

GCSE 2004
June Series



Mark Scheme

Information and Communication Technology Specification A *(Subject Code 3521/H)*

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1. Mark first three answers (unless clarification)

- | | | | |
|-----|------------------------|---------------------------|-------------------|
| (a) | graphics digitiser | concept keyboard | MICR (reader) |
| | keyboard | scanner | OCR (reader) |
| | light pen | digital camera/web cam | OMR (reader) |
| | mouse/tracker ball | joystick/games controller | bar code (reader) |
| | sensor/thermistor | graphics tablet | laser pen |
| | touch screens/pad | microphone | |
| | Interactive whiteboard | | |
| | Not Switch | | |

Other answers may be possible – please make sure these are not backing store.

Any 3 X 1 (3)

- | | | |
|-----|--|----------------------------|
| (b) | laser printer | bubble-jet/ink-jet printer |
| | Plotter | actuator |
| | Screen/Monitor (VDU)/Interactive Whiteboard/ | digital projector |
| | Speaker | lights |
| | dot-matrix printer | buzzer |
| | motor | |
| | Not projector | |

NB – allow “printer” for one mark but if a second named printer is given, then ignore the first one i.e. if given a mark for “printer” then no additional mark would be given for the answer “laser printer”

Could have THREE different printers for 3 marks.

Any 3 X 1 (3)

- | | | |
|-----|--------------------------------------|--------------------------------|
| (c) | CD-ROM (drive) | floppy disk (drive) |
| | DVD ROM (drive) | memory stick/pen drive |
| | DVD Ram (drive) | zip disk (drive) |
| | hard disk (drive) - allow hard drive | |
| | CD-R (drive) | CD-RW (drive) |
| | Flash card | Dat tape/Magnetic tape (drive) |

Allow ROM, RAM, EPROM etc. for 1 mark each

NOT just disk drive OR CD OR Compact Disc, DVD

Any 2 X 1 (2)

Total 8 marks

2.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
- Text/font size made bigger/smaller/changed
- (Text made) bold/underline/italic/font style
- (Text) centred
- Drawing tools/auto shape
- Using bullet points/numbering/lists
- Tables
- Text boxes
- Borders/Border Art
- Text font type changed/Word art used
- Columns/Tab
- Coloured(text)could be used
- Coloured (background/pattern/shade/watermark/layering)
- 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

One bullet point can only score one mark.

NOT just Wizard/template NOT just alignment/NOT frames

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

3. 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 be 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

4

(a) (i) C11 **Correct answer only - 1 mark**

(ii)

D11 **Correct answer only**

D13 **Correct answer only**

D17 **Correct answer only**

D19 **Correct answer only**

Any 2 x 1 mark

(b) Number/Numeric/Integer
Currency
Text/alphanumeric
Formulae
Centre
Bold
Merge cells
Word wrap
Column widths/row heights

NOT just left/right justified or decimal

Any 3 x 1 mark

(c) Faster to edit
Neater to edit/easier to edit/easier to change
Changes are automatically recalculated in totals.
Time saved using replication/or when the model is set up
Presentation/DTP advantages for 1 mark
Validation advantages
More accurate (correct)/less likely to make errors (may be built in function)

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

Not validation
Not save for future
Not what if.....

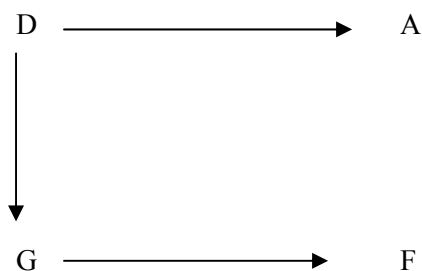
Any 2 x 1 mark

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) **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.
- Receive an acknowledgement

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

7.

- Supervises the programs whilst they are running
 - Provides start up instructions (boot up)
 - Handling interrupts
 - Share resources between different tasks/time slicing
 - Reporting on errors/Error handling
 - Dealing with passwords/security
 - Handling input/output – 2 marks if in detail
- ie handling printer queues and handling input from a scanner
- Allocation of storage space/memory handling
 - Manages time allocations
 - Scheduling/run time processes

Any 4 x 1 mark

Total 4 marks

8.

