Cambridge Technicals
IT

Unit 2: Global information

Level 3 Cambridge Technical in IT
05838 – 05842 & 05877

Mark Scheme for January 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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MARKING INSTRUCTIONS

PREPARATION FOR MARKING

RM ASSESSOR

1.   Make sure that you have accessed and completed the relevant training packages for on-screen marking: *RM Assessor Online Training*; *OCR Essential Guide to Marking*.

2.   Make sure that you have read and understood the mark scheme and the question paper for this unit. These are posted on the RM Cambridge Assessment Support Portal http://www.rm.com/support/ca

3.   Log-in to RM Assessor and mark the **required number** of practice responses ("scripts") and the **number of required** standardisation responses.

YOU MUST MARK 5 PRACTICE AND 10 STANDARDISATION RESPONSES BEFORE YOU CAN BE APPROVED TO MARK LIVE SCRIPTS.

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.   **Crossed Out Responses**
      Where a candidate has crossed out a response and provided a clear alternative then the crossed out response is not marked. Where no alternative response has been provided, examiners may give candidates the benefit of the doubt and mark the crossed out response where legible.

Short Answer Questions (requiring only a list by way of a response, usually worth only **one mark per response**)
Where candidates are required to provide a set number of short answer responses then only the set number of responses should be marked. The response space should be marked from left to right on each line and then line by line until the required number of responses have been considered. The remaining responses should not then be marked. Examiners will have to apply judgement as to whether a 'second response' on a line is a development of the 'first response', rather than a separate, discrete response. (The underlying assumption is that the candidate is attempting to hedge their bets and therefore getting undue benefit rather than engaging with the question and giving the most relevant/correct responses.)

Short Answer Questions (requiring a more developed response, worth **two or more marks**)
If the candidates are required to provide a description of, say, three items or factors and four items or factors are provided, then mark on a similar basis – that is downwards (as it is unlikely in this situation that a candidate will provide more than one response in each section of the response space.)
Longer Answer Questions (requiring a developed response)
Where candidates have provided two (or more) responses to a medium or high tariff question which only required a single (developed) response and not crossed out the first response, then only the first response should be marked. Examiners will need to apply professional judgement as to whether the second (or a subsequent) response is a 'new start' or simply a poorly expressed continuation of the first response.

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. Award No Response (NR) if:
   • there is nothing written in the answer space

   Award Zero '0' if:
   • anything is written in the answer space and is not worthy of credit (this includes text and symbols).

8. The RM Assessor **comments box** is used by your team leader to explain the marking of the practice responses. Please refer to these comments when checking your practice responses. **Do not use the comments box for any other reason.**

   If you have any questions or comments for your team leader, use the phone, the RM Assessor messaging system, or e-mail.

9. 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.

10. For answers marked by levels of response:

To determine the level – start at the highest level and work down until you reach the level that matches the answer
To determine the mark within the level, consider the following

Descriptor	Award mark
On the borderline of this level and the one below	At bottom of level
Just enough achievement on balance for this level	Above bottom and either below middle or at middle of level (depending on number of marks available)
Meets the criteria but with some slight inconsistency	Above middle and either below top of level or at middle of level (depending on number of marks available)
Consistently meets the criteria for this level	At top of level

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

Annotation	Meaning	Annotation	Meaning
✔	Tick – correct answer	λ ^	Omission mark
✘	Cross – incorrect answer		Highlight
➕	Plus – use for positives	MAX	Max
➖	Minus – use for negatives	VG	Vague
?	Unclear	TV	Too vague
L1	Level 1	REP	Repeat
L2	Level 2	SEEN	Noted but no credit given
L3	Level 3	〰	Not relevant
BOD	Benefit of doubt		
BP	Blank Page		

12. **Subject-specific Marking Instructions**

INTRODUCTION

Your first task as an Examiner is to become thoroughly familiar with the material on which the examination depends. This material includes:

- the specification, especially the assessment objectives

- the question paper

- the mark scheme.

