

Information & Communication Technology A

General Certificate of Secondary Education **GCSE 1994**

General Certificate of Secondary Education (Short Course) **GCSE 1094**

Mark Schemes for the Units

June 2006

1994/1094/MS/R/06

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OCR Publications
PO Box 5050
Annersley
NOTTINGHAM
NG15 0DL

Telephone: 0870 870 6622
Facsimile: 0870 870 6621
E-mail: publications@ocr.org.uk

CONTENTS

General Certificate of Secondary Education ICT A (1994)

General Certificate of Secondary Education Short Course ICT A (1094)

MARK SCHEMES FOR THE UNITS

Unit	Content	Page
2357/01	Paper 1: Foundation	1
2357/02	Paper 1: Higher	7
2359/01	Paper 2: Foundation	15
2359/02	Paper 2: Higher	23
*	Grade Thresholds	31

Mark Scheme 2357/01
June 2006

Question
1

Answer
Answers and ticks as shown:

Mark

Item	Name of item	The item is used for INPUT (✓)	The item is used for OUTPUT (✓)
A	Microphone	✓	
B	Scanner	✓	
C	Mouse	✓	
D	Speaker		✓
E	Printer		✓
F	Monitor/screen/VDU		✓

[10]

Question	Answer	Mark
2	<i>Ticks as shown:</i>	

Statement	True (✓)	False (✓)
A modem is used to send computer signals over telephone lines	✓	
Using a password will stop viruses from infecting your computer		✓
A floppy disk can store more data than a CD-ROM		✓
A field in a school database stores all the data about a pupil		✓

[4]

3 (a) Six from:

- Row/column for Cars
- Row/column for Vans
- Row/column for Lorries/Trucks
- Row/column for one other named vehicle eg motorcycles/others.
- Indication of date/day of week
- Suitable space for tallying columns/rows/boxes
- Customised title/name
- Total per day/week of each type/Total of all vehicles per day/week

[6]

(b) Two from:

- Place a tick/mark in appropriate column/box.
- Use a method of tallying...
- ...eg four marks and cross out.
- Write down number...
- ...add one when necessary
- Cross out marks/boxes for each vehicle.
- Add up marks in the column

[2]

4 (a) One from:

- A3
- A4
- A5
- A6

*Must be letter/column first.**Allow R1C1 notation.*

[1]

(b) D3*Must be letter/column first.**Allow R1C1 notation.*

[1]

- (c) D4
Must be letter/column first.
Allow R1C1 notation. [1]
- (d) (=)SUM(D3:D6)
One mark for the function.
One mark for the range.
One mark for any other formula that works. [2]
- (e) (i) C5
Must be letter/column first.
Allow R1C1 notation. [1]
- (ii) D5
Must be letter/column first.
Allow R1C1 notation. [1]

5

Two from:

- Searches/filters/queries.
- Sort.
- Produce reports.
- Easier to keep up to date/edit.
- Easier/quicker to enter data.
- Can save queries/searches/filters.
- Can have multiple tables/link tables/relational database.
- Takes up less space.
- Data can be exported (for use elsewhere).

[2]

6 (a) Ticks as shown:

Description of data	Example	Boolean	Text	Numeric (integer)	Numeric (real)
Telephone number	01223 2345		✓		
Account has been paid	N	✓			
Amount paid	£25.89				✓
Number of books ordered so far	14			✓	

[4]

- (b) (i) Collection of items of data (about an object)/collection of fields [1]
- (ii) (Contains a) single data item (about an object)/column title/attribute/category [1]
- (iii) Collection of records/tables. [1]

7 (a)

- Repeat
- 3 (or number >3)

For one mark, FD 20 RT 120 FD 20 RT 120 FD 20 RT 120

[2]

(b)

- FORWARD/FD
- LEFT/LT

[2]

8 (a)

Two from:

- Temperature/thermister
- Acidity/pH/chemical
- Geiger/radiation
- Light/infrared
- Flow meter/pressure
- Depth/height

[2]

(b)

Four from:

- No human intervention/automatic/does not miss readings/notices immediately
- (Data Logging can occur) over a long period of time/without breaks continuously
- Can be safer (than manual logging).
- (Data reading) can be more accurate.
- Time intervals can be more accurate.
- Logging can be set to stop/start at pre-determined times.
- Data can be recorded at shorter intervals (than is possible by humans)
- Logging can be set to record one event when another event occurs.
- The data is already entered for analysis/data logging.

