

Information & Communication Technology A

General Certificate of Secondary Education **1994/1094**

Mark Scheme for the Components

June 2007

1994/1094/MS/R/07

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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 should be read in conjunction with the published question papers and the Report on the Examination.

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General Certificate of Secondary Education

Information and Communication Technology A (1994/1094)

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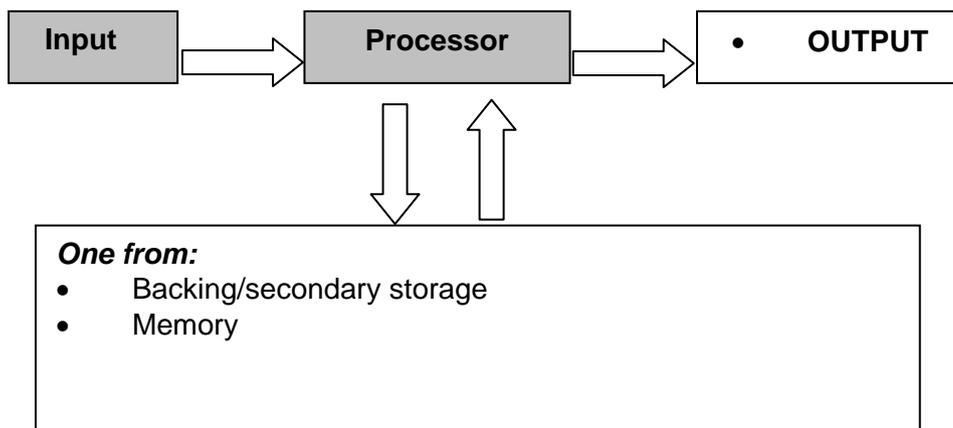
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June 2007**

1

Item	Name of item	INPUT (✓)	OUTPUT (✓)
	Plotter		(✓)
	Printer		✓
	Joystick	✓	
	Microphone	✓	
	Remote (Control)	✓	
	Speaker(s)		✓

[10]

2



[2]

3 *Ticks should be as follows:*

Change	Tick (✓)
DVD players are in common use	✓
Books can be checked out of libraries	
Cinema tickets can be bought	
Microwave ovens are in common use	✓

[2]

4 *Ticks should be as follows:*

Original Image	Changed Image	Flip (✓)	Rotate (✓)	Crop (✓)	Layer (✓)
		✓			
			✓		
				✓	

[3]

5 For each row, one from:

Safety Issue	Why is it unsafe?
Photo of monitor on edge	The monitor could fall and hurt someone.
Photo of overloaded socket	<p>One from:</p> <ul style="list-style-type: none"> overloaded socket danger of fire power likely to be cut off by trip switch
Photo of drinks on computer	<p>One from:</p> <ul style="list-style-type: none"> liquid getting into computer danger of fire danger of electrocution mess on floor leading to slipping
Photo of trailing wires	<p>One from:</p> <ul style="list-style-type: none"> damage to computers if pulled tripping over/possible injury to person

[3]

6 (a) **Two from:**

- searches through the document
- checks spellings
- highlights spelling mistakes/unrecognised words
- against dictionary spellings/listing
- suggests alternative spellings
- changes to correct spellings

[2]

(b) **One from:**

- adjusts spacing between words/characters
- to align text at both/left and right margins

[1]

(c) **Three from:**

- change font type
- change font style
- change font size
- use different case/capitalisation
- underline
- use colour
- use graphics
- use borders
- use "word art"
- centred text

[3]

- 7 **Two from:**
- use anti-virus software
 - keep anti-virus software updated
 - do not connect to the Internet/don't download off the Internet
 - do not open unknown emails
 - do not open attachments
 - do not share/copy other people's files [2]
 - do not use floppy/portable/removable disks
- 8 (a) 22 [1]
- (b) Adds up/totals (column B/V-neck jumpers, if specific range is used must be correct) [1]
- (c) **One from:**
- Verification
 - Visual checking [1]
- (d) **Four from:**
- highlight (cells)
 - D1/D2 to D4
 - chart wizard/option
 - choose bar chart
 - choose position of chart
 - add legends
 - add titles
 - label axes
 - choose scaling
 - choose colours [4]
- 9 (a) **For each, one from:**
- Scanner:**
- any existing image/picture or suitable example eg photograph
- Digital camera:**
- new image/picture or suitable example
- Clip art:**
- ready-made images/pictures or suitable example eg cartoon
- Painting package:**
- edit/create, new/original image/picture/diagram or suitable example [4]
- (b) **Two from:**
- can accurately place frames/graphics/items
 - have appropriate/greater choice of templates/layouts available
 - colour separation
 - can use columns
 - use of kerning
 - can use layering
 - use of irregular frames [2]

