GCSE 2004
June Series

ASSESSMENT and QUALIFICATIONS ALLIANCE

Mark Scheme

Information and Communication Technology
Specification B
3522/H

Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation meeting attended by all examiners and is the scheme which was used by them in this examination. The standardisation meeting ensures that the mark scheme covers the candidates' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for the standardisation meeting each examiner analyses a number of candidates' scripts: alternative answers not already covered by the mark scheme are discussed at the meeting and legislated for. If, after this meeting, examiners encounter unusual answers which have not been discussed at the meeting they are required to refer these to the Principal Examiner.

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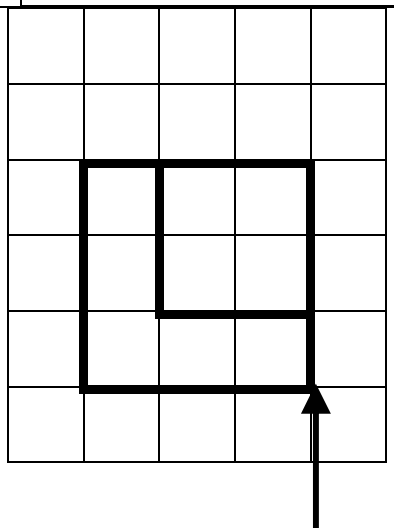
3522/H – Full Course Higher Tier

1.		
a.		
i.	These points. Inserts/imports the picture + detailed description of the process, 1+1m Or: cut/copy the file off disk and paste into the letter + detailed description of the process, 1+1m Or: open the picture in a graphic application and cut/copy it into the letter + detailed description of the process, 1+1m Or: drag the file from the disk and drop it in the letter + detailed description of the process, 1+1m Positions the picture in the letter, e.g. cursor in the correct position, moves the picture after importing, re-sizes, 1m Wraps text round picture, 1m	3 marks
ii.	Any reasonable, for example. colour, tab, different fonts, different styles, borders Not: bullets	3 marks
b.		
i.	These points. A wordprocessed document A spreadsheet	2 marks
ii.	Any reasonable, for example: A picture	1 mark
c.	These points. Roboshop's address and telephone number the secretary's name a hyperlink to Roboshop's web site	3 marks
d.		
i.	Any reasonable, for example. the files can be downloaded more quickly files take up less storage space on disk	2 marks
ii.	This point. it must be unzipped Not: 'do a virus scan' as this is not sufficiently specific to a zipped file.	1 mark
	Total for this question:	15 marks

<table>
<tr><td>2.</td><td></td><td></td></tr>
<tr><td>a.</td><td>Any reasonable.
spreadsheet</td><td>1 mark</td></tr>
<tr><td>b.</td><td>These points.
<table>
<tr><td>Formula</td><td>Cell reference</td><td>There is no cell with this formula</td></tr>
<tr><td>B5*C5</td><td>D5</td><td></td></tr>
<tr><td>D8+D9+D10</td><td></td><td>✓</td></tr>
<tr><td>SUM(D2:D7)</td><td>D8</td><td></td></tr>
<tr><td>D10*0.175</td><td>D11</td><td></td></tr>
</table></td><td>4 marks</td></tr>
<tr><td>c.</td><td>Any reasonable. For example.
The plumber can rely on the software to produce accurate calculations if it has been set up correctly
If the unit costs change, then VAT and the total costs are automatically recalculated.
The software can be set up so that it can be used to produce estimates for any customer.</td><td>3 marks</td></tr>
<tr><td>d.</td><td></td><td></td></tr>
<tr><td>i.</td><td>Any reasonable input device. For example:
mouse – used to point and select
scanner – used to scan pictures of the bath, etc.</td><td>4 marks</td></tr>
<tr><td>ii.</td><td>Any reasonable. For example.
floppy disk, CD-RW (accept CD-ROM, CD, etc), hard disk, zip disk, etc.</td><td>3 marks</td></tr>
<tr><td></td><td>Total for this question:</td><td>15 marks</td></tr>
</table>