[4]

(c)

Six from:

- Exported (from the data logging software) to/imported...
- ...into spreadsheet/database.
- Do a calculation on data/formulas/averages/means
- Converted to a graph/chart/table
- Import/copy and paste/insert...
- ...name of type of package/DTP/presentation/word processor
- Write some text of the report
- Formatting as appropriate
- Images added to report

[6]

9

Four from:

- Use a search engine
- Example of search
- Type in a known URL/address/go to cinema's website
- Use information (on that site)/film times/prices/location/hyperlinks...
- Email for information
- Reason for emailing
- Book seats on-line/transport/meals etc.
- Purchase/pay for tickets on-line.

[4]

10

Two from:

- Copyright issue
- Illegal to sell files without permission
- Not paying royalties

[2]**Total: 60 marks**

Mark Scheme 2357/02
June 2006

- 1** **Two from:**
- Searches/filters/queries.
 - Sort.
 - Produce reports.
 - Easier to keep up to date/edit.
 - Easier/quicker to enter data.
 - Can save queries/searches/filters.
 - Can have multiple tables/link tables/relational database.
 - Takes up less space.
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2 (a) **Ticks as shown:**

Description of data	Example	Boolean	Text	Numeric (integer)	Numeric (real)
Telephone number	01223 2345		✓		
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Amount paid	£25.89				✓
Number of books ordered so far	14			✓	

[4]

- (b) (i)** Collection of items of data (about an object)/collection of fields/one row in a table **[1]**
- (ii)** (Contains a) single data item (about an object)/column title/attribute/category **[1]**
- (iii)** Collection of records/tables. **[1]**

- 3 (a)**
- Repeat
 - 3 (or number >3)
- For one mark, FD 20 RT 120 FD 20 RT 120 FD 20 RT 120 **[2]**

- (b)**
- FORWARD/FD
 - LEFT/LT
- [2]**

- 4 (a)** **Two from:**
- Temperature/thermister
 - Acidity/pH/chemical
 - Geiger/radiation
 - Light/infrared
 - Flow meter/pressure

- Depth/height [2]

(b) Four from:

- No human intervention/automatic/does not miss readings/notices immediately
- (Data Logging can occur) over a long period of time/without breaks continuously
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- Time intervals can be more accurate.
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- Use a search engine
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- Reason for emailing
- Book seats on-line/transport/meals etc.
- Purchase/pay for tickets on-line.

[4]

6 Two from:

- Copyright issue
- Illegal to sell files without permission
- Not paying royalties

[2]

7 Three from:

Feature	Descriptions
Accurate measurements	scale drawings.
Preset shapes	stored in library (for easy replication of items).
3D views	to give realistic views. to allow what ifs
Fly-through/walk through	to allow various viewpoints. to allow walk through.
Zoom feature	to allow detailed drawings/views.
Shading/texture/colour	for perspective/realistic appearance
Library of objects	no need to draw each object from scratch/accurate drawings available.
Layering	allow objects to be placed in front/behind others.
Grouping	for easier editing/movement of objects
Copy/paste	for easier replication/moving of objects.
Analysis	for costings/estimates manufacture
Rotate	to look at design from different sides/perspective

[6]

8

Four from:

- Stored in outbox.
- Sender connects to ISP/server.
- Email transferred to ISP/server.
- Transmitted via telecommunication system/modem/telephone line/analogue to digital conversion etc
- Use of a protocol, eg POP/SMTP
- Routers.
- DNS (Domain Name Server).
- Received by recipient ISP/server.
- Recipient connects to ISP/server.
- Email transferred to recipient inbox.

