

MARK SCHEME for the November 2004 question paper

<p style="text-align: center;">0418 INFORMATION TECHNOLOGY 0418/01 Paper 1 (Written), maximum raw mark 80</p>

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 November 2004 question papers for most IGCSE and GCE Advanced Level syllabuses.

Grade thresholds taken for Syllabus 0418 (Information Technology) in the November 2004 examination.

	maximum mark available	minimum mark required for grade:			
		A	C	E	F
Component 1	80	54	43	30	27

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.

November 2004

INTERNATIONAL GCSE

MARK SCHEME

MAXIMUM MARK: 80

SYLLABUS/COMPONENT: 0418/01

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



Page 1	Mark Scheme	Syllabus	Paper
	IGCSE– NOVEMBER 2004	0418	1

1	A - Monitor	1
	B - Mouse	1
	C - Keyboard	1
	D - Floppy disc drive	1
2	Monitor	1
	Plotter	1
3	Fit an anti-glare screen	1
	Use a wrist rest	1
4	Software	1
	Hardware	1
	Hardware	1
	Software	1
5	Control	1
	Measuring	1
6	RIGHT	1
	8	1
	50	1
	LEFT	1
	END REPEAT	1
7	FALSE	1
	TRUE	1
	TRUE	1
	FALSE	1
8(a)	Two from: Ph/acidity/alkalinity Temperature Light Radiation Any named chemical sensor e.g. dissolved oxygen/O ₃ /Nitrate/Nitrite/Ammonia	2
(b)	Temperature is analogue data and/or the computer uses digital data.	1
(c)	Analogue to digital converter.	1
(d)	Two from: Take more accurate readings More readings can be taken in a short period of time Results can be more easily/quickly produced Graphs are easier/automatically produced No chance of forgetting to record the temperature Collects temperature over long periods continuously/automatically Data can be automatically stored and used in other programs Safety considerations	2
(e)	Spreadsheet/database	2
(f)	DTP/Word processor/Presentation software/web page editor	1

Page 2	Mark Scheme	Syllabus	Paper
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- (g)** (for spreadsheet read spreadsheet/database and for DTP read DTP/Word processor/Presentation software)
- Three from: Spreadsheet file will be saved in suitable format
 Template/frames created in DTP package
 Spreadsheet file imported/copied and pasted in to DTP package
 Pictures imported into DTP package
 Text typed in and formatted
 Headings formatted **3**
- Equivalent web page answers will be accepted.
- 9** Two from: Disable macros and scripts
 Do not use floppy discs from unknown sources
 Do not use CD ROMs from unknown sources
 Do not download files from the Internet/do not stay on Internet too long because of risk of viruses
 Do not load attachments to e-mails from unknown/doubtful sources
 Firewalls **2**
- 10 (a)** Two from: Users can save data in their own storage area wherever they are
 Users can get any networked software wherever they are
 Need fewer printers
 Standardising of software
 Users do not need to keep using the same machine
 Users can access school intranet from anywhere
 Users can access Internet from anywhere
 Do not need to carry CD Roms/floppy discs around
 It is easier to communicate with...
 Can email work to teachers
 Staff can monitor students
 Can take advantage of network security
 Can share files **2**
- (b)** Two from: Work can be hacked into more easily
 If no network point convenient users cannot work
 Expense of network cards
 If server goes down users cannot work
 Students can use Internet inappropriately
 Viruses can be downloaded
 Cost of updating/replacing server **2**
- 11 (a)** Two from: Clip art
 Images/graphics
 Sound
 Video/Animation
 Word Art
 Charts/graphs **2**
- (b) (i)** Two from: Making a copy of file(s)
 On an alternative medium
 In case anything happens to original **2**

Page 3	Mark Scheme	Syllabus	Paper
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- (b) (ii) Original could be deleted accidentally
Original could be deleted by hackers
Original could be corrupted by system failure
Original could be corrupted by hackers 2

12 (a) Advantages of CD Rom

One mark each for:

- No danger of accessing doubtful websites.
- Does not take as long to find required information
- Do not have to have a modem
- Do not need to be near a telephone line
- Once CD Rom is bought there is no additional expenditure
- Do not have to remember user id/password
- Usually quicker to load material
- Information on CD is more reliable

Advantages 3 max

Disadvantages

One mark each for:

- CD Rom can be lost
- CD Rom can be damaged
- Internet is up to date/CD Rom is soon out of date
- CD ROMs are expensive to replace/update
- Limit to size/detail of information available

Disadvantages 3 max

4 max overall

(b) Problems:

One mark each for:

- Floppies not enough capacity for large files
- Risk of transmitting viruses
- Risk that work may not be student's own
- Home computer may not be compatible with software
- Floppy could become damaged
- Files could be corrupted

3 max

Prevention:

One mark each for:

- Virus protection/killer software
- Issue students with rewritable high capacity media
- Ask students to sign affidavit as to authenticity
- Allow students to borrow laptops
- Allow students to send e-mail attachments to school

3 max

4 max overall

Page 4	Mark Scheme	Syllabus	Paper
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13 (a)	Second Name/Column A	1
(b)	= Average(d4:f4) or sum(d4:f4)/3 or (d4 + e4 + f4)/3	1
(c)	O'Neill, Michelle	1
(d)	Two from: Password protect laptop Password protect file/data Keep laptop locked securely away when not in use Encrypt data Keep data on rewritable medium only/email home and delete work Lock rewritable medium securely away Firewalls	2
(e)	Five from: Type formula in ... (student gives appropriate cell references) To calculate average of d3:d10, e3:e10 and f3:f10 Highlight d11:f11 Highlight d1:f1/type in category access label Click on graph icon Select bar/column chart Type in value/y axis heading	5
	Three from: Students can learn at their own pace Work can be individually targeted Work is assessed automatically/do not have to wait for teacher to mark Students can continue with next stage immediately/do not have to wait for others to catch up Materials are more entertaining/exciting/interesting Computers are more motivating to students than teachers Using Internet for research	3
14 (a)	Advantages	
	One mark each	
	Students will have greater access to computers Laboratories are usually large Lots of existing electric sockets Cost less to convert than an ordinary classroom Lots of existing benching which could be used	Advantages 3 max
	Disadvantages	
	One mark each	
	Students will have less access to Science Laboratories have lots of windows usually - increased risk of sun glare on screens Network points to benches may lead to trailing wires Water/gas pipe outlets could be dangerous Benches and stools in labs not suited to good posture when using computers	Disadvantages 3 max
		5 max overall

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- (b)** Two from:
- Can search for data quickly
 - Less bulky
 - Environmentally friendly
 - Can be transported easily
 - Can easily be altered
 - Easier to read
 - Quicker to copy
 - Can sort/print in any order
 - Easier to keep information together on a database rather than paper
 - Easier to check for errors using validation
- 2**

- 15** Hackers may read the data and pass it on
 Hackers may delete the data
 Hackers may amend the data

- Three from:
- Data can be encrypted
 - Username/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
 - Proxy server security

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