MARK SCHEME for the November 2005 question paper

0418 INFORMATION TECHNOLOGY

0418/01   Paper 1 (Written), maximum raw mark 80

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*.

The minimum marks in these components needed for various grades were previously published with these mark schemes, but are now instead included in the Report on the Examination for this session.

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

1   **A** Bar Code reader
      B MICR/Magnetic Ink reader
      C Magnetic stripe reader
      D Optical mark reader

      1 mark each   **[4]**

2   Monitor
      Printer

      1 mark each   **[2]**

3   Control program   producing a slide show

            Spreadsheet   recording the temperature of a cooling liquid

            Database   keeping track of personal finances

            Multimedia presentation   storing information about pupils

            Measuring program   burglar

      1 mark each correct arrow   **[4]**

4   FALSE
      TRUE
      TRUE
      TRUE

      1 mark each   **[4]**

5   Software
      Hardware
      Hardware
      Hardware

      1 mark each   **[4]**

6   FORWARD 30
      RIGHT 90
      FORWARD 25
      PENUP
      RIGHT 90
      FORWARD 20
      PENDOWN
      FORWARD 40
      RIGHT 90
      FORWARD 45

Allow:
FD for FORWARD
PU for PENUP
RT for RIGHT
PD for PENDOWN

      1 mark each pair of statements   **[5]**

7 **(a)** Two from:
Save it to removable storage medium
make a copy on removable storage medium and delete it from network area.
Change/use password.
Store it in a secure/hidden folder
.
[2]

(b) two from:
computer works in digital
phone lines carry sound/analogue signal
need to convert digital to analogue
[2]

(c) two from:
e-mail
teleconference/video conference
IRC/chat rooms/instant messaging
bulletin boards/newsgroups
[2]

(d) encryption **[1]**

8 three from:
sound
video/animation
tables
charts/graphs
links
hot spots
buttons
numbers
hit counters
forms
[3]

9 **(a)** C5 **[1]**

(b) A1 or any cell in column A or in Row 2 **[1]**

(c) =B3-C3 **[1]**

(d) (=)SUM(C3:C7) **OR** (=)(C3+C4+C5+C6+C7) **OR (=)**B3-D7 **[1]**

10 **(a)** problem -electrocution
prevention – RCB installed
problem – trailing cables
prevention – create ducts/cover cables with carpets etc.
problem – heavy equipment falling
prevention – sturdy tables
problem – fire
prevention – CO_2 extinguisher
1 mark for each problem (2 maximum)
1 mark for each prevention (2 maximum) **[4]**

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(b) three from:
do not download software
do not open email (attachments)
regularly update antivirus
do not use floppy discs from unknown sources
do not open emails from unknown sources
firewalls
use of content blocking software [3]

(c) three from:
accessing computer systems illegally
detecting passwords using software remotely/locally
looking at other peoples data/passing on data
changing other peoples data
deleting other peoples data
inserting viruses
[3]

(d) five points (cannot gain full marks without at least one each of advantages/
disadvantages)
danger of accessing offensive websites
can take long time to find required information
have to have a modem/internet connectivity
have to have a telephone line/computer
other people in the house cannot use phone line
internet is up to date
internet has vast amounts of information
speed of search only if referring to use of search engine
can access biased/inaccurate websites
lack of expertise leads to inefficient searching
[5]

11 (a) (i) Hussain, Parvez [1]
(ii) Hayer, Tony [1]
(iii) Dixon, Paul [1]

(b) Double entry [1]
visual verification [1]

(c) (i) range check or description [1]
(ii) invalid character check or description [1]
(iii) range check or description [1]

12 (a) 1 mark for identify plus 1 mark for a description
such as 3D modelling, simulation (e.g. flight or driving) and use of spreadsheets for
personal finance and tuck shop finances
[2]

(b) any two reasons from:
safety
cost of building real thing
time scale
[2]

13 (a) three from:
temperature
pressure/barometer
moisture
humidity
light
anenometer/wind/movement sensor
[3]

(b) two from:
computer can take readings during holidays
computer readings are more accurate
readings can be taken more frequently
readings can be taken any time of day or night
can produce graphs more quickly
more reliable/readings taken at regular intervals
[2]

(c) database/spreadsheet **[1]**

(d) four from:
load DTP/word processor
open new document
create text/table frames
copy data from spreadsheet
paste data into text/table frame
enter text
import graphs
resize data
printed out **[4]**

14 (a) any reasonable description (1) of use of dials or buttons/keypads/touchscreen (1)
[2]

(b) four from:
heater is switched on
temperature sensor constantly monitors temperature
temperature of oven is compared with preset value
     if lower heater stays on
     if higher microprocessor switches heater off
time is constantly monitored
time elapsed is compared to preset time
if equal then heater is switched off by microprocessor
microprocessor causes buzzer to sound
[4]