[4]

9 (a)

Three from:

- Mimics real-life/simulation.
- Uses formulae/rules.
- Used for “what if?” scenarios/predictions.
- Change variables/rules.
- Valid example of change variables/rules.

[3]

(b) An explanation is an expansion of a point, ie a reason or a consequence.

Formulas
for calculations

In built functions, eg, average, countif,
for (complex) calculations/manipulate data, eg average, sum etc

Other features, eg, macros, sort, conditional formatting
Appropriate description

Graphs
for display of data/trends/analysis.

Automatic (re)calculation
For update/up to date results
is faster than manual.
related data.

Using absolute referencing
So you can use the same information (in different places)/constant

Using relative referencing
to change variables.

Marks to be awarded as follows:

	1 point	2 or more
0 exp	1	2
1 exp	2	3
2 or more	3	4

[4]

10 ***A discussion requires the elaboration of a point with an expansion.
NO ticks, only use Ps and Es***

Employment

Loss of jobs
Need to retrain workers
Computer-orientated jobs increased.

Running costs

Initial costs high
Maintenance costs increased
Power supply costs high.

Staff costs

Fewer staff therefore less cost
Staff more skilled therefore higher individual costs.

Product

More uniform output
Less wastage
Higher output/productivity

Health and safety

Protecting staff from hazards when using robots.

Additional points (each of the following must be expanded for additional expansion mark)

Robots can work continuously
Robots more accurate work
No need for human environment
Can be reprogrammed for different product.

Marks to be awarded as follows:

	1 point	2 points	3 or more
0 exp	1	2	3
1 exp	2	3	4
2 exp	3	4	5
3 or more	4	5	6

1 mark is also available for a reasoned conclusion - ***up to the maximum for the question.***

[6]

11 ***A description is an expansion of a point, ie a reason or a consequence.
NO ticks, only use Ps and Es***

Design data structure
fields/types/length/table(s).

Implement the data structure
blank database set up

Implement design of validation routines
Make sure data is reasonable/of correct type or example

Devise data capture sheet
to collect data.

Design data entry screen
e.g. drop down menus
for ease of data entry.

Enter the data into the database
and verify the data.

Testing
to ensure that the database works as intended.
to make improvements.

Set up queries/reports/output formats
for ease of use by user.

Designing reports/output/queries formats
For ease of use or example or can be printed

Marks to be awarded as follows:

	1 point	2 points	3 or more
No exp	1	2	3
1 exp	2	3	4
2 exp	3	4	5
3 or more	4	5	6

Total: 60 marks

[6]

**Mark Scheme 2359/01
January 2006**

Question	Answer	Mark												
1	Cheap personal computers Electronic mail.	[2]												
2	encryption passwords.	[2]												
3	<table border="1"> <tr> <td>They can sort books alphabetically on the shelves.</td> <td></td> </tr> <tr> <td>They can find names of authors very quickly.</td> <td>✓</td> </tr> <tr> <td>They can have longer breaks.</td> <td></td> </tr> <tr> <td>They can send reminders automatically.</td> <td>✓</td> </tr> <tr> <td>They can search for books kept at other libraries while a customer waits.</td> <td>✓</td> </tr> <tr> <td>They can put returned books back on the shelves very quickly.</td> <td></td> </tr> </table>	They can sort books alphabetically on the shelves.		They can find names of authors very quickly.	✓	They can have longer breaks.		They can send reminders automatically.	✓	They can search for books kept at other libraries while a customer waits.	✓	They can put returned books back on the shelves very quickly.		[3]
They can sort books alphabetically on the shelves.														
They can find names of authors very quickly.	✓													
They can have longer breaks.														
They can send reminders automatically.	✓													
They can search for books kept at other libraries while a customer waits.	✓													
They can put returned books back on the shelves very quickly.														
4	graphics tablet. OCR	[2]												
5 (a)	Random Access memory	[1]												
(b)	One from <ul style="list-style-type: none"> • Temporary memory to store data until PC is turned off • To store <u>my</u> work./user data • To hold data/programs during processing. • Anything that implies temporary to change data • To store data you want to edit 													
(c)	Read Only Memory.	[1]												
(d)	One from <ul style="list-style-type: none"> • Permanent memory/kept when PC is turned off. • To store data that should not be changed. • To store boot program. • To store (parts of) operating system (BIOS) • Anything that implies permanent. 													
6 (a)	One from <ul style="list-style-type: none"> • (Small picture) that you can click on/go to/select/press on • can click on it/go to it/select it/press on it to do things like printing/saving • (Small picture) which represents actions. • (Small picture) that represents a sequence of instructions. • Use instead of menus. • Symbol • Is a short cut 	[1]												
(b)	Two from: <ul style="list-style-type: none"> • To make using the computer easier/easy. • Learning how to helps/use the computer quicker/quick. • Do not have to remember/learn instructions. • To make use of computer by people who have learning disabilities easier/easy. 	[2]												

