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Cambridge Assessment International Education

Cambridge IGCSE™ (9–1)

INFORMATION AND COMMUNICATION TECHNOLOGY **0983/12**

Paper 1 Written **May/June 2020**

MARK SCHEME

Maximum Mark: 100

Published

Students did not sit exam papers in the June 2020 series due to the Covid-19 global pandemic.

This mark scheme is published to support teachers and students and should be read together with the question paper. It shows the requirements of the exam. The answer column of the mark scheme shows the proposed basis on which Examiners would award marks for this exam. Where appropriate, this column also provides the most likely acceptable alternative responses expected from students. Examiners usually review the mark scheme after they have seen student responses and update the mark scheme if appropriate. In the June series, Examiners were unable to consider the acceptability of alternative responses, as there were no student responses to consider.

Mark schemes should usually be read together with the Principal Examiner Report for Teachers. However, because students did not sit exam papers, there is no Principal Examiner Report for Teachers for the June 2020 series.

Cambridge International will not enter into discussions about these mark schemes.

Cambridge International is publishing the mark schemes for the June 2020 series for most Cambridge IGCSE™ and Cambridge International A & AS Level components, and some Cambridge O Level components.

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Generic Marking Principles

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptors for a question. Each question paper and mark scheme will also comply with these marking principles.

GENERIC MARKING PRINCIPLE 1:

Marks must be awarded in line with:

- the specific content of the mark scheme or the generic level descriptors for the question
- the specific skills defined in the mark scheme or in the generic level descriptors for the question
- the standard of response required by a candidate as exemplified by the standardisation scripts.

GENERIC MARKING PRINCIPLE 2:

Marks awarded are always **whole marks** (not half marks, or other fractions).

GENERIC MARKING PRINCIPLE 3:

Marks must be awarded **positively**:

- marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- marks are awarded when candidates clearly demonstrate what they know and can do
- marks are not deducted for errors
- marks are not deducted for omissions
- answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

GENERIC MARKING PRINCIPLE 4:

Rules must be applied consistently e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

GENERIC MARKING PRINCIPLE 5:

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

GENERIC MARKING PRINCIPLE 6:

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

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<table>
<tr><th>Question</th><th>Answer</th><th>Marks</th></tr>
<tr><td>1(a)</td><td>
<table>
<tr><th></th><th>Boolean</th><th>Numeric</th><th>Text (alphanumeric)</th></tr>
<tr><td>Athlete_name</td><td></td><td></td><td>✓</td></tr>
<tr><td>Gold_medal(Y/N)</td><td>✓</td><td></td><td></td></tr>
<tr><td>Age</td><td></td><td>✓</td><td></td></tr>
<tr><td>Name_of_Country</td><td></td><td></td><td>✓</td></tr>
</table>
One mark per correct row
</td><td>4</td></tr>
<tr><td>1(b)</td><td>Six from:
Italic
Increase/decrease font size
Border
Tab
Bold
Superscript
Underline
Text highlighting</td><td>6</td></tr>
</table>

Question	Answer	Marks
2(a)	Command Line Interface/CLI	1
2(b)	**Two** from: Have to remember/learn the commands Have to type in the commands accurately Difficult to edit once commands typed in	2

Question	Answer	Marks
3	Bluetooth Modem Router WiFi	4

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Question	Answer	Marks
4(a)	**One** from: Normal data: Any integer between 1 and 10 **Two** from: (must be a different type) Abnormal data: Any number outside the range/alphabetic/symbol/negative number/decimal number **One** from: Extreme: 1 or 10	**4**
4(b)(i)	**Five** from: Select the whole sheet Right click then Format cells Click Protection tab ... ... unlock cells Highlight F3:F6/Forecast grades column/column F Lock cells Click on Review then protect sheet	**5**
4(b)(ii)	Calculates the Average of the range B3 to D3 Rounds up the answer to 0 decimal places/integer	**4**
4(c)	**Three** from: Highlight A3:A6 Hold CTRL Select G3:G6 Click insert Column/bar graph **Three** from: Add legend Add chart title Add axes labels Remove gridlines Change colour/thickness of the bars	**6**

Question	Answer	Marks
5	**Two** from: File transfer protocol Used when transferring files from one computer to another over the internet	**2**

