

**CAMBRIDGE INTERNATIONAL EXAMINATIONS**

Cambridge International General Certificate of Secondary Education

**MARK SCHEME for the October/November 2015 series**

**0417 INFORMATION AND COMMUNICATION  
TECHNOLOGY**

**0417/11**

Paper 1 (Written), maximum raw mark 100

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- 1
1. It minimises the window
  2. It reduces the size of the window
  3. It closes the window
  4. It goes to the home page
  5. It goes to favourites/feeds/history/adds to favourites
  6. It allows you to search

[6]

2

<b>Application</b>	<b>Graph plotter</b> ✓	<b>Laser printer</b> ✓	<b>Dot matrix printer</b> ✓
Rapid, high quality and high volumes of output		✓	
CAD where large printouts are required such as A0	✓		
Industrial environments such as car repair companies			✓
Printing on multipart forms			✓

[1]

[1]

[1]

[1]

3

<b>Application</b>	<b>Storage method</b>
Theatre booking systems	Hard disc
Storing photographs in a camera for printing at a later time	Flash memory card
The most portable device used to transport data from computer to computer	Pen drive
A disc used to sell music albums without video	CD ROM

[1]

[1]

[1]

[1]

4

Use	Modelling ✓	Control ✓	Measurement ✓	
The maintaining of growing conditions in a greenhouse		✓		[1]
Simulating car driving	✓			[1]
Monitoring the environment			✓	[1]
Using what ifs	✓			[1]

5 (a) The input device used in flight simulation is **a joystick** [1]

(b) The type of memory used to store the work that the user is currently working on is **RAM** [1]

(c) A medium used to backup data is **magnetic tape** [1]

6 **Three** matched pairs from:  
 FORWARD n  
 Move n units forward  
  
 BACKWARD n  
 Move n units backward  
  
 RIGHT t  
 Turn right t degrees  
  
 LEFT t  
 Turn left t degrees [6]

7 (a) Temperature [1]  
 Light [1]

(b) **Five** from:  
 – Light source placed one side of/outside the beaker  
 – Light sensor placed other side of/inside the beaker  
 – Temperature sensor placed inside the beaker  
 – Sensors connected to the ADC/computer  
 – Heat source placed below beaker until colour change occurs  
 – The sensors feed back data to microprocessor/computer  
 – Data is converted from Analogue to Digital  
 – Readings are printed out/displayed/ Graphs are automatically produced by computer...  
 – ...light plotted against temperature/time [5]

8 LAN

**Two** from:

- LAN is a Local Area Network
- LAN covers a small area/one building
- A school network is a LAN

WAN

**Two** from:

- WAN is a wide area network
- WAN covers a large geographical area/worldwide
- The Internet is a WAN
- A WAN consists of connected LANs

WLAN

**Two** from:

- WLAN is a wireless local area network
- Uses wireless technology to transmit data
- Uses Wireless Access Points (WAPs) connected to a wired network

[6]

9

	✓
Once bought robots do not have to be paid	
They have to do less hazardous jobs	✓
They don't need to lift heavy loads	✓
They can become deskilled	
It can lead to unemployment	
They work in a cleaner/healthier working environment	✓
They can work whenever they want	
They get a massive pay rise	

[3]

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**10 Seven** from:

- The customer is asked to type in their PIN
- The ATM checks to see if the card is valid/in date/stolen
- The customer is asked which language/currency they require
- The bank account details are read from the chip
- Customer is asked if they want a receipt
- The typed PIN number is compared with that stored in the chip
- If they are the same the transaction proceeds
- If they are not the same the customer is asked to re-enter PIN
- If three failed attempts transaction rejected and card withheld
- The customer is asked which service is required
- The customer is asked how much money they want to withdraw
- The amount is checked against the card limit
- If transaction is authorised, transaction is completed/if transaction is not authorised, transaction is rejected

[7]

**11 Three** from:

- It is a form/type of blog
- Shorter in length than a normal blog
- Consist of short sentences
- Posts are called microposts
- Accessed by subscribers

[3]

**12 (a) 8**

[1]

**(b) 5**

[1]

**(c) E3000**

[1]

**(d) Computer\_type**

[1]

**(e) Format check**

Must have one letter ...

[1]

... followed by 4 digits

[1]

[1]

**(f) Two** from:

- Data in RAM can be lost if computer shuts down/volatile
- Data in RAM can be corrupted
- Data in RAM can be accidentally deleted
- RAM is relatively very expensive per unit of memory

[2]

Page 6	Mark Scheme	Syllabus	Paper
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- 13 (a)** Interview [1]  
 Can change questions in light of previous answers/interviewer can detect body language [1]
- Questionnaire [1]  
 Quicker to get every worker's response/easier to collate responses [1]
- Examining documents [1]  
 Can see exact details of inputs and outputs [1]

**(b) Three from:**

- Design of data capture forms
- Design of screen layouts
- Design of report layouts
- Design of screen displays
- Design of validation routines
- Design of data/file structures
- Choice of hardware
- Choice of software [3]

**(c) Five from:**

- User documentation needs to be provided
- This will help people use various features of the new system/so users will know/learn how to use the system/learn how to deal with errors
- Features such as how to save/print/enter data/troubleshooting/FAQs, etc. need to be provided
- Technical documentation needs to be provided
- This will help a programmer or systems analyst to upgrade the system
- This will help a programmer or systems analyst to modify the system
- Will contain technical elements such as program listing/flowcharts/lists of variables, etc. [5]

**14 Four from:**

- Place/organise in folders
- Sort the emails
- Flag for importance
- Delete from phone
- Delete from server
- Search/filter emails
- Archive emails [4]

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**15 Three** matched pairs from:

A hub

Broadcasts data to all computers/devices in a network

A bridge

Passes data to another network

A switch

Passes data to specific computers/devices in a network

A proxy server

Retrieves web pages and passes them to the computer that requested it/caches web pages [6]

**16 Six** from:

*Advantages*

- More portable than PC/laptop
- Can access internet in most places if they are part of a phone plan unlike PC/laptop
- Larger screen area than smartphones
- Carry resources round with them

*Disadvantages*

- Smaller screen area than laptop/PC
- Touch screen so keyboard can be more difficult to use compared to laptop/PC
- Not as portable as smartphone
- Cannot access internet in as many places if they are not part of a phone plan
- More difficult to produce complex worksheets than PC/laptop

[6]

**17 Eight** from:

- DVDs are used to hold very large files several Gb
- DVDs used to store films/movies
- DVD RWs useful for keeping generations of files
- DVDs discs can be used to store computer data
- DVD ROM used for applications which require the prevention of deletion of data
- DVD ROMs used by software companies for distributing software programs and data
- DVD ROMs used by film/movie distributors
- DVD R used in applications which require a single 'burning' of data
- DVD RW used for applications which require the updating of information/record over old data
- DVDs have between five and ten times the capacity of CDs
- DVD RAM has the same properties as DVD RW but with quicker access
- DVD RAM data can be overwritten more easily
- DVDs are portable/can be transported from one computer to another
- DVD ROMs cannot have data changed

[8]