Question	Answer	Mark
(c)	<p>Two from:</p> <ul style="list-style-type: none"> • Mouse. • Touch screen. • Roller/track ball/touch pad. • Joystick. <p>Do not allow, games, simulation, add-ons like guns</p>	[2]
7 (a)	<p>Two from:</p> <ul style="list-style-type: none"> • Quicker data entry (when order received). • Quicker for customer to fill in form. • Fewer data entry mistakes (when order entered into computer). • Quicker checking for errors (by both customer and company personnel). • Less space on order form required. • Easier to check/validate. • Takes up less memory/space on company's computer. • Quicker to process/search 	[2]
(b) (i)	Validation	
(ii)	<ul style="list-style-type: none"> • Data is valid/acceptable/reasonable • Six digits entered 	[2]
(c)	<p>Two from:</p> <ul style="list-style-type: none"> • Big bang/direct changeover. • Phased implementation. • Parallel running • Pilot running 	[2]

8 (a)

Points	Expansions
Taking backups	<ul style="list-style-type: none"> • Regularly • And keep off-site/in a secure location • In case of system crash/corruption of data
By having mirrored servers	<ul style="list-style-type: none"> • To ensure safety of data if primary system crashes/corrupts etc.
Ensuring that staff are well trained	<ul style="list-style-type: none"> • So less chances of incorrect use causing deletion/corruption of data
Using security measures/passwords	<ul style="list-style-type: none"> • To prevent untrained/unauthorised staff from accessing data
Ensure firewalls/anti-virus software is used	<ul style="list-style-type: none"> • To reduce unauthorised access (which may then cause corruption/deletion of data)

One mark for naming each method and one mark for matched expansion
[4]

(b) (i) One from:

- Meaningless data.
- Scrambled data
- Jumbled up data
- Key

[1]

(ii) One from:

- So unauthorised access/hacking does not result in understandable data/hackers won't understand data
- To endeavour to keep data transmitted/stored private/secret
- Because data is confidential.

[1]

(c) Two from:

- Data that is no longer in regular use.
- but (safely) stored for future reference.
- The storage of data for long periods of time (often saved in a compressed form).
- May be needed to conform to legal requirements regarding retaining data for several years
- To free up space on the hard disk drive
- Audit

Do not accept: data no longer needed

[2]

9

Two from:

- Instant response required.
- Data in batch processing is not processed immediately.
- Needs to prevent the plane from crashing.
- Needs to accept continuous input/process

[2]

Question
10

Answer

Mark

Two from:

- **Accessing/hacking** without permission/unauthorised/with authorisation a computer system
- **Using** without permission/unauthorised a computer system
- **Accessing** without permission/unauthorised **the software** on a computer (system)
- **Modifying /changing /deleting** without permission/unauthorised **data /software** on a computer system
- Introducing a virus by hacking /unauthorised access (to modify /delete data)

Do not allow: virus on own/creating a virus/copyright

[2]

