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Cambridge International General Certificate of Secondary Education

INFORMATION AND COMMUNICATION TECHNOLOGY **0417/11**

Paper 1 Written **May/June 2016**

MARK SCHEME

Maximum Mark: 100

Published

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1 **(a)** RFID reader [1]

(b) Optical Character Reader [1]

(c) Chip reader [1]

(d) Magnetic stripe reader [1]

2

	applications (✓)	systems (✓)
Word processing	✓	
Compilers		✓
Interpreters		✓
Spreadsheet	✓	

4 correct answers – 2 marks
2 or 3 correct answers – 1 mark
1 correct – 0 marks [2]

3

	TRUE (✓)	FALSE (✓)
Most modern laptop computers have webcams built in	✓	
Desktop computers are not very portable	✓	
All desktop computers have a touchpad built in		✓
Laptop computers are rarely supplied with a mouse.	✓	

4 correct answers – 2 marks
2 or 3 correct answers – 1 mark
1 correct – 0 marks [2]

4 **(a)** Phishing [1]

(b) Pharming [1]

(c) Spam [1]

(d) Smishing [1]

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5 **Four** from:

Information must be processed fairly and lawfully
Information collected must be processed for limited purposes
Information collected must be adequate, relevant and not excessive
Information collected must be accurate and up to date
Information must not be held for longer than is necessary
Information must be processed in accordance with the individual's rights
Information should not be transferred outside the area of the Act unless adequate levels of protection exist. [4]

6 **Four** descriptions from:

Phone call
Text message
Email
Social network site
Blog/microblog
Video call [4]

7 **(a)** **Two** from:

Payroll workers
Typing pool workers
Car production workers
Checkout operators
Bank workers [2]

(b) **Two** from:

Website designers
Computer programmers
Delivery drivers in retail stores
Computer maintenance staff
Robot maintenance staff [2]

8 **Four** from:

Stores IP addresses
IP address is a unique identifier set up by network manager/ISP
Can change but should match the network it's on
IP address consists of 4 numbers separated by full stops
Stores MAC addresses
6 pairs of hexadecimal digits
MAC address is usually hard coded by manufacturer, never changes [4]

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9 (a) **Three** from:

Encrypting the password
Ask for memorable information, such as mother's maiden name
Changing passwords very regularly
Use TANs
Only being asked for or providing a limited number of characters from the password
Twin factor authentication [3]

(b) **Three** from:

Save travelling expenses
Saves time travelling/queuing
Elderly/disabled people don't have to travel
No embarrassment having to ask for loans face to face
Can bank when banks are closed
Use it anywhere there's an internet connection [3]

10 (a) The car registration number [1]

(b) **Two** from:

Car owner's name
Car driver's name
Height of vehicle
Colour of vehicle
Credit/debit card details
Make of car/model of car
Length of vehicle [2]

(c) **Two** from:

As the car arrives a camera takes a snapshot of the number plate as an image
Stores it in a file
Software identifies where number plate is in image and crops that part of the image
The OCR software converts the registration number to numbers/letters [2]

(d) **Three** from:

The number plate is compared…
…with those stored on the customer file
When a matching record is found
The name of the customer is read
The name is merged into the message
And a signal is sent to screen to display the appropriate part of the message [3]

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11 (a) Price… – 1 mark
…descending order – 1 mark [2]

(b) Year_released… – 1 mark
…ascending order – 1 mark [2]

(c) Year_released<2010 AND Price<8.99

Year_released – 1 mark
<2010 – 1 mark
AND – 1 mark
Price – 1 mark
<8.99 – 1 mark [5]

(d) Erasure, Jimmy Smith

1 mark if only one of these given
Minus 1 for each additional artist, to a mark of zero [2]

12 (a) **Six** from;

As it stands the form is not fit for purpose.
On the one hand:
The fields which require completion are all included.
Fields are clearly labelled
The space allowed for data entry is more than adequate
On the other hand the form could be improved by having:
Appropriate space for each field
Screen more spread out
Larger font for field names
Drop down list for Number of adults, Number of children, Number of infants (1 mark each, 2 max.)
Drop down list for date of return/date of departure
Drop down list for Class
Separate drop down lists for dd/mm/yyyy
Navigation buttons could be included to move between records
Drop down list for Number of adults, Number of children, Number of infants (1 mark each, 2 max.) [6]