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Question	Answer	Marks
6(a)	Max **five** from: *Comparisons* Both use communication devices to collect personal data Both require the user to communicate quickly Both require the user to enter personal data Both use the internet Max **five** from: *Differences* Smishing: fake text messages/SMS are sent to a phone Phishing: fake emails are sent to your computer In smishing the user may be asked to make a phone call A smishing message is shorter than a phishing email Easier to spot a smishing message Smishing messages tend to use 5000 in the message	**6**
6(b)	**Six** from: Avoid clicking on any unknown emails with links. Do not reply to emails that have asked you about any of your personal data. Report any suspicious activity. If the email urges you for a quick reply then that is a clear sign of phishing. Do extensive research before replying to any message, check the domain name/company name If the email is too good to be true, it possibly is Check the time when the unknown email was sent. If the email was sent at an unusual time, then that is another sign of phishing. If the to: box has a large number of similar emails to yours then it is phishing If there are several grammar mistakes then it is suspicious	**6**

Question	Answer	Marks
7(a)	3D printer	**1**
7(b)	LCD Monitor	**1**
7(c)	Buzzer	**1**

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Question	Answer	Marks
8	Max **four** from: *Advantages* Tablet computers are more portable Can be used in more places than a desktop computer Smaller footprint as the units are not separate Powered by battery so can be used away from a power supply Internet connection may be better as device is portable Max **four** from: *Disadvantages* Tablet computers are easier to steal/lose As the elements of a desktop computer are separate they are easier to upgrade/tablet computers are one unit Batteries can run out/desktop computers have less chance of running out of power Screens are smaller Keyboard tends to be onscreen/touch screen therefore can be harder to use No mouse therefore pointing devices/touchscreen can be harder to use Webcams tend to be static therefore harder to use Less standard ports/sockets Desktop computers have a better heat dispersion rate Desktop computers are less likely to be damaged as they are not portable.	**6**

Question	Answer	Marks
9(a)	**Two** from: Can lead to unhealthy eating due to dependency on ready meals Can lead to laziness Lack of fitness/exercise Manual household skills are lost	**2**

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Question	Answer	Marks
9(b)	Max **four** from: *Drawbacks* Security issue with the data being sent as passwords can be accessed Leads to laziness as voice control used Heavily reliant on power/battery power Other people can hack devices Reliant on the WiFi connection Can be affected by walls/weather Affected by distance from the WAP Max **four** from: *Benefits* Smartphones can connect to the devices and can control them Wireless so no tripping over wires Voice control can be used to activate the devices Home surveillance from afar TV on demand Keyless door locks are more secure	**6**

Question	Answer	Marks
10	**Four** from: The music score can be generated from the music played The editing/correcting of the music score in a different key is faster Solo music scores can be easily transformed into music for many parts Software can automatically correct the music score Music can be played automatically as it is written Music notes are automatically printed out in the correct format Music scores can be saved for future editing	**4**

Question	Answer	Marks
11(a)	Interview members of the target audience to see what they want from the presentation Give out questionnaires to the target audience	**2**
11(b)	**Four** from: Select slide 1 Click Insert … ... Select Audio Locate the music on PC and select Click play in background Test it by running the slideshow	**4**

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Question	Answer	Marks
11(c)	**Four** from: The font needs to be easy to read Larger font needed Different font Bright colours Animation used Simpler language Shorter length Transition effects More pictures than text Different music	**4**

Question	Answer	Marks
12(a)	Damage to fingers and wrists – 1 mark **One** from: Caused by continuous use of a keyboard Caused by repetitive clicking of a mouse button	**2**
12(b)	**Three** from: Use an ergonomic keyboard Use an ergonomic mouse Use a wrist rest/use a mouse rest Use voice-activated software Take regular breaks Maintain correct posture of arms	**3**

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Question	Answer	Marks
13	Max **seven** from: *Differences* Optical discs such as CDs, DVDs and Blu-ray discs … …. are read from and written to using a laser beam Solid state storage such as pen drives and SSDs … …. are read from and written to using semiconductor chips Optical discs have slower access times Optical discs have slower transfer rates Optical discs can be more easily scratched Solid state do not have to get up to speed before they work Solid state has lower power consumption Max **seven** from: *Comparisons* Both store videos, music, files, images, data Both are portable Both use direct access Both can be easily lost/stolen Both backing storage	**8**

Question	Answer	Marks
14	**Six** from: Internal storage examples RAM and ROM Internal storage is chip based Backing storage can be solid state, optical or magnetic Backing storage is permanent storage RAM loses memory when computer is turned off RAM contains current instruction ROM contains instructions to boot up the computer Backing storage has slower access speeds More storage in backing storage	**6**

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