10 The commands/values to be inserted are:

40

ON

LEFT

REPEAT 4 [FORWARD 40 RIGHT 90]

[6]**11 Three from:**

- can share peripherals
- can share files/data/software
- can email files/data/software
- can log on and use files from any workstation
- can share Internet connection
- can be maintained centrally
- can be administered centrally/central backup/control Internet access
- can easily distribute (school) information
- can be monitored/checked

[3]**12 (a) Ticks should be as follows:**

Task	Fax (✓)	Video- conferencing (✓)	Email (✓)
Sending a signed legal document	✓		
Sending a personal message			✓
Having a face-to-face conversation		✓	
Sending a short sound file			✓

[4]**(b) Two from:**

- use of multiple addresses
- use of address/distribution/group list/contacts list
- use of "cc"/carbon-copy
- use of "bcc"/blind carbon copy

[2]**(c) Four from:**

- individual emails cheaper/cost less than stamps
- can attach attachments eg video/animations/audio files
- can be forwarded/no need to copy document
- recipient can edit files
- documents/emails can be stored electronically/can be retrieved anywhere/take up less space
- sending/delivery can be quicker/response can be quicker
- writing style can be informal/formal presentation/house-style not needed
- receipt notification
- hyperlinks can be included

[4]**TOTAL [60]**

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- 1 (a) **One from:**
- verification
 - visual checking
- [1]
- (b) **Four from:**
- highlight (cells)
 - D1/D2 to D4
 - chart wizard/option
 - choose bar chart
 - choose position of chart
 - add legends
 - add titles
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- 2 (a) **For each, one from:**
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- 2 (b) **Two from:**
- can accurately place frames/graphics/items
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REPEAT 4 [FORWARD 40 RIGHT 90]
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- can share peripherals
 - can share files/data/software
 - can email files/data/software
 - can log on and use files from any workstation
 - can share Internet connection
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 - can be administered centrally/central backup/control internet access
 - can easily distribute (school) information
 - can be monitored/checked
- [3]

5 (a)

Task	Fax (✓)	Video- conferencing (✓)	Email (✓)
Sending a signed legal document	✓		
Sending a personal message			✓
Having a face-to-face conversation		✓	
Sending a short sound file			✓

(b) *Two from:*

- use of multiple addresses
- use of address/distribution/group list/contacts list
- use of "cc"/carbon-copy
- use of "bcc"/blind carbon-copy

[4]

(c) *Four from:*

- individual emails cheaper/cost less than stamps
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- sending/delivery can be quicker/response can be quicker
- writing style can be informal/formal presentation/house-style not needed
- receipt notification
- hyperlinks can be included

[2]

[4]

6 Five from:

- sites may look authentic
- so they lead you to give personal information
- inappropriate images, example - pornography/violence
- inappropriate text, example - drugs/terrorist/racist information
- viruses, example of problem
- spam email/enticement into scams
- pharming/users misdirected to fraudulent websites/servers
- inaccurate facts/misleading conclusions/not based on facts
- bias/lobby groups
- no control over content
- phishing/fraudulent acquisition of personal data
- grooming
- secure padlock site/https/domain, gov, ac, ed
- discussion groups are valuable source of help and advice on almost any topic
- news/weather up-to-date news/weather bulletins
- news/weather live broadcasts
- established on-line shopping pages

One mark available for a reasoned conclusion.