You should ensure that you have copies of these materials.

You should ensure also that you are familiar with the administrative procedures related to the marking process. These are set out in the OCR booklet **Instructions for Examiners**. If you are examining for the first time, please read carefully **Appendix 5 Introduction to Script Marking: Notes for New Examiners**.

Please ask for help or guidance whenever you need it. Your first point of contact is your Team Leader.

Question			Answer	Marks	Guidance
1	**(a)**		**Possible explanation could include:** • The data from the sensors is collected from within the organisation (1) • The bike is part / one element (1) of the race team / PH GP (1) • The data collected is uploaded to a cloud storage area (1) and is only accessed (1) by PH RT technical crew (1) • Its generated within the organisation (1) not from a third party (1) as the sensors are owned and managed by PH GP (1) • The data is private / sensitive (1) • Any other valid suggestion.	3	*Up to three marks for explanation.*
1	**(b)**		**For one mark:** • Quantitative (data) (1) • Numerical (1) • Primary (1)	1	*For 1 mark.*
1	**(c)**		**Possible explanation of why the collected data should demonstrate integrity to include:** • Integrity means the collected data is accurate / up to date / complete / fit for purpose (1) • If the collected data does <u>not</u> demonstrate integrity (1) then incorrect decisions could be made (1) by the technical team (1) • If the collected data does <u>not</u> demonstrate integrity (1) then incorrect decisions could affect the performance (1) of the bike during the races (1) • Examples (1) e.g. fuel settings • Any other valid suggestion.	4	*Up to three marks for explanation.* *1 mark for an appropriate example* *Max 3 without an example.*

Question			Answer	Marks	Guidance
1	**(d)**		**For one mark:** • Visual(isation of) data (1st) **Possible justification of data analysis tool to include:** • The technical teams will be able to visualise the data collected from the sensors. (1) • Some of the data may be complicated (1) so a graph will make it easier (1) to analyse (1) • Comparisons (1) from different sensors (1) can be made (1) • Trends and patterns (1) can be seen to interpret data (1). • Any other valid suggestion.	4	*1st Mark – Identification of correct data analysis tool.* *2nd / 3rd / 4th Marks – Justification of choice of data analysis tool.* *Do not accept graph as the tool as this is given in the question* *Read whole answer and mark to candidates advantage.*
2	**(a)**		**For one mark:** • <u>Document</u> store / <u>document</u> storage (1st) **Possible justification of information format to include:** • The data can be uploaded (1) and stored (1) until required (1) • Changes (1) can be made to the downloaded data (1) and then uploaded as the latest version (1) • The data can be stored (1) until deleted (1) • Technical teams can download the data (1) irrespective of their location / trackside / at base (1) • Any other valid suggestion.	4	*1st Mark – Identification of correct information format.* *2nd / 3rd / 4th Marks – Justification of choice of information format.* *Read whole answer and mark to candidates advantage.*

Question			Answer	Marks	Guidance
2	**(b)**		**Possible advantage of uploading the data to a secure cloud area to include:** • Sensor data can be uploaded (and downloaded) / accessed (1) trackside / at the team base / at any time / on different devices with an internet connection (1) • Sensor data can be kept secure (1) and can only be accessed by the technical teams / authorised people (1). • Multiple people can gain access (1) if they have the security / access details (1) • Extra storage can be added (1) if the amount of data increases (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 sensor data cannot be accessed / saved (1). • If security details are forgotten / input incorrectly (1) the sensor data cannot be accessed (1). • More susceptible to unauthorised access (1) compared to a physical storage device (1) • Any other valid suggestion.	4	*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
3*			**A discussion of the security methods that could be used to maintain security of the sensor data on the cloud include:** **Indicative content** • Password protection • Tiered levels of access to data • Firewalls (hardware and software) • Anti-malware / anti-virus \`applications • Encryption of data (at rest / in transit • Any other valid suggestion.	10	**Mark band 3 (7 - 10 marks)** The learner has shown a detailed level of understanding by explaining **more than one** the security methods that could be used by PH GP to maintain security of the sensor data **on the cloud**. 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 **at least one** security methods that could be used by PH GP to maintain security of the sensor data **on the cloud**. Descriptions may concentrate on one method, 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.* **Mark band 1 (1 – 3 marks)** The learner has identified points relevant to security methods 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.**

