

## **MARK SCHEME for the June 2005 question paper**

<p style="text-align: center;"><b>0418 INFORMATION TECHNOLOGY</b> <b>0418/01 Paper 1 (Written), maximum raw mark 80</b></p>
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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 Examiners were initially instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began. Any substantial changes to the mark scheme that arose from these discussions will be recorded in the published *Report on the Examination*.

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 must be read in conjunction with the question papers and the *Report on the Examination*.

- CIE will not enter into discussion or correspondence in connection with these mark schemes.

CIE is publishing the mark schemes for the June 2005 question papers for most IGCSE and GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.

**Grade thresholds** for Syllabus 0418 (Information Technology) in the June 2005 examination.

	maximum mark available	minimum mark required for grade:			
		A	C	E	F
Component 1	80	64	52	39	35

The threshold (minimum mark) for B is set halfway between those for Grades A and C.  
The threshold (minimum mark) for D is set halfway between those for Grades C and E.  
The threshold (minimum mark) for G is set as many marks below the F threshold as the E threshold is above it.

Grade A\* does not exist at the level of an individual component.

June 2005

**IGCSE**

**MARK SCHEME**

**MAXIMUM MARK: 80**

**SYLLABUS/COMPONENT: 0418/01**

**INFORMATION TECHNOLOGY  
Paper 1 (Written Paper)**



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- 1    **A** Laptop computer  
**B** Mouse  
**C** CD Rom  
**D** Floppy disc  
**E** Graphics tablet
- 1 mark each [5]
- 2    Floppy disc  
Magnetic tape
- 1 mark each [2]
- 3    TRUE  
FALSE  
TRUE  
FALSE
- 1 mark each [4]
- 4    Three from:
- Backache  
RSI  
Eyestrain  
Headaches  
Radiation from monitor [3]
- 5    Data Handling  
Word processing
- 1 mark each [2]
- 6    Three from:
- Take more accurate readings  
One safety aspect  
Readings are more reliable/taken at regular intervals  
More readings can be taken in a short period of time  
Results can be more easily / quickly produced  
Graphs are easier/automatically produced [3]
- 7    **RIGHT (90)**  
**(REPEAT) 6 (or more)**  
**(FORWARD) 50**  
**LEFT (60)**  
**END REPEAT**
- 1 mark each [5]

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- 8 (a) Any cell in range B3:E6 [1]
- (b) Any cell in range D3:D6 [1]
- (c) 6 [1]
- (d) Any cell in range B3:D6 [1]
- (e) E5 [1]
- 9 Three from:
- Search for information on borrowers  
 Search for information on books  
 Store (new) records of books  
 Store records of borrowers  
 Print out overdue reminders  
 Calculate fines  
 Identify reading habits of pupils [3]
- 10 (a) Moisture  
 Pressure/weight  
 Temperature  
 Ph  
 Water level [3]
- (b) Mention of correct item of data (water level, weight of clothes, temperature, washing liquid sensor or user input) [1]  
 Compares with pre-programmed/user set value [1]  
 If temperature too high microprocessor switches off heater/if water level reached microprocessor switches off valve/if clothes too heavy microprocessor sounds alarm. [1]
- Allow follow through if wrong answer is given in a).**
- 11 (a) Three from:
- Easier to know when they need to re-order  
 Automatic re-ordering  
 Can keep records of usage of items  
 Easier/quicker to know how many in stock  
 Names of suppliers/stock items easier to find  
 Less physical space required (for database)  
 Ease of backup  
 Easier to keep it up to date [3]
- (b) Double entry  
 Visual comparison with original
- 1 mark each [2]

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(c) Two checks from:

Range, length, existency/presence, unique for code, input mask, type check.

Examples are:

Code – length check (1) how it would be used (1)

Quantity in stock – range check (1) how it would be used (1)

Need re-ordering – invalid character check (1) how it would be used (1)

Telephone number of supplier – length check (1) how it would be used (1).

Describe the validation check (1) identify the check and matched to a suitable field [4]

(d) Numeric [1]

Boolean/logical [1]

Text/alphanumeric [1]

Text/alphanumeric [1]

12 (a) Two from:

Sound

Animation

Video

[2]

(b) Two from:

Microphone

Speakers

Sound card/midi card/audio digitiser

[2]

(c) Two from:

In case the file is accidentally deleted

In case file is corrupted/changed

In case hackers delete it

In case of viruses

[2]

13 Two from:

Desk Top Publishing/graphics package

Advertising posters/programmes

Spreadsheet

Calculating points gained by houses or years/recording or displaying results

Database

Names or addresses of parents or pupils for invitation to the event/recording or displaying results

Word processing

Letters to parents/community advertising sports day.

Presentation package

Show parents what activities take place

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Web editor

Develop a web page publicising event

1 for each separate type of software. 2 maximum

1 for each valid use. 2 maximum

[4]

**14 (a)** Modem

[1]

To convert analogue to digital/digital to analogue

[1]

**(b)** Two from:

Parents unable to use the phone

Undesirable sites may be accessed

Phone bills will rise

Arguments over who can use computer

May download a virus

Hacker can access data

May receive unsolicited e-mails from undesirable characters

[2]

**15** Hackers may read the data and pass it on

[1]

Data can be encrypted/Usernames/Passwords can be used/do not connect the computers to a network/if connected to a network use dedicated lines/physical security – locks on computer room doors/firewall

[1]

Hackers may delete the data

[1]

Usernames/Passwords can be used/do not connect the computers to a network/if connected to a network use dedicated lines/physical security – locks on computer room doors/firewall

[1]

Hackers may amend the data

[1]

Data can be encrypted/Usernames/Passwords can be used/do not connect the computers to a network/if connected to a network use dedicated lines/physical security – locks on computer room doors/ firewall

[1]

NOT backups

Do not award more than one mark for a repeated reason.

**16** Five such as:

Laptops can be transported from room to room

Can not share resources on laptops/more difficult to print out work

Can not use laptops to access work which may have been saved in other lessons

Can use laptops outside the classroom in Science/Geography/at home

Cannot use the Internet/email

More fragile

Have a smaller footprint

Desktops have more memory/bigger hard discs

Less susceptible to hacking

Less susceptible to virus

Laptops may be more expensive to buy/repair than network stations

Difficult to use keyboard/mouse on laptop

Laptops need recharging from time to time

When the network is down cannot use network computers/can still use laptops

[5]

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**17** Two from:

- Hackers may intercept data (1) and defraud customer (1)
- Easier for customers to mismanage accounts (1)
- Customers deprived of personal communication (1)
- Easier for customers to make transactions (1)
- Can be used 24/7(1) from anywhere (1)
- No need to queue (1)
- Do not have to wait for post (1)
- Immediate transfers can be made (1)

2 points and 2 descriptions

**[4]**