

MARK SCHEME for the June 2005 question paper

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| <p style="text-align: center;">0418 INFORMATION TECHNOLOGY 0418/02 Paper 2 (Written), maximum raw mark 80</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 2 | 80 | 58 | 43 | 30 | 22 |

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: 0418/02

**INFORMATION TECHNOLOGY
Paper 2 (Written Paper)**

| Page 1 | Mark Scheme | Syllabus | Paper |
|--------|------------------|----------|-------|
| | IGCSE– JUNE 2005 | 0418 | 2 |

| | | |
|---|---|--------------------------|
| 1 | bar code reader magnetic stripe reader [1] each | [2] |
| 2 | telephone line modem [1] each | [2] |
| 3 | reminders for overdue books can be sent out automatically librarians can find borrowers' records more quickly [1] each | [2] |
| 4 | (a) a robot (b) MICR (c) bar code reader (d) OMR | [1] [1] [1] [1] |
| 5 | FALSE TRUE TRUE FALSE | [1] [1] [1] [1] |
| 6 | (a) observation questionnaires | [1] [1] |
| | (b) two from: parallel running/implementation pilot running/implementation phased running/implementation direct changeover | [2] |
| | (c) two from: can sort records can produce graphs can save file can print file/records/data/reports can produce input forms <u>easy</u> to edit records <u>easy</u> to add/delete records can encrypt data can password protect the file (not just 'passwords' on its own) | [2] |
| | (d) direct/random | [1] |

| | | | |
|--------|------------------|----------|-------|
| Page 2 | Mark Scheme | Syllabus | Paper |
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- (e)(i) two from:
- program listing/coding
 - list of variables
 - program flowchart
 - system flowchart
 - file structure
 - purpose of the system
 - screen layouts
 - print formats
 - purpose of the program
 - hardware (requirements)
 - software (requirements)
 - sample runs
 - error messages
 - validation routines
- [2]

- (ii) two from:
- how to use the system
 - how to load software/how to install
 - how to run software
 - how to save a file
 - how to search
 - how to sort
 - how to print
 - troubleshooting guide
 - screen layouts (only if not mentioned in technical documentation)
 - print formats (only if not mentioned in technical documentation)
 - error messages (only if not mentioned in technical documentation)
 - hardware requirements (only if not mentioned in technical documentation)
 - software requirements (only if not mentioned in technical documentation)
 - sample runs (only if not mentioned in technical documentation)
- [2]

- 7 LAN
- two from:
- a network of computers
 - computers need network cards
 - local area network
 - usually within the same building
 - requires a server
 - does not require a modem
- [2]

- WAN
- two from:
- wide area network
 - connects LANs together
 - requires a modem
 - requires a phone/dedicated line
 - computers/LANs can be large distances apart
 - sharing resources or topology descriptions = 0
- [2]

| Page 3 | Mark Scheme | Syllabus | Paper |
|--------|------------------|----------|-------|
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- 8 (a)** keypad/board/keying in/typing [1]
bar code reader [1]
- (b)** two from:
bar code reader – less likelihood of errors/more accurate
faster data entry
keypad – bar code labels can be damaged
plastic covering over bar code hinders reading
- Allow follow through if answers to **(a)** are wrong [2]
- (c)** two from:
credit card/account number
expiry date
start date
issue number
sort code/bank type
verification/security number
Do NOT accept PIN or name [2]
- 9 (a)** two from:
quicker to search for information
can have sound
can have video/animation
easier to download information
less waste of paper
portability = 0 [2]
- (b)** two from:
more difficult to skim read
more difficult to see whole page at a time
you have to have a computer/cannot always read it where you want to
more difficult to highlight passages/annotate text [2]
- 10 (a)** title [1]
author's name [1]
reference/accession number/ISBN/publisher/picture of cover/ Dewey number/
genre/fiction or non-fiction/target age group/picture of author/date published/
summary of contents/no. of copies [2]
(**[2]** for 4 items, **[1]** for 3 items else 0)
information fills the page OR is clearly a screen form [1]
- (b)** user id/membership number [1]
password/PIN [1]
- (c)** two from:
could see confidential information
could pass confidential information on to others
could change information
could delete information [2]

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|--------|------------------|----------|-------|
| Page 4 | Mark Scheme | Syllabus | Paper |
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- (d) two from:
 save costs in phone calls to borrowers
 save postage costs
 save cost of wages – fewer librarians needed
 encourage more borrowers
 fewer overdue books as borrowers could find return date easier [2]
- (e) Advantages
 two from:
 takes less time to send a message
 do not have to worry about borrower being engaged
 do not have to worry about borrower being out
 many copies of message can be sent simultaneously
 cheaper to send emails than phoning [2]
- Disadvantages
 two from:
 address is easier to mistype without realising
 lose the personal touch
 can be difficult to get a reply
 might pass on viruses
 borrower might not have computer/Internet [2]
- 11 (a) four from:
 doctors interviewed for requirements
 data is collected from experts
 knowledge base is designed/created
 rule base is designed/created
 inference engine is designed/created
 input screen is designed/created
 output format is designed/created [4]
- (b) two from:
 (car engine) fault diagnosis
 prospecting
 tax
 careers
 chess games
 animal/plant classification [2]
- 12 two from:
 normal – acceptable, valid data/data that has an expected outcome
 abnormal – outside the limits of acceptability/validity
 extreme – at the limits of acceptability/validity
 [1] for name [1] for description [4]
- 13 (a) two from:
 microphone/mic
 speakers
 sound card
 videocams/web cams [2]

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| Page 5 | Mark Scheme | Syllabus | Paper |
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- (b) three from:
several people can take part in a conference regardless of where they are
people are connected on-line/using the Internet
images of the members of conference appear on the screen
software is needed in each computer to operate the conference
people who speak can be heard by all the other people in the conference
[3]
- (c) two from:
saves travelling time
do not have to pay for conference room
do not have to pay employee travelling expenses
do not have to pay for hotel rooms/overnight stays
conferences can be called at short notice
do not have to carry bulky documents to conference
[2]
- 14** two from:
number exists
not stolen
expiry date not passed/check if card is valid/start date valid/card activated
sufficient credit in account
[2]
- 15** Advantages
maximum four from:
disabled people do not have to leave their home
do not have to waste time travelling long distances to shops
do not have to spend money on travelling expenses travelling long distances to shops/banks
greater choice of goods than local shops.
no embarrassment of having to ask for loans face to face
can shop when shops are closed
can take their time paying/not rushed at checkouts
can shop at any time of day or night to suit themselves
less tiring than going from shop to shop
can have saved shopping lists
max [4]
- Disadvantages:
maximum four from:
lose personal touch
less opportunity for socialising with friends/neighbours
cannot touch/feel/see the goods in reality/substitute goods delivered
more expensive phone bills
lack of exercise/become lazy
less choice of goods than big supermarkets
people can become unsociable
delivery times can be long/must pay delivery charges/must have a delivery address
you cannot pay with cash/you have to have a credit card
you have to have a computer/Internet
max [4]
overall max [7]