11

Step	Analysing	Designing	Developing, Testing and Implementing
Check the system gives the required output			✓
Create the data and file structures.			✓
Describe any validation required.		✓	
Draw diagrams to describe the system processing.		✓	
Interview future users about their requirements.	✓		
Specify suitable hardware and software.	✓ OR	✓	

Do not accept: two ticks in the last row

[6]

12 (a) **Four from:**

- analogue to digital converters (an ADC)
- digital to analogue converters (a DAC)
- light sensor
- humidity sensor/moisture sensor
- temperature sensor/thermistor
- actuators
- lights
- humidifiers
- heaters/heating system/radiators
- watering system/sprinklers
- motors (for the windows/watering system)
- keyboard/monitor/mouse/keypad
- fan/cooling system
- Carbon dioxide sensor
- Oxygen sensor
- pH sensor
- dehumidifier

Do not accept: Modem, heat sensor, cold sensor, thermometer, cables, meter, water sensor or sensor on its own

[4]

(b) Five from:

- Sensors constantly/continuously acquire (analogue) data...
- ...to ADC
- (Digital) data received from ADC by computer
- Computer compares received data
- with pre-set limits
- Light/humidity/temperature/pH/soil moisture content outside set limits
- computer activates actuators
- computer switch on/off lights
- computer switch on/off humidifiers
- computer switch on/off heaters
- computer switch on/off watering system
- motors to open/close windows
- Output affects input/feedback used

Do not accept: Too hot, too cold etc

*Award marks for diagrams **provided** that points above are included.*

[5]

13 (a) Four from:

- Card swiped/read/takes the information from the card
- Card number check digit is checked
- Card accepted/denied
- Type of card established
- Signature given/PIN entered
- Bank/Card company contacted
- Card number checked if lost/stolen/missing
- Credit limit checked/floor level checked
- Transaction accepted/denied
- Acceptance/rejection sent to store
- Any doubts, request to telephone card company/bank
- Receipt produced/received
- Amount deducted/transferred from customer account/bank
- Amount added/transferred to supermarket account
- PIN/signature checked to see if correct

Do not accept: itemised bill

[4]

(b) One from:

- Instant credit of amounts/no delay in receiving payment
- Better security in place reducing fraud
- Less delay at checkout waiting for customer to write cheques
- Customers prefer/more satisfied with credit card transactions
- Payment guaranteed
- Higher limit on credit cards
- Improved sales

[1]

14

Four from

LAN

- Could be set up within a relatively small geographical area/one building/site /room/local area (network)
- Simple to extend by or adding a second / third /... hub/station etc
- Easy to restrict access by use of local security measures
- Local expertise/control available/easier as (company) specifics may be applied locally
- More expensive to set up than WAN
- E-mail can be used to send/receive **internal** mail /**Local** bulletin boards/chat rooms can be used to send/receive messages (concerning company led topics)
- Sharing of resources/hardware/software

[2]**WAN**

- Set up/gives links worldwide/wide area (network)
- Can pose external security risks/virus/hackers etc due to access by worldwide pool of users
- Less control over content as content decided by individuals worldwide
- Ongoing costs to maintain connection through ISP
- Is created by use of multiple networks linked together through worldwide communications networks/modem/satellite/ broadband
- E-mail can be used to send/receive messages worldwide /Worldwide bulletin boards/chat rooms can be used
- Sharing of resources/hardware/software

