

GCSE 2004
June Series



Mark Scheme

Information and Communication

Technology Specification A

(Subject Code 3521/F)

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1.

- (a) Graphics digitiser
Keyboard
Light pen
Mouse
Sensor
Any 3 BUT **Correct answer only** **(3)**
- (b) concept Keyboard
scanner
digital camera/Web cam
joystick
graphics tablet
touch screens/pad microphone
Electronic Whiteboard
MICR
OCR
OMR
bar code reader
Any 1 BUT **not in box** **(1)**
- (c) Laser printer
Monitor
Plotter
Speaker
Any 2 BUT **Correct answer only** **(2)**
- (d) ink-jet printer
actuator
motor
lights
dot-matrix printer
NOT VDU
Any 1 BUT **not in box** **(1)**
- (e) CD-ROM
DVD ROM
DVD RAM
hard disk
ROM
NOT CD
Any 2 BUT **Correct answer only** **(2)**

Total 9 marks

2. Advantages

- Cheaper because.....
 - Less staff to pay
 - No fancy shop to pay for
 - To advertise from Web page
- Faster to
 - access a range of info about new products
 - Obtain latest information
 - Access worldwide databases
 - E-mail customers rather than mail them about....
- World wide market rather than a local one.
- Create an e-business
- Creates some jobs
- Shorter hours become possible
- Sales at any time of the day
- Can deal with more people at the same time
- Power of Advertising on the Web

Any 3 x 1 mark

Disadvantages

- Local people might not know you are there
- Not feel a personal service
- Staff can waste time just surfing the net
- Access/ISP can cost money
- Virus issues
- Hacking issues
- May cause unemployment – must be clear this applies to the shops
- Fear of buying due to credit card security would cut sales
- Not everyone has access to Internet/computers

Any 2 x 1 mark

Total 5 marks

3(a) (i) C6 **Correct answer only - 1 mark**

(ii) C10 **Correct answer only**
C12 **Correct answer only**

2 x 1 mark

(b) Number
Currency
Date
Text
Formulae
Bold
Centre
(Column) width

Any 3 x 1 mark

(c) Faster to edit/change/alter/amend
Neater/easier/edit/change/alter/amend
Changes are automatically recalculated in totals.
Time saved using replicate
Clearer/better presentation/layout
Validation advantages
More accurate/fewer errors

By hand is taken as a minimum of pen, pencil and brain.

Any 2 x 1 mark

Total 8 marks

4. NOT “first name” as already given

Title	at least 3
Surname/Last name	at least 10
Other names	at least 10

NOTE MAX TWO FOR NAME

Number	at least 2
Street - Address line 1	at least 10
Town/Area/County -Address line 2	at least 10
(address – instead of above)	at least 20/memo/or 2x10

NOTE MAX TWO FOR ADDRESS LINES

If terms Address 1 and town are mixed up – usually gains one tick

Postcode	at least 7
(or clear 3box gap 3 box)	
Telephone number (day)	at least 11
Telephone number (evening)	at least 11
Contact tel. Number	at least 11
Mobile tel. Number	at least 11

NOTE MAX TWO TELEPHONE NUMBERS

Fax number	at least 11
E-mail address	at least 20(sensible splits)
Photo	box to fit
Date of membership/expiry of membership	at least 8(2-2-2/4)
Identification given	at least 10
DOB	at least 8(2-2-2/4)
Gender	at least 6 (or coded)
(allow over 18 and YES/NO)	at least 3
Membership Number or equivalent	at least 5
Signature	Memo
Date	at least 8(2-2-2/4)

NB – could use the date at end of form

NOT NI - Not doctor, not doctor’s address etc.

Boxes only unless memo specified

[] – open boxes are OK – boxes with small vertical lines are OK but dashes are NOT.

Memo = lines/dashes/large box/dots IGNORE FILLING IN

Mark only the first 7 fields (Do not count first name)

Ignore correct duplicate fields eg. 3rd telephone number – these do not count in the SEVEN.

Tick correct field name – do not penalise lack of capitals

Tick correct number of boxes/memo field for the corresponding field name.