Question			Answer	Marks	Guidance
4	**(a)**		**For one mark:** • Audio / speech / verbal (1) • Text (1)	1	*For one mark.*
4	**(b)**		**Possible explanation of the importance of providing good quality information includes:** • Good quality information can help the rider change their strategy (1) meaning there is a higher chance (1) of the race being won (1) • Riders can change their riding strategy (1) so if the team orders are of poor quality (1) the strategy may be the incorrect one (1) • If the orders are of poor quality (1) then a rider may be put in danger / crash (1) • The rider may miss a pit stop (1) to change tyres/ example (1) so leading to possible danger during the race (1) • Any other valid suggestion.	3	*Up to three marks for explanation.*

Question			Answer	Marks	Guidance
5	**(a)**		**Possible explanation of the use of dynamic webpages showing live commentary during the race(s) includes:** • Dynamic webpages allow the content (1) to be changed (1) • Fans can read content in real-time (1) with little lag (1) between the race happening and comments being posted (1) • They automatically update (1) information (1) as they happen in the race (1) • The page content (1) changes automatically (1) without reloading the page (1) • Constantly updated (1) with new data (1) unlike static pages that do not change (1) • Users can be from all over the world (1) so subtitles can be shown in different languages in real time (1) • Any other valid suggestion.	3	*Up to three marks for explanation.*
5	**(b)**		**Possible explanation of why blogs are included in the public information classification includes:** • Blogs do <u>not</u> contain (1) sensitive / private / confidential information (1) the blogs can be seen by anyone (1) • Links (1) to e.g. webpages (1) can be included (1) • Contain text / images / videos (1) with registered readers (1) being able to post comments (1) • Any other valid suggestion	3	*Up to three marks for explanation.*

	Question		Answer	Marks	Guidance
Section B					
6	**(a)**		**For one mark:** • Business (1) • Organisation (1)	1	*For one mark.*
6	**(b)**		**For one mark:** • Graphic (1) • Image (1)	1	*For one mark.*
6	**(c)**		**Possible explanation of the seat plan and the price demonstrating validity includes:** • The seat plan / prices must be correct and up-to-date (1) showing <u>only</u> seats (1) that are available (1) • The seat plan must show those seats that are available (1) and not already booked by other customers (1) • The customer will know (1) the prices are correct (1) • If the seat plan / prices are not valid (1) then seats may be bought by 2 customers (1) leading to issues when customers come to watch the event (1) • Each seat can have a different view of the stage (1) with some having better views (1) so they are more expensive than others (1) • Any other valid suggestion.	3	*Up to three marks for explanation*
7	**(a)**		**Possible explanation of what is meant by completely anonymised. Includes:** • Any information / data that can link it (1) to the original source / a person (1) has been removed (1) • Any other valid suggestion.	3	*Up to three marks for explanation*

	Question		Answer	Marks	Guidance
7	**(b)**		**Possible explanation of a positive impact on customer includes:** • Customers know their card details are safe (1) • Limiting risk of being used by criminals (1) as if the theatres payment system is hacked (1) then the payment details are not able to be seen (1) • Any other valid suggestion.	3	*Up to three marks for explanation*

7	**(c)**		**A description of one impact that could affect the flow of information during the booking process. includes:**
			• Fault with / unstable internet connection (1st)
			    o Decrease in speed of connection / connection drop out (1) could mean the information does not reach the theatre (1)
			• Invalid format of input (1st)
			    o If the format does not match that required (1) then the booking process will stop (1)
			• Excess / high numbers of users (1st)
			    o which slows the system down (1) so the booking process may not work fully losing tickets (1)
			• Hardware faults (1)
			    o Disrupt the flow of information (1) so the process may have to be started again / the information may not arrive at its destination (1)
			• Human Error (1st)
			    o Incorrect data input (1) Example (1) e.g. card number / postcode
			• Any other valid suggestion.
				3	*1st mark – Identification of impact*
					2nd / 3rd marks – Description of impact.
					