[2]**TOTAL 60 marks**

Mark Scheme 2359/02
June 2006

Question	Answer	Mark
1	<p>Two from:</p> <ul style="list-style-type: none"> • Data that is no longer in regular use • but (safely) stored for future reference • The storage of data for long periods of time... • ...often saved in a compressed form • May be needed to conform to legal requirements/audits regarding retaining data for several years • To free up space on the hard disk drive • Audit <p>Do not accept: data no longer needed</p>	[2]
2	<p>Two from (or corollary):</p> <ul style="list-style-type: none"> • Instant response required • Data in batch processing is not processed immediately • Needs to prevent plane from crashing • Needs to accept continuous input/process 	[2]
3	<p>Two from:</p> <ul style="list-style-type: none"> • Accessing/hacking <u>without permission</u>/unauthorised/with authorisation a computer system • Using <u>without permission</u>/unauthorised a computer system • Accessing <u>without permission</u>/unauthorised the software on a computer (system) • Modifying /changing /deleting <u>without permission</u>/unauthorised data /software on a computer system • Introducing a virus by hacking /unauthorised access (to modify /delete data) <p>Do not allow: virus on own/creating a virus/copyright</p>	[2]
4		

Step	Analysing	Designing	Developing, Testing and Implementing
Check the system gives the required output.			✓
Create the data and file structures.			✓
Describe any validation required.		✓	
Draw diagrams to describe the system processing.		✓	
Interview future users about their requirements.	✓		
Specify suitable hardware and software.	✓ OR	✓	

[6]

Do not accept: two ticks in the last row

5 (a)

Four from:

- analogue to digital converters (an ADC)
- digital to analogue converters (a DAC)
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Do not accept: Modem, heat sensor, cold sensor, thermometer, cables, meter, water sensor or sensor on its own

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(b)

Five from:

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- Acceptance/rejection sent to store
- Any doubts, request to telephone card company/bank
- Receipt produced/received
- Amount deducted/transferred from customer account/bank
- Amount added/transferred to supermarket account
- PIN/signature checked to see if correct

Do not accept: itemised bill

[4]

(b)

One from:

- Instant credit of amounts/no delay in receiving payment
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- Customers prefer/more satisfied with credit card transactions
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[1]

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Four from**LAN**

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[2]

WAN

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- Is created by use of multiple networks linked together through worldwide communications networks/modem/satellite/ broadband
- E-mail can be used to send/receive messages worldwide /Worldwide bulletin boards/chat rooms can be used
- Sharing of resources/hardware/software

[2]

8

Six from:

- Questions asked by system
- Answers supplied by user
- System accesses rule base
- Influence engine search knowledge base
- Results given (as a percentage probability)
- Structure of knowledge base designed
- Rule (base) designed/created
- Inference engine designed/created
- Knowledge from experts/different sources is collected
- Knowledge/data/information entered into computer/knowledge/rule base
- Questions to be answered design/created

EITHER:

- Interface for input designed/created

OR:

- User interface designed/created
- Interface for output designed/created
- Interface for initial/additional input designed/created

[6]

Do not accept: database, search engine

9

Test Data Table (Number of seats – Max=6, Min =1)		
Type of Data	Example	Expected Result
Extreme	1	Accept
Normal	1, 2, 3, 4, 5, 6	Accept
Normal	4	Accept
Extreme	1 or 6	Accept
Abnormal	Any number greater than 6	Reject
Abnormal	< 1 or >6 Any text	Reject

[6]

10

Six from:

- The finished system would be compared against the design brief
- And decisions made as to how closely it met the design brief
- User opinions would be sought
- To see how successful (different parts of) the system was according to their needs/meets the needs of the user
- And if bugs had been brought to light which need fixing
- A close look at the developments in hardware since system was commissioned
- To check if modifications/additions need to be considered at this point
- Describe any limitations of the new/present system
- suggestion for overcoming them/improvements
- Make suggestions as to how future developments/improvements could be carried out
- Acquire evidence to identify areas which testing has shown to be a problem
- examining (documentation)/documentation produced by the system

[6]

11

Four from:

- Processor speed too slow/computer not powerful enough
- RAM size insufficient
- Keyboard too restrictive
- Not practical enough – e.g. seats/cockpit realism/hydraulic jacks etc
- Still not in the public domain
- Too costly for home use
- Not relevant to aim of game
- Need extra hardware/software to run realistically
- To simplify the game so that it is easy to play
- Might encourage terrorism

[4]

12

Points (P):

Expansions (E):