(b) **Three** from:

A format check ensures that data is in a specific format…
…such as two digits for day, two digits for month and four digits for year
In the table above the date would be rejected by this check as it has one digit for the month in one example two in the other
In the table above the date would be rejected by this check as it has two digits for the day in one example and one in the other [3]

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13 (a) **Two** from:

A URL is a Uniform Resource Locator
Is the unique address for a file that is accessible on the Internet
It consists of a protocol usually http or https
Then a domain name that identifies a specific computer on the Internet
Then a pathname that specifies the location of a file in that computer. [2]

(b) **Three** from:

http://www.cie.org.uk/gcseict/giraffe.htm
When the giraffe image is clicked on
The user would be redirected to the part of the CIE website
This website contains the giraffe web page [3]

14 **Three** from:

Used advanced searches
Use Boolean operands…
…use + and – to limit results to only key words
Use speech marks around key phrases
Use the specific web address [3]

15 Generic file formats are those that when files are saved in that format they can be used in different types of application software – 1 mark

Three from:

A .txt file can be imported into any text editor/ word processing/DTP package
A .csv file can be imported into any spreadsheet
A .jpg/.gif/.png file can be used in most bitmap image editing software
A .pdf can be used in any document format reader
A .rtf can be used in any word processor and retains some formatting
A .css can be opened in any text editor
A .htm can be opened by any web browser [4]

16 **Four** from:

The letter will be more personal/can have the member's name on it
The letter will be of better quality and look more professional
Easier to target team members of specific sports
Easier to identify how many letters to print
Address labels are easier to produce using the data from the database [4]

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17 (a) (i) Host nations/Venues/Country [1]

(ii) Number of times hosted [1]

(iii) The number of times Countries that have hosted the Commonwealth Games [1]

(b) Bar/column chart [1]

18 **Three** matched pairs from:

Content layer
Content can consist of text or images [2]

Presentation layer
This layer is defined by the CSS or styles to indicate how elements are displayed [2]

Behaviour layer
This layer of a Web page allows interaction [2]

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19 To be marked as a level of response:

Level 3 (7–8 marks)
Candidates will describe in detail the reliability and unreliability of at least two methods of preventing unauthorised access to data.
Examples will be given and will be appropriate.
The information will be relevant, clear, organised and presented in a structured and coherent format.
Specialist terms will be used correctly and appropriately.

Level 2 (4–6 marks)
Candidates will describe the reliability or otherwise of methods of preventing unauthorised access to data.
For the most part, the information will be relevant and presented in a structured and coherent format.
Examples will be given and will be mostly appropriate.
Specialist terms will be used appropriately and for the most part correctly.

Level 1 (1–3 marks)
Candidates will identify some of the methods of preventing unauthorised access to data.
Answers may be in the form of a list.
There will be little or no use of specialist terms.
Errors of grammar, punctuation and spelling may be intrusive.

Level 0 [0 marks]
Response with no valid content

Examples of reliability of methods
User id and Password will…
…prevent users who do not know the password from gaining access
…will reject users who try to guess passwords (usually after 3 attempts)
Strong passwords using a mixture of alphabetic, alphanumeric and special characters…
…will be difficult to guess
Biometrics are unique and are almost impossible to duplicate…
…only the user who has those characteristics can access the laptop
Using biometrics means that passwords don't have to be remembered
Laptops can now come with fingerprint scanner
Laptops can have built in retina identification

Examples of lack of reliability
Strong passwords can be difficult to remember
…can be easily forgotten
…can be easily disclosed to any user
Software for retina scan can malfunction
User can have fingerprints affected by injury/cut on a finger
Laptops with this technology tend to cost more
Low cost fingerprint technology tends to be inaccurate
Fingerprints can be copied by expert thieves [8]

20 Each paragraph has been indented on the first line [1]
Each occurrence of Cambridge Primary has been emboldened [1]
The line spacing has been increased [1]
The text has been fully justified [1]

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