					The impact must be correct to enable the mark for the description to be awarded.

Question			Answer	Marks	Guidance
8	**(a)**		**An explanation of how charts & graphs could be used to analyse sales to include:** • Visually / see (1) which type of seats (1) have sold the most / least (1) • Compare (1) trends & patterns (1) of types of seats sold (1) • Any other valid suggestion. • Example (1) e.g.to see if cheaper seats are sold in greater numbers	4	*Up to three marks for explanation* *1 mark for example relevant to theatre / seats* *Max 3 marks without an example relevant to theatre / seats*
8	**(b)**		**Explanation of why the graphs and charts would be included in the marketing, promotion, and sales category of information includes:** • The sales (1) can be used to inform (1) of the most popular / least popular type of seat (1) which could be used to change seat prices (1) • Graphs / charts showing sales (1) can be used for future events of the same type (1) to target marketing (1) • The graphs / charts would show sales figures (1) for each type of seat (1) for each event (1) • Any other valid suggestion.	4	*Up to four marks for an explanation.*

Question			Answer	Marks	Guidance
9*			**A discussion of the actions that should be taken by the theatre when using photographs of the stars and celebrities to comply with the Copyright, Designs and Patents Act.** <u>**Indicative content:**</u> • Check copyright on any images taken from the internet / photo sharing website • Ask permission from celebrity / star / agent / creator before using photographs • Pay, if required, a fee to use the photograph • Provide details of copyright owner on the theatre website • Do not alter the photograph in any way unless permission from the copyright holder has been given • Take their own photographs • Use © free images • Any other valid suggestion.	10	**Mark band 3 (7 - 10 marks)** The learner has shown a detailed level of understanding by explaining **more than one clear action** needed to be taken to comply with the CD&P Act. 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 at **least one action** needed to be taken to comply with the CD&P Act. Description may concentrate on one action, 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.* **Mark band 1 (1 – 3 marks)** The learner has identified points relevant to the use of CD&P Act, description 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.**
10	**(a)**		**For one mark:** • Entertainment (1) • Communication (1)	1	*For one mark*

Question			Answer	Marks	Guidance
10	**(b)**		**A description of one advantage and one disadvantage to the theatre of using social media includes:** **Advantage** • Can reach a larger number of customers (1) over a large geographical area (1) • Updates / news can be posted (1) to SM pages quickly (1) • A direct connection can be made to customers (1) as they have chosen to follow the pages (1) • A range of media can be used on the SM page (1) so providing interest to customers (1) • Customers can interact with the SM page (1) by posting comments / reviews / likes (1) • Posts can be shared (1) and therefore a greater number of potential customers can be reached (1) • Any other valid suggestion. **Disadvantage** • Negative comments / posts (1) can reach a large audience very quickly (1) • Trolls (1) can deliberately post negative comments (1) • Can be time consuming (1) to keep the SM page up to date (1) • Need to have a dedicated member of staff / hire a new employee (1) which will mean an increase in costs / wages (1) • Any other valid suggestion	4	*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
10	**(c)**		**Explanation of one requirement of Green IT on the theatre includes:** • To use computers / IT resources (1) in an efficient/ environmentally responsible way (1) and to reduce waste by recycling resources / computers / giving to charity for reuse (1). • To reduce carbon footprint (1) by turning off lights / computers (1) when not in use (1) • To become eco-friendly (1) • Any other valid suggestion	3	*Up to three marks for an explanation.* *The focus is on the theatre organisation rather than the staff / customers.* *Accept answers relating to renewable resources / working from home / green certificates or endorsement*

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