Count ticks - divide by 2 - round down

MAX 7 marks

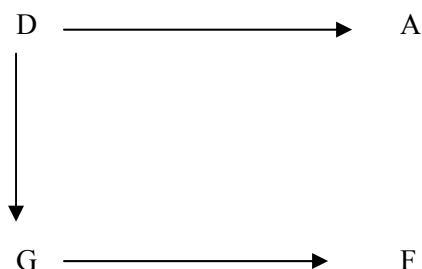
Design given 1 or 0

Don’t give the mark if you cannot read or the form is VERY disorganised. Or LESS THAN 3 FIELDS

Total 8 marks

5(a) Check decision boxes

Is the correct pair in the process box?

D must be linked with A
(if D is wrong A cannot be given)G must be linked with F
(if G is wrong F cannot be given)**2 x 1 mark for each pair**
Either order is OK
Total 4 marks(b) Heat sensor (temperature sensor) / thermistor/thermo-couple **1 mark**
(Not THERMOMETER or sensor or temperature probe)(c) Any suitable answer that is greater than or equal to 1 minute
less than or equal to 30 minutes
1 mark(d) The idea that “feedback” is a continuous or 24/7 activity **1 mark**
NOT CONSTANT unless qualified**Total 7 marks**

6.a) Desk Top Publishing Package

Allow word processing package. **NOT PowerPoint or Excel**

Allow named DTP and w/p software eg. Word, Publisher

1 mark

b) Part b) mark independently - NOT JUST ABOUT PRESENTATION

Mark the feature then the reason. (If feature is wrong, the reason can't be right)

Check if the feature is clarified in the Reason part.

If no feature given for any part, go back and check for two features on one line.

- Picture/clipart added/graphic/image
- Resize clip art/crop
- Text/font size made bigger/smaller/changed
- (Text made) bold/underline/italic/font style
- (Text) centred
- Drawing tools/auto shape/pre-shapes
- Using bullet points/numbering/lists
- Tables
- Text boxes/frames
- Borders/Border Art
- Text font name/type changed/Word art used
- Columns/Tab
- Coloured(text)could be used
- Coloured (background/pattern/shade/watermark/fill)
- Text right/(fully) justify
- Change the line spacing
- Import text
- Spellchecker/grammar checker
- Grouping together/moving.../drop and drag
- Copy and paste/cut and paste
- Layering

One bullet point can only score one mark.

NOT just Wizard/template NOT just alignment

NOT “writing” for the first mark. Allow for additional named repeats.

NB – allow “change/different font” for one mark but if a second font change is given then assume it is the same as the first. i.e. if given a mark for “change font” then no additional mark would be given for the answer “change font style.

Any 4 for 1 mark each for feature named.

- Can be easily read
- Looks more attractive
- Contains no spelling/grammar mistakes
- Produces professional layouts
- Produces interesting layouts
- Control layouts/formatting
- Makes text stand out
- Grabs peoples attention/eye-catching/noticeable
- Personalise / show what they sell
- Saves time entering/errors in retyping
- Consistent throughout
- All can be moved at once

Straight repeats of reasons do NOT gain additional marks.

Any 4 for 1 mark each relating to above

Total 9 marks

7.

Manages time allocations for tasks	
Allocates memory for storing programs	
Handles input and output operations	

Correct Answer only 3 x 1 mark**Total 3 marks**

8

a) Password Qszxfg7596 **1 mark****Allow transposition errors or capitals**

Reason Less likely to guess – not obviously linked to Sarah
 Longer – less likely to guess
Any 1 x 1 mark

b) Password Sarah **Correct Answer Only 1 mark**

Reason Most likely to guess – obviously linked to Sarah
 Shortest – most likely to guess – less letters
Any 1 x 1 mark

c) (i) Software/is a program/code
 Replicates itself
 Cause problems/damage/deletes/destroys to other software or systems

Any 2 x 1 mark

(ii) From a floppy disk brought into school
 From the Internet
 From an e-mail
 Written by a pupil

Any 1 x 1 mark

d) (i) Encoding the information (or some of it) on the network
 Even if pupils got hold of sensitive info, it would not be able to “read” without the “key”
 Any one 1mark **1 mark**

Total 8 marks

9 NB – looking for answers related to THIS application

- (i) Graphics software uses/needs lots of memory
Imported images may be large
Editing images needs lots of memory
May be handling lots of images
Any 1 x 1 mark
- (ii) Makes it easier to see detail/draw
Colour so that the drawing can be seen in colour
Easier to compare/see in detail multiple images
Any 1 x 1 mark
- (iii) Graphics/images/design files that need to be saved can be very large
Not program
1 mark
- (iv) Editing/handling/dealing with graphics (files/pictures/designs) requires a lot of processing. So a fast processor is needed to deal with these in an acceptable time.
Could be dealing with lots of programs/tools/images together
Rendering/tweening of images takes a lot of processing
1 mark
- (v) For saving/backing up **LARGE FILES**
Allow large files to be imported/exported
Distribution to customers/clients/companies
NOT just for saving
1 mark
- Total 5 marks**

10.

