

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

Application	Graph plotter ✓	Laser printer ✓	Dot matrix printer ✓
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

Application	Storage method
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]

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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]

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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 ...

... followed by 4 digits

[1]

[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]

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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]