3.		
a.		
i.	These points. When the Patient Name has been input, the clerk checks again that the Patient Name on the monitor is the same as that on the form. The Patient Name is input twice. The computer checks that the two Patient Names input are the same. If they are not the same, the computer tells the clerk.	2 marks
ii.	These points. type check table look-up	2 marks
b.	Any reasonable. For example. A key field must be in every record in a database. A key field must be different in every record in a database.	2 marks
c.	Any reasonable. For example. The coded information takes up less space on backing storage. The clerk can input the coded information faster.	2 marks
d.		
i.	These points. Patient Name — *Admission Date* Wrig75 — 04/01/2004 Iqbal — 07/01/2004 McLoughlin — 07/02/2004 Rooney — 15/03/2004 Morgan — 20/03/2004 Feather — 17/04/2004 Writes down the Patient Names, 1m In the order shown, 2m 5 in order, 1m In reverse order, all correct, 1m	3 marks
ii.	Any reasonable. For example. It's easier to find a patient in a printed list if the list is in alpha order on the patients' names. A list of a doctor's patients can be produced.	1 mark
e.		
i.	This point. Morgan and no others	1 mark
ii.	This point. McLoughlin, Morgan, Rooney, Feather and no others	1 mark
iii.	This point. Morgan, Rooney and no others	1 mark
	Total for this question:	15 marks

4.			
a.	Any reasonable. For example. If the bar code is damaged, the number can be entered on a keyboard.		1 mark
b.	These points. The bar code on the book identifies the book, 1m The bar code on the library card identifies the pupil, 1m To record who has borrowed a book both the pupil and the book must be linked, 1m		2 marks
c.	Any reasonable. For example. The bar code on the book is used to find the link between the book and the borrower, and delete it. It does not matter who returns the book.		2 marks
d.	Any reasonable. For example. Find books written by an author. Find books on a topic, such as history or geography.		2 marks
e.	These points. Includes a fileserver and at least 3 computers in a correct topology (star, bus or line), 1m		3 marks
	Includes a printer, 1m Includes a bar code reader, 1m Includes other reasonable facilities, e.g. CD drive, connection to other network, etc., 1m	Max 2m	
f.	These points. the network manager; ignore other answers, 1m librarians; ignore other answers, 1m		2 marks
g.	Any reasonable. For example: If there are a lot of pupils at the school, the cost per pupil could be very small. If the school library has a lot of books, the cost of organising lending manually could far exceed the cost of a computer system. The hardware could have additional uses; for example, it could be used to access a wider range of different information sources on the web.		3 marks
	Total for this question:		15 marks

<table>
<tr><td>5.</td><td></td><td></td></tr>
<tr><td>a.</td><td></td><td></td></tr>
<tr><td>i.</td><td>These points. Allow any reasonable abbreviation, eg. lt for left.
<table>
<tr><td>clearscreen</td><td>ignore</td></tr>
<tr><td>repeat 2 [forward 2 left 90 forward 3 left 90]</td><td>repeat 2 [instructions], 1m
instructions, 1m</td></tr>
<tr><td>forward 2
left 90
forward 3
left 90
forward 2
left 90
forward 3
left 90</td><td>Correct sequence and correct syntax but not using repeat, 1m</td></tr>
</table></td><td>2 marks</td></tr>
<tr><td>ii.</td><td> 

outer square correct position and size, 1m
inner square correct position and size, 1m</td><td>2 marks</td></tr>
<tr><td>iii.</td><td>These points.
Correct labels in boxes, 1m each box.
D
A
CB

Correct down lines from start to end, and at least one down arrow above decision box, 1m
Correct loop (right from decision box, up, left) and at least one arrow, 1m
Yes and No on decision box or equivalents, 1m</td><td>6 marks</td></tr>
<tr><td>b.</td><td>These points.
<TITLE>My web page</TITLE>, 1m
<H1>My picture</H1>, 1m
<IMG SRC=”mypicture.jpg”>, 1m
For the remaining lines:
all lines correct order and syntax, or only 1 mistake, 2m
2 mistakes, 1m
allow <HTML> in place of <START>
allow </HTML> in place of <END></td><td>5 marks</td></tr>
<tr><td></td><td>Total for this question:</td><td>15 marks</td></tr>
</table>