Increase in fraud [1]	More information held means that it is more difficult to police access/misuse[1]
Hacking/unauthorised access [1]	To obtain/change data for criminal activities
Illegal use of data [1]	By exposing/using private data held. [1]
Electronic tagging possible [1]	To keep tabs on criminals movements [1]
CCTV cameras used [1]	Much less expensive/effective use of police manpower. [1]
Speedy/worldwide communications links [1]	Enable police to track criminals across world. [1] To exchange information rapidly between forces [1]
Huge databases centrally held on computer [1]	Allows speedy/previously impossible searches for information to be carried out. [1]
Global positioning satellite technology used [1]	To lead/guide attendance at scenes of crimes [1]
DNA profiling [1]	Makes it possible to identify/eliminate suspects of crime. [1]
Detection of minutia left at scenes of crimes [1]	Only possible through use of micro technology/ such as electron scanning etc. (or any correct specific example).[1]
Vulnerable people can be targeted [1]	By obtaining data identifying them as such from information held on computers. [1]
Use of on-line chat rooms is abused (for 'grooming' purposes etc.) [1]	Monitoring of chat-rooms may give clues regarding individuals/groups intentions. [1]
Simple spreading of temptations [1]	Such as pornography, terrorist activities etc [1]
Send (not create) a virus [1]	With malicious intent etc [1]

New type of crime created [1]

	No points	1 point	2 points	3 points	4 points or more
No expansions	0	1	2	3	4
1 expansions	1	2	3	4	5
2 expansions	2	3	4	5	6
3 expansions	3	4	5	6	7
4 expansions	4	5	6	7	8
or more					

One mark for reasoned conclusion

Minimum conclusion example: There are few more advantages/disadvantages, so therefore introduction is a good/bad thing

DO NOT give a mark for the 'So I think introducing computers is a good thing' type conclusion.

[8]

TOTAL 60 marks

**General Certificate of Secondary Education
ICT A (1094/1994)
June 2006 Assessment Series**

Unit Threshold Marks

Unit		Maximum Mark	a*	a	b	c	d	e	f	g	u
2357F	Raw	60				37	33	29	25	21	0
	UMS	55				48	40	32	24	16	0
2357H	Raw	60	43	36	29	23	16	12			0
	UMS	80	72	64	56	48	40	32			0
2358	Raw	60	57	51	42	34	28	22	16	10	0
	UMS	120	108	96	84	72	60	48	36	24	0
2359F	Raw	60				26	22	19	16	13	0
	UMS	55				48	40	32	24	16	0
2359H	Raw	60	40	34	28	23	17	14			0
	UMS	80	72	64	56	48	40	32			0
2360	Raw	60	53	44	35	26	22	19	16	13	0
	UMS	120	108	96	84	72	60	48	36	24	0

Specification Aggregation Results

Overall threshold marks in UMS (i.e. after conversion of raw marks to uniform marks)

	Maximum Mark	A*	A	B	C	D	E	F	G	U
1094	200	180	160	140	120	100	80	60	40	0

	Maximum Mark	A*	A	B	C	D	E	F	G	U
1994	400	360	320	280	240	200	160	120	80	0

The cumulative percentage of candidates awarded each grade was as follows:

	A*	A	B	C	D	E	F	G	U	Total No. of Cands
1094	1.66	9.60	25.15	45.05	61.14	74.99	86.72	95.09	100	41586
1994	2.92	14.19	35.95	59.81	75.17	85.38	93.28	98.15	100	22843

For a description of how UMS marks are calculated see;
www.ocr.org.uk/OCR/WebSite/docroot/understand/ums.jsp

Statistics are correct at the time of publication

OCR (Oxford Cambridge and RSA Examinations)
1 Hills Road
Cambridge
CB1 2EU

OCR Information Bureau

(General Qualifications)

Telephone: 01223 553998

Facsimile: 01223 552627

Email: helpdesk@ocr.org.uk

www.ocr.org.uk

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Head office
Telephone: 01223 552552
Facsimile: 01223 552553

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