7 One from:

Analogue is continuously variable
Analogue has all values

[5]**[1]****One from:**

Digital data is on/off
Digital data is pulsed
Digital data is 1 or 0 / Binary
Digital data is discrete

[1]**8 Two from:**

- software may not be copied (or shared) without permission (or payment)
- software may not be used in a public performance without permission (or payment)
- employees cannot be forced to use unlicensed software
- employees cannot be made to distribute unlicensed software
- author has ownership of intellectual property software company can issue/sell licenses
- copyright lasts for 28, 56, author's life plus 50 years,
- 75 years from the publication date, or 100 years from the date of creation in US, life of author plus 50 years in UK.

[2]

9 **Three from:**

- predict results
- compare with actual results
- change variables/conditions ...
- ... to see what is happening
- goal seek
- valid examples of testing/conditions

[3]

10 **Answers from:**

Area	Advantage	Disadvantage
Cost	Cheap access to wide audience	Cost of initial startup maintenance/running costs
Expertise	Can need little in-house expertise	Need to employ/out-source to web designers
Global market	Access wider market/global presence	Delivery costs, etc
Security	None	Hacking/cloning copying site/need for security/cost of security
Using third party website	No need to set up own website Access wider market/global presence	Cost of advertising on website
Email use	Access to many customers	Email adverts can be annoying
Maintenance	Regular updating	If not done then out of date Running costs

**Max four marks for advantages/disadvantages.
One mark available for a reasoned conclusion.**

[6]

11 Answers from:

ergonomic keyboards

- to reduce RSI/carpel tunnel syndrome
- to reduce repetitive movements of fingers
- correct use of keyboard eg avoid pounding the keys/use as little force as possible on the keys

wrist rests

- to ensure that hands/wrists are kept level to reduce RSI

suitable size mouse

- use of trackball/ball mice instead of conventional mouse
- avoid the "death grip" on the mouse/use as little force as possible on the mouse
- to reduce RSI/carpel tunnel syndrome

large or modified monitors/suitable monitors resolution/screen filters /suitable use of colours on screen/increase blink rate

- to reduce eye strain/tension headaches

glasses/lenses

- to reduce eye strain/tension headaches

adjustable chair

- to reduce neck/back/muscle pain

adjustable monitor at correct height/angle

- to reduce neck/back/muscle pain

footrest

- to reduce neck/back/muscle pain
- varicose veins

lighting

- to reduce eye strain/tension headaches

[6]

12 Example points and expansions:

Firewalls

Prevent access by unauthorised computers

Anti spyware

Detects keystroke logging/unauthorised data transmission

User IDs

Used to identify the user to the computer system

Passwords

Used for security/change regularly/rules

Access rights

Restrict access to authorised users

Encryption of data

Data may be stolen but cannot be read

Removable media

Store data away from computer

Shutdown computer when not in use

Data cannot be retrieved

Log off computer when not in use

Example – so a password would be needed

Physical security

Example - lock doors/blinds on windows

Wireless networks

Make secure/do not use

Use access keys

Restrict the computers that are allowed to connect

Marks to be awarded according to this grid:

	1 point	2 points	3 or more points
0 expansions	1	2	3
1 expansion	2	3	4
2 expansions	3	4	5
3 or more expansions	4	5	6

[6]

Total [60]

**Mark Scheme 2359/01
June 2007**

Question	Answer	Mark												
1	CD-ROM Zip-drive	[2]												
2	A painting (package) is used to produce a picture A spreadsheet is used to keep accounts for a small shop A CAD (package) is used to produce a scaled A (web) browser is used to view pages on the Internet.	[4]												
3	An item of data stored on the magnetic strip on a credit card is the account number . A program that corrupts data is called a virus . A method used to read data from bank cheques is called MICR . A printer is a device used for output . A microphone is used to input sound to a computer. A method used in supermarkets when a customer pays for goods with a bank card is called electronic funds transfer (EFT) . A copy of data, often stored away from the computer, is called a backup .	[7]												
4	<table border="1"> <tbody> <tr> <td>Robots are used in car making</td> <td>✓</td> </tr> <tr> <td>No information is stored on computer</td> <td></td> </tr> <tr> <td>Automated stock control is now used</td> <td>✓</td> </tr> <tr> <td>Fewer people need to be employed in certain businesses</td> <td>✓</td> </tr> <tr> <td>Architects no longer need to design buildings</td> <td></td> </tr> <tr> <td>Businesses no longer send letters</td> <td></td> </tr> </tbody> </table>	Robots are used in car making	✓	No information is stored on computer		Automated stock control is now used	✓	Fewer people need to be employed in certain businesses	✓	Architects no longer need to design buildings		Businesses no longer send letters		[3]
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5	<table border="1"> <tbody> <tr> <td>Theatre seat reservation systems</td> <td></td> </tr> <tr> <td>Producing telephone bills</td> <td>✓</td> </tr> <tr> <td>Automatic pilot systems</td> <td></td> </tr> <tr> <td>Controlling the environment in a greenhouse</td> <td></td> </tr> <tr> <td>Clearing cheques in a bank</td> <td>✓</td> </tr> <tr> <td>Booking an aeroplane ticket</td> <td></td> </tr> </tbody> </table>	Theatre seat reservation systems		Producing telephone bills	✓	Automatic pilot systems		Controlling the environment in a greenhouse		Clearing cheques in a bank	✓	Booking an aeroplane ticket		[2]
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Producing telephone bills	✓													
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Booking an aeroplane ticket														