- (a) use of colour
use of sound
use of images/pictures/graphics
position of items on screen
help facilities
house style/ eg consistency of layout of style

NOT easy to use.

Any 3 x 1 mark

- (b) Menu (driven)
Command (line)

Correct answer only - 1 mark

Correct answer only - 1 mark

Total 6 marks

9.

(a) (i) Wide Area Network

Correct Answer only 1 mark

(ii) Local Area Network

Correct Answer only 1 mark(b) **Wide Area Network - usually****Local Area Network - usually**Town/world wide
Uses comms to connectroom/building wide accept site
connects with wires**NOT just locally****1 mark each**

(c) Computer NOT connected to a network (other computers)

1 mark

(d)

- Share expensive peripherals – printers, hard disk space, other named resources
(MAX 2 MARKS)
- Work on files from any computer/hot desking
- Share files/software
- Communicate with each other
- Monitoring computer use

Any 3 x 1 mark**Total 8 marks**

10(a) Implementation (may be in box) **Correct answer only** **1 mark**

(b) **Any two of the following three**

Interviews

first mark for naming method

1 mark

Second mark for a relevant point

1 mark

- Face to face discussion
- Immediate feedback
- Can read the people/facial expressions
- Follow up questions
- High % response

Any 1 x 1 mark

Questionnaires

first mark for naming method

1 mark

Second mark for a relevant point

1 mark

- Cheap to produce
- Cheap to administer
- No need for anyone else to be present
- Can be filled in at any time
- Time to think about questions
- Anonymity
- Collect a lot of information quickly.
- Often a low response rate

NOT Data Capture Forms

Any 1 x 1 mark

Observation

first mark for naming method

1 mark

Second mark for a relevant point

1 mark

- Can see things not thought about in advance
- No time taken answering questions/does not interfere with business
- Often a more accurate picture

Looking at Documents

first mark for naming method

1 mark

Second mark for a relevant point

1 mark

- Can see things not thought about in advance
- No time taken answering questions/does not interfere with business
- Often a more accurate picture

(c)

- Design a Test Plan
- Using the data from a Test Plan/design the test data
- Describe method to be used
- Data used should be typical, extreme and erroneous (**any 2 - 1 mark**)
- The predicted results (from the test plan)
- Compared with the actual results (from the test plan)
- Identify the need for modification

JUST the word VALIDATION by itself is zero.

Any 3 x 1 marks

(d) **Purpose**

To give performance criteria against which your solution can be judged

Check the pc's against the results.

Judge solution against pc's

1 mark

Total marks 9

11

Advantages OF INTERNET (not just computer)

- Access medication for animals
- Faster access to range of info
- Latest information is out their/information is up to date
- Wider range of treatments available
- Access to worldwide databases/research rare animals
- E-mail can be used to (one only)
- Access same information from home/anywhere/work
- Chat lines could be an advantage
- Create web page/advertise on-line
- Create an e-business/shop/sell on-line/order on-line/on-line banking/tracking

(max 2 from list)

- Creates some jobs
- Shorter hours become possible
- Diagnose over internet rather than visit
- Find out what other vets are doing so they can compete
- Route planning for vets (on-line)
- Storage areas on Internet
- Video conferencing
- Book appointment on-line

Any 6 x 1 mark

Disadvantages of Internet (not computers/databases)

- Not policed – dangerous stuff out there
- Information not always checked! Is it reliable?
- Staff can waste time just surfing the net
- Access/ISP can cost money
- Chat lines can also waste money
- Virus issues
- Hacking issues
- May cause unemployment
- Ties up the phone or needs an extra line.
- Training issues for staff
- Junk mail

NOT CRASH/SLOW INTERNET PROBLEMS

Any 3 x 1 mark**Total 9 marks**