6.		
a.		
i.	Any reasonable. For example. User usernames and passwords help keep students' files private and secure.	1 mark
ii.	Any reasonable. For example. You should choose a password that is hard for someone else to guess. You should never tell anyone else your password. You should change your password frequently. You should use a minimum of 6 characters.	2 marks
iii.	Any reasonable. For example. To verify the password. So that any error when entering the password the first time is picked up.	1 mark
b.		
i.	Any reasonable. For example. If the building burns down, all the computers could be destroyed. Another student using the computer could delete the work. Another student using the computer could email the work to everyone in the class.	3 marks
ii.	Any reasonable. For example. Another copy on backing storage, 1m	1 mark
iii.	Any reasonable. For example. Make a copy on portable media, e.g. floppy disk, zip, etc. (NOT the computer's hard disk). Take the copy to another location, e.g. home. Keep several copies in different locations.	2 marks
c.	Any reasonable. For example. To prevent the student installing viruses hidden in the downloaded software. Installing the downloaded software may damage software already installed. Not: to prevent pupils downloading pornography.	2 marks
d.	Any reasonable. For example. Bandwidth is too narrow, 1m Transmission speed of the network is too slow, 1m Computer's processor is too slow, 1m Computer has too little free space on the hard disk, 1m The more people are using the network, the slower it runs, 1m There is a bottleneck as all the school's computers access the Internet via one modem, 1m The web page being accessed has many large graphics.	3 marks
	Total for this question:	15 marks

7.		
a.		
i.	This point. teleworking	1 mark
ii.	Any reasonable. For example. Less car use means less pollution.	1 mark
iii.	Any reasonable. For example. At home, the accountant's working hours are more flexible. The accountant does not have to waste time travelling to work every day.	2 marks
iv.	Any reasonable. For example. The accountant feels out of touch compared with colleagues who work at the firm's head office every day. It can take longer to get work done at home as there can be more distractions. The accountant can't socialise with colleagues at work.	2 marks
b.	Any reasonable. For example: Health hazard: eye strain How to avoid the health hazard: take a short break regularly Health hazard: RSI How to avoid the health hazard: touch type using an approved method	4 marks
c.		
i.	This point. multi-tasking	1 mark
ii.	Any reasonable. For example. A wordprocessor can be used to write email messages. Some web sites let users contact them using a hyperlink to email. Some emails contain hyperlinks to web sites.	1 mark
d.	Any reasonable. For example. Infrastructure problems - the electricity supply is unreliable - there may not be access to telephone lines. Financial problems – computer equipment is too expensive for most people in a low wage economy. Cultural problems – you need to speak a major world language such as English in order to be able to read the information available. Education – people are not sufficiently well educated to know how to use the Internet, or what to do with it. Not: They haven't got the facilities to use the Internet. They might not have a computer. They might not be connected. Because it is expensive.	3 marks
	Total for this question:	15 marks

8.		
a.		
i.	These points. Do the ironing. Experience religious insights and prayer.	2 marks
ii.	These points. Control the operation of traffic lights. Recall census data.	2 marks
b.	Any reasonable for. For example: Computers can repeat a task over and over again without making errors. Computers can accurately recall more information than people. Computers can accurately recall information much faster than people. Computers can work 24 hours every day. Commuters can communicate more extensively and effectively than people. Any reasonable against. For example. People are better at tasks which are not repetitive. People are better at creative tasks. People can work on their own initiative.	4 marks Allow up to 3 reason for, and up to 3 against
c.	Any reasonable advantage. For example. When body parts wear, they need replacing or the person suffers or dies, e.g. pacemakers. These body parts can last longer than the original. New body parts could be made with additional features that the originals do not have, e.g. replacement arms with alternative hands that are more sensitive, have more fingers, have torches built in, etc. This process, taken to an extreme conclusion could see most body parts replaced, and replaceable indefinitely, so people could lead more active lives much longer. Any reasonable against. For example. To get a body part replaced, the person has to have an operation which could be painful or life threatening. Computerised devices can go wrong perhaps causing bizarre behaviour or death. If we get used to the idea that body parts can be replaced, we may not live healthy lives. Some body parts are not currently replicable, because: technology cannot produce an adequate replacement we do not fully understand how all body parts function, e.g. the brain. We do not fully understand which body parts we can replace and which we cannot replace.	7 marks Allow up to 4 adv., and up to 4 disadv.
	Total for this question:	15 marks