Question Answer Mark

6

A computer	✓
Analogue to digital converters	✓
OMR	
Temperature sensors	✓
Water	
Motors	✓
Temperature control program	✓

[4]

7

	LAN	WAN
Links computers in different countries		✓
More vulnerable to hackers		✓
Links computers in the same building	✓	
The Internet is an example of this type of network		✓
Most likely to involve telecommunication links		✓

[5]

8

Two from:

- ring
- star
- bus
- line(ar).

[2]

9

(a) Four from:

- number of seats
- type of seats
- seat number
- cost of seats
- time (of screening)
- film title
- card type
- security number of card
- issue number of card
- expiry date of card
- mobile number
- landline number
- email
- address
- post code
- title (Mr, Dr, Rev etc)
- name on credit card
- date of birth/age
- special access requirements, eg, disabled.

[4]

Question	Answer	Mark
9	<p>(b) Five from:</p> <ul style="list-style-type: none">• all three given items (bank card number, date of performance and customer name)• four additional items of data (from 9a)• total to be charged to bank card• indication that the fields are compulsory, ie, star (*) or other symbol• some indication of delimiters for entering data – eg individual letter boxes/lines or spaces• form of guidance for date/time entry – eg dd/mm/yy• form of instructions about picking up tickets• multiple choice boxes/drop down list• form of instruction for filling in form• help button• submit/continue/reset button• at least two separated areas, eg customer details, performance details, credit card details.	[5]
	<p>(c) Two from:</p> <ul style="list-style-type: none">• range• presence/required field• format/picture/input mask• length check• invalid character/type check.	[2]

Question	Answer	Mark
10	<p data-bbox="331 293 778 320">Max 2 marks per method, max 6</p> <ul style="list-style-type: none"> <li data-bbox="331 331 1118 461">• Encryption <ul style="list-style-type: none"> <li data-bbox="403 365 740 392">• scrambling/encoding data <li data-bbox="403 400 1118 461">• readable only to (decryption) key holder/unreadable by others. <li data-bbox="331 504 1139 633">• Firewall <ul style="list-style-type: none"> <li data-bbox="403 537 1139 564">• software which checks identity of accessing system/user <li data-bbox="403 573 564 600">• filters/blocks <li data-bbox="403 609 979 636">• by file type/user name/IP address/computer. <li data-bbox="331 676 1066 887">• User ID/password (to the system) <ul style="list-style-type: none"> <li data-bbox="403 710 719 736">• identifies user to system <li data-bbox="403 745 979 772">• data entered is compared to pre-stored data <li data-bbox="403 781 1066 808">• never reveal password to anyone/change regularly <li data-bbox="403 817 895 844">• always log off when leaving computer <li data-bbox="403 853 804 880">• masking of password eg stars. <li data-bbox="331 927 1066 1137">• Password protected file <ul style="list-style-type: none"> <li data-bbox="403 960 719 987">• identifies user to system <li data-bbox="403 996 979 1023">• data entered is compared to pre-stored data <li data-bbox="403 1032 1066 1059">• never reveal password to anyone/change regularly <li data-bbox="403 1068 895 1095">• always log off when leaving computer <li data-bbox="403 1104 804 1131">• masking of password eg stars. <li data-bbox="331 1178 987 1276">• Swipe card/electronic key/key-card/key <ul style="list-style-type: none"> <li data-bbox="403 1211 868 1238">• security data stored on card or chip <li data-bbox="403 1247 987 1274">• data entered is compared to pre-stored data. <li data-bbox="331 1317 871 1415">• PIN <ul style="list-style-type: none"> <li data-bbox="403 1350 719 1377">• PIN entered via key pad <li data-bbox="403 1386 871 1413">• PIN compared with pre-stored data. <li data-bbox="331 1458 815 1556">• Biometric data <ul style="list-style-type: none"> <li data-bbox="403 1491 788 1518">• retina/fingerprint etc scanned <li data-bbox="403 1527 815 1554">• compared with pre-stored data. <li data-bbox="331 1599 796 1729">• Restricted physical access <ul style="list-style-type: none"> <li data-bbox="403 1632 592 1659">• security guard <li data-bbox="403 1668 796 1695">• locked room/bars on windows <li data-bbox="403 1704 496 1731">• CCTV. <li data-bbox="331 1771 815 1910">• Monitoring logins <ul style="list-style-type: none"> <li data-bbox="403 1805 727 1832">• a log is kept of all log ins <li data-bbox="403 1841 815 1868">• unusual activity results in alarm <li data-bbox="403 1877 727 1904">• 3 logins and you are out. <li data-bbox="331 1953 951 2051">• Different levels of access <ul style="list-style-type: none"> <li data-bbox="403 1986 951 2013">• only management have access to all data <li data-bbox="403 2022 927 2049">• administrator allocates levels of access. 	[6]

