marks = Nothing worthy of credit.**
5	(a)		**For one mark:** • Safe Harbour Scheme / Privacy Shield (1)	1 (LO4.2)	*For one mark.*
5	(b)		**Possible explanation of how the scheme aims to protect data includes:** • Set up by the US Department of Commerce (1). • If complied with (1) provides sufficient protection (1) to UK data being stored / processed in the USA (1). • If the receiving organisation / garage (1) has not signed up to the scheme (1) then data cannot be transferred. (1). • Both sending and receiving countries / governments (1) must have been deemed to be safe / are responsible for security (1) • Any other valid suggestion.	4 (LO4.2)	*Up to four marks for explanation.* *This can be marked even if 0 marks awarded in part (a)*

Question			Answer	Marks	Guidance
6			**Possible explanation of how charts and graphs could be used by the car manufacturer includes:** • Can show data / information (1) in a visual way (1). • Trends and patterns (1) can be seen to interpret data (1). • Number of cars registered each year / in different counties can be shown (1). • Common faults can be seen (1) to activate product recalls (1). • A pie chart could be used to show the proportion (1) of cars using hybrid, petrol or diesel fuel (1) so they can manufacture according to trends (1). • Any other valid suggestion.	3 (LO2.1)	*Max 2 without an example.*

Section B					
Question			**Answer**	**Marks**	**Guidance**
7	(a)		**Possible responses include:** • A network (1) of <u>interconnected</u> networks / devices (1) spanning the world (1). • Uses the WWW (1) to browse websites (1) • Any other valid suggestion.	3 (LO1.4)	*For three marks.*
7	(b)		**Possible portable devices include:** • Laptop (1) • Tablet (1) • Smartphone / mobile phone (1) • Any other valid suggestion.	2 (LO1.3)	*For two marks.* **Phone on its own is TV**

Question			Answer	Marks	Guidance
7	(c)	(i)	**Possible description of data:** • Numbers / text (1) without context / meaning (1) • Any other valid suggestion.	2 (LO3.1)	*Up to two marks for description.*
7	(c)	(ii)	**Possible differences between primary and secondary data include:** • Primary data is collected by an individual / organisation (1). • Secondary data is collected by a 3rd party (1). • Any other valid suggestion.	2 (LO5.1)	*Up to two marks for one difference.* *Must consider both sides for full marks.*
8*			<u>**Indicative Content**</u> The impacts and consequences of data protection legislation on the marketing company when collecting, storing and processing data and information. **Impacts may include:** • Consent needs to be gained from data subjects. • Need to review data that is stored. • Stored data needs to be pseudonymised / anonymised. • Need to appoint a data protection officer. • Need to confirm compliance with DPL. • Certifications should be achieved to confirm compliance. • Development of codes of conduct to assist with the GDPR's "proper application."	10 (LO4.3)	**Mark Band 3 (7-10 marks)** The learner has explained the impacts and consequences of data protection legislation on the marketing company. Subject specific terminology and knowledge will be clearly used to support and inform the explanations. *There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated.* **Mark Band 2 (4-6 marks)** The learner has described the impacts / consequences of data protection legislation on the marketing company. Subject specific terminology and knowledge will be used to support and inform the explanations but this may be limited in scope. At the bottom of the mark band, the learner may describe generic issues that may occur. *There is a line of reasoning presented with some structure.*

Question			Answer	Marks	Guidance
			Consequences may include: • Cost increases to company as data requested under a SAR is now free rather than charging £10. • Company can be fined for non-compliance / data being processed in the incorrect way / no data protection officer / a security breach. • Extra costs in reviewing stored data. • Increased security and staff training to ensure security is compliant. DPL = Data Protection Legislation. Response may focus on GDPR or DPA (2018) both of these approaches are acceptable.		*The information presented is for the most part relevant and supported by some evidence.* **Mark Band 1 (1-3 marks)** The learner has identified generic points in relation to data protection legislation. Subject specific terminology may be limited or missing. *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.* **0 marks = Nothing worthy of credit.**
9	(a)		**Explanation of how firewalls could maintain the security of the stored data includes:** • Firewalls monitor traffic (1) in and out of a network (1). • Traffic that does not (1) meet the predefined rules (1) for the firewall will not be allowed into or out of the network (1). • A firewall protects data (1) from unauthorised access from outside the company (1) as well as being protected from being sent out of the company (1). • Any other valid suggestion.	3 (LO6.6)	*An explanation for up to three marks.*
9	(b)		**Stages of data analysis include:** • Identify the need (1st) what is needed / what is to be found out / objectives are set (1). • Define / Identify the scope (1st) sets the restrictions on the project / sets constraints (1).	4 (LO 3.4)	*In each of two cases:* *1st mark – Identification of stage of data analysis.* *2nd mark – Description of stage.* The stage must be correct to enable the mark for the description to be awarded.

Question			Answer	Marks	Guidance
			• Identify potential sources (1ˢᵗ) identify reliable / wide range sources of data (1). • Source / collect / select information (1ˢᵗ) select most appropriate / required data / information (1). • Select the most appropriate tools (1ˢᵗ) tools selected will depend on data to be presented / requirements of client (1). • Process / analyse data (1ˢᵗ) data is entered into software to be analysed (1). • Record / store information (1ˢᵗ) Project report / findings is created (1). • Share results (1ˢᵗ) results published for client / stakeholders (1).		
9	(c)		**Possible explanation of how data can be transmitted includes:** • Data can be transmitted within or outside of the company (1). • Different methods of transmission can be used (1). • Which method of transmission (1) is used is dependent on the defined requirements of the client (1). • Hard copy (1) includes a printed report / graphs and charts / example (1). • Digitally (1) can include uploading to an internal or externally accessed website / example (1). • Any other valid suggestion.	4 (LO2.4)	*Up to four marks for an explanation.*
9	(d)		**Possible information styles include:** • Audio (1ˢᵗ) can be used for people who are visually impaired (1) as the results of the market research can be spoken (1).	6 (LO2.1)	*In each of two cases:* *1ˢᵗ Mark – Identification of information style.* *2ⁿᵈ and 3ʳᵈ Marks – Description of information style.* The information style must be correct before marks for

Question			Answer	Marks	Guidance
			• Braille text (1st) can be used for people who are visually impaired (1) as they will be able to read the results through a series of raised dots that form letters (1). • Subtitles (1st) can be used for people who are hearing impaired (1) as they will be able to read text if the results are presented visually (1). • Any other valid suggestion.		the description are awarded.
10	(a)		**Possible description of an open system:** • A system that can interact with other systems (1) to exchange information (1). • A system that can interact with other systems (1) even if different software / hardware platforms are used (1). • Any other valid suggestion.	2 (LO3.6)	*Up to two marks for description.*
10	(b)		**Two connectivity rules from list:** • At least one input / output for each external entity (1). • Data only flows in one direction (1). • Every data flow connects to at least one process (1). • At least one input and / or one output data flow for each process (1).	2 (LO5.2)	*One mark for each of two connectivity rules.*

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