- (a) use of colour
use of sound
use of images/pictures/graphics/icons
position of items on screen
help facilities
house style
NOT easy to use.
Any 4 x 1 mark
- (b) Menu **Correct answer only - 1 mark**
Command **Correct answer only - 1 mark**

Total 6 marks

11. These versions will work 90% of the time. You must “trace through” others.

Version 1 – Going right (possible combination)

Step 1 – look at and mark the BIG square first (3)

Step 2 - look at and mark the LITTLE square next (1)

Step 3 – Check for PENUP and PENDOWN sequence with instruction between(1)

Step 4 – Check the transition instructions between squares(1)

FORWARD 60 (could be FORWARD 10 FORWARD 50) **1 mark**

RIGHT 90
FORWARD 50
RIGHT 90 **1 mark**

FORWARD 50
RIGHT 90
FORWARD 50 **1 mark**

3 Marks for drawing the large square

MARK FIRST

RIGHT 90
FORWARD 10
RIGHT 90
PENUP (could before either of the other 3 instructions)
FORWARD 10
PENDOWN
LEFT 90 (could come before PENDOWN)
NB – if no left turn – SMALL SQUARE as in version 2

TRY TO MARK LAST

1 Mark PENUP/DOWN with any instructions between

1 Mark for moving pen to a suitable point to start the small square THEY DREW.

FORWARD 30
RIGHT 90
FORWARD 30
RIGHT 90
FORWARD 30
RIGHT 90
FORWARD 30

1 Mark for drawing the small square – MUST be ALL correct

TRY TO MARK SECOND

If starts with PENUP then lose 1 mark

If mm or degrees or if FD or RT etc. is used , lose the first mark ONLY

Version 2 – Going right (possible combination)

Step 1 – look at and mark the BIG square first (3)

Step 2 - look at and mark the LITTLE square next (1)

Step 3 – Check for PENUP and PENDOWN sequence with instruction between(1)

Step 4 – Check the transition instructions between squares(1)

FORWARD 10 **1 mark**

RIGHT 90
FORWARD 50
LEFT 90 **1 mark**

FORWARD 50
LEFT 90
FORWARD 50
LEFT 90
FORWARD 50 **1 mark**

3 Marks for drawing the large square

MARK FIRST

LEFT 90
FORWARD 10
LEFT 90
PENUP (could before either of the other 2 instructions)
FORWARD 10
PENDOWN
RIGHT 90 (could come before PENDOWN)
NB – if no right turn – SMALL SQUARE as in version 1

TRY TO MARK LAST

1 Mark PENUP/DOWN with any instructions between

1 Mark for moving pen to a suitable point to start the small square THEY DREW.

FORWARD 30
LEFT 90
FORWARD 30
LEFT 90
FORWARD 30
LEFT 90
FORWARD 30

1 Mark for drawing the small square – MUST be ALL correct

TRY TO MARK SECOND

If starts with PENUP then lose 1 mark

If mm or degrees or if FD or RT etc. is used , lose the first mark ONLY

12(a) **Sending a text message/mail** **1 mark**
/attachment/file/picture

Over a **communications network** **1 mark**

LAN/WAN/Internet /WAP phone/between computers

Message sent electronically would score 1 mark.

NOT just electronic-mail

(b) **Advantage compared with post**

- Arrives faster/sent faster
- Same delivery time anywhere in the world
- Cheaper to send than paying postage/send attachments at no extra cost.

ALLOW e-mails are free

- Less chance of getting lost
- Send to many people at the same time
- Send when ready (not when post is collected)
- Check e-mails from many places (World wide)
- Don't have to leave the house to send it.

NOT – does not need the receiver to be there

Any 3 x 1 mark

(c) **Disadvantage compared with telephone**

- Don't know if anyone is "in"
- Not easy two way communication/ Impersonal you don't immediate response
- More likely to have a telephone than e-mail
- Mobile phone can be reached in more places
- Problems with computers are more common
- Catch/send virus
- Excessive junk mail

Any 2 x 1 mark

Total 7 marks