Question	Answer	Mark
11	(a) • Direct (changeover)/big bang.	[1]
	(b) Two from: <ul style="list-style-type: none"> • there is no 'safety-net'/backup (if new system fails)/cannot use the old system (if problems with new system) • all staff must be trained together/in one cohort • need to stop the old system all in one go. 	[2]
12	(a) Four from: <ul style="list-style-type: none"> • template letter created • individual customer details entered • linked with database of customers' addresses • field names/identifiers are placed in appropriate places in the letter • field names replaced with actual data from database. • data imported into letter • database created • system prints out letters • selection of customers is made. 	[4]
12	(b) Two from: <ul style="list-style-type: none"> • less likely to miss customers out • quicker than writing individual letters • customers like individual/personalised letters • fewer errors made than typing individual letters. • produces many individualised letters quickly. 	[2]
13	Two from: <ul style="list-style-type: none"> • unauthorised access to a computer system • unauthorised access to data/hacking • unauthorised modification of data • unauthorised deletion of data • unauthorised access to software • spread/introduce a virus. 	
14	(a) Do not allow: virus on own/creating a virus/copyright One from: <ul style="list-style-type: none"> • Spell checked her work • Proof read her work. 	[2]
	(b) Two from: <ul style="list-style-type: none"> • visually compared work/checked it for mistakes • compared with the original • work entered twice... • ...computer informs of any difference between the two • double entry. 	[2]

Total: 60 marks

**Mark Scheme 2359/02
June 2007**

Question	Answer	Mark
1	<p>One from:</p> <ul style="list-style-type: none"> • ring • star • bus • line(ar). 	[1]
2 (a)	<p>Five from:</p> <ul style="list-style-type: none"> • all three given items (bank card number, date of performance and customer name) • four additional items of data from: <ul style="list-style-type: none"> number of seats type of seats seat number cost of seats time (of screening) film title card type security number of card issue number of card expiry date of card mobile number landline number email address post code title (Mr, Dr, Rev etc) name on credit card date of birth/age special access requirements, eg, disabled • total to be charged to bank card • indication that the fields are compulsory, ie, star (*) or other symbol • some indication of delimiters for entering data – eg individual letter boxes/lines or spaces • form of guidance for date/time entry – eg dd/mm/yy • form of instructions about picking up tickets • multiple choice boxes/drop down list • form of instruction for filling in form • help button • submit/continue/reset button • at least two separated areas, eg customer details, performance details, credit card details. 	[5]
2 (b)	<p>Two from:</p> <ul style="list-style-type: none"> • range • presence/required field • format/picture/input mask • length check • invalid character/type check. 	[2]

Question	Answer	Mark
3	<p>Max 2 marks per method, max 6</p> <ul style="list-style-type: none">• Encryption• scrambling/encoding data• readable only to (decryption) key holder/unreadable by others. • Firewall• software which checks identity of accessing system/user• filters/blocks• by file type/user name/IP address/computer. • User ID/password (to the system)• identifies user to system• data entered is compared to pre-stored data• never reveal password to anyone/change regularly• always log off when leaving computer• masking of password eg stars. • Password protected file• Identifies user to system• data entered is compared to pre-stored data• never reveal password to anyone/change regularly• always log off when leaving computer• masking of password eg stars. • Swipe card/electronic key/key-card/key• security data stored on card or chip• data entered is compared to pre-stored data. • PIN• PIN entered via key pad• PIN compared with pre-stored data. • Biometric data• retina/fingerprint etc scanned• compared with pre-stored data. • Restricted physical access• security guard• locked room/bars on windows• CCTV. • Monitoring logins• a log is kept of all log ins• unusual activity results in alarm• 3 logins and you are out. • Different levels of access• only management have access to all data• administrator allocates levels of access.	[6]

Question	Answer	Mark
4	<p>(a) • Direct (changeover)/big bang.</p> <p>(b) Two from:</p> <ul style="list-style-type: none"> • there is no 'safety-net'/backup (if new system fails)/cannot use the old system (if problems with new system) • all staff must be trained together/in one cohort • need to stop the old system all in one go. 	<p>[1]</p> <p>[2]</p>
5	<p>(a) Four from:</p> <ul style="list-style-type: none"> • Sensor/mechanics inputs details eg engine/ car details. • The system asks questions/mechanic answers questions/mechanic types in faults • Inference engine compares input • Compares input with data in knowledge base, • Eg engine temperature with what it should be. • Compares using the rules of the rule base, • Eg is temperature too high? • Report to engineer/suggested diagnoses/suggested solutions • Automatic adjustments made • Percentage likelihood of faults/probabilities are output • Probable/likely faults are output. <p>(b) Three from:</p> <ul style="list-style-type: none"> • it is quicker than contacting the experts yourself • it is quicker to diagnose faults • the expert system has a larger knowledge base than the mechanic/mechanic has more limited knowledge • it is cheaper than contacting the experts yourself • it is more likely to output more accurate information • the system is portable • can consult the system if and when problems arise • new data can be entered into the system to benefit other users • more information available • all alternatives may be displayed/output • expert system increases mechanics expertise over time/help to train mechanics. 	<p>[4]</p> <p>[3]</p>

Question	Answer	Mark
6	<p>(a) Four from:</p> <ul style="list-style-type: none"> • template letter created • individual customer details entered • linked with database of customers' addresses • field names/identifiers are placed in appropriate places in the letter • field names/identifiers replaced with actual data from database • data imported into letter • database created • system prints out letters • selection of customers is made. <p>(b) Two from:</p> <ul style="list-style-type: none"> • less likely to miss customers out • quicker than writing individual letters • customers like individual/personalised letters • fewer errors made than typing individual letters. • produces many individualised letters quickly. 	<p>[4]</p> <p>[2]</p>
7	<p>Two from:</p> <ul style="list-style-type: none"> • unauthorised access to a computer system • unauthorised access to data/hacking • unauthorised modification of data • unauthorised deletion of data • unauthorised access to software • spread/introduce a virus. <p>Do not allow: virus on own/creating a virus/copyright.</p>	<p>[2]</p>
8	<p>(a) One from:</p> <ul style="list-style-type: none"> • Spell checked her work • Proof read her work. <p>(b) Two from:</p> <ul style="list-style-type: none"> • visually compared work/checked it for mistakes • compared it with the original • work entered twice... • ...computer informs of any difference between the two • double entry. 	<p>[1]</p> <p>[2]</p>

Question	Answer	Mark
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9	If all advantages or all disadvantages given, maximum five marks.	
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Example answers:

Advantages

- Cheaper than sending human
- No special areas of space ship have to be built to keep the humans safe
- Can get closer to areas too dangerous for humans
- Robots can be built to withstand greater extremes
- Robots are expendable
- Robots can collect and transmit data faster than humans
- They can use direct links to base
- Robots can collect more data than humans over a time period
- They can multi-task
- Do not need life support
- Rocket is lighter
- Robots can work continuously
- Robots are **more** accurate.

Disadvantages

- Can be expensive to get robots back to earth
- Robots often destroyed when arriving
- Difficult to repair robots
- Robots cannot make unplanned decisions
- Unplanned decisions may be needed as the circumstances change
- Collecting samples may not be flexible
- Alternative samples might be ignored
- A decision as to which is the best sample may need to be taken.

One mark available for a reasoned conclusion.

[7]

Question	Answer	Mark
10	<p>Example answers:</p> <p>Any three pairs from:</p> <ul style="list-style-type: none">• Less money spent on travel...• ...more disposable income • Less time spent on travel...• more time for leisure activities• can spend more time with family • Less congestion on roads...• ...less irritability when travelling• ...less risk of accident on way to work• ...more environmentally friendly • Can work when it suits...• ...no need to keep regular office hours • Can work at own pace...• ...less immediate pressure to 'do it now' • May be fewer distractions...• ...can be more productive • Use equipment provided by company...• ...no need to buy own computer • Can claim tax allowance...• ...for use of home facilities.	[6]

Question	Answer	Mark
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11	If all benefits or all drawbacks given, maximum five marks.	
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Example answers:

Benefits

- No/fewer hotel/accommodation costs
- Time is saved travelling (to conference)
- No/less travel costs
- No venue needs to be hired
- Don't have to carry documents to meeting
- Conferences can be called at short notice
- Disabled people don't have to travel.

Drawbacks

- Less social contact (with other workers)
- Need to organise work around conference time
- Conference time may be inconvenient
- Time differences may need to be considered
- Cost of equipment
- Problems caused by equipment failure
- Technical problems with power supply/satellite signal
- Would need fast uplink
- Time lag/picture break up (may cause problems)
- Can only take place if all parties have correct equipment.

One mark available for a reasoned conclusion.

[7]

Question	Answer	Mark
12	<p>If all visually impaired or all hearing impaired given, maximum four marks.</p> <p>Five from:</p> <ul style="list-style-type: none">• appropriate signing symbols could be included• presenter notes/handouts may be in Braille. <p>Sound</p> <ul style="list-style-type: none">• use would benefit visually impaired students• by allowing them to hear the content of the lesson• to input commentary to presentation. <p>Pictures</p> <ul style="list-style-type: none">• use would benefit hearing impaired students• by allowing them to see the content of the lesson• this could include the use of cameras• to provide relevant pictures or movies/these pictures could include animations or video. <p>Text</p> <ul style="list-style-type: none">• use of large font size for visually impaired• high contrasting colours• use of captioning or subtitles with video. <p>Video/Animation</p> <ul style="list-style-type: none">• benefit to hearing impaired• more interesting than pictures (or hard copy text). <p>Large screens etc</p> <ul style="list-style-type: none">• would benefit visually impaired students.	[5]

TOTAL 60 MARKS

**General Certificate of Secondary Education
ICT A (1094/1994)
June 2007 Assessment Session**

Unit Threshold Marks

<i>Unit</i>		Maximum Mark	a*	a	b	c	d	e	f	g	u
2357F	Raw	60				43	39	35	31	27	
	UMS	55				48	40	32	24	16	0
2357H	Raw	60	45	39	33	28	22	19			0
	UMS	80	72	64	56	48	40	32			0
2358	Raw	60	58	52	43	35	29	23	17	11	0
	UMS	120	108	96	84	72	60	48	36	24	0
2359F	Raw	60				37	33	30	27	24	0
	UMS	55				48	40	32	24	16	0
2359H	Raw	60	36	30	24	19	13	10			0
	UMS	80	72	64	56	48	40	32			0
2360	Raw	60	53	44	35	27	23	20	17	14	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	1.8	10.1	27.1	47.1	63.3	76.2	87.1	95.1	100.0	35217
1994	3.2	14.9	36.6	60.8	75.4	86.1	93.6	98.2	100.0	19735

For a description of how UMS marks are calculated see;
http://www.ocr.org.uk/exam_system/understand_ums.html

Statistics are correct at the time of publication

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