



ASSESSMENT and
QUALIFICATIONS
ALLIANCE

Mark scheme

June 2003

GCSE

Information and Communication Technology B

Short Course 3528 Higher

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1a	These points. currency	1 mark
b	These points. Uses sum(range), 1m Range is D2:D5; D1:D5; D1:D6; D2:D6, 1m Allow any reasonable syntax, e.g. D2..D5 D2+D3+D4+D5 or equivalents, max 1m	2 marks
c	Any reasonable that identifies cells D5 and D7.	2 marks
d	These points in this order. pie; line	2 marks
e	Any reasonable, for example: pie – shows relative importance of sales of each meal bar or column – easier to read off value of Takings NOT line	1 mark
Total		8 marks
2a	These points. Names validation check as a range check, 1m Lower boundary is 0, and relationship with (Weekly Wage) field is correct, e.g. 0 < Weekly Wage, 1m Upper boundary is greater than 250 and less than 1000, and relationship with (Weekly Wage) field is correct, e.g. Weekly Wage < 600, or '3 digits', 1m No marks given but is describing a range check, 1m	3 marks
b(i)	This point. Casey and no others	1 mark
(ii)	These points. Hood, Habib, Clarke and Casey, and no others	1 mark
c	This point. Employee Number is 03452	1 mark
d	These points. Instructions tell respondent what do to, 1m Design includes horizontal or vertical line that looks like part of an OMR form, for example, using pairs of brackets or similar, 1m Associates each job with a pair of brackets, for example: [EL] [FI] [PA] [SU], 1m	2 marks
Total		8 marks

3a	<p>These points.</p> <p>Allow connection to the processor box via the monitor.</p> <p>Allow the mouse to be connected to the keyboard instead of the Processor Box.</p> <p>Joins four other parts to Processor Box with no other connections, 2 m.</p> <p>Joins two other parts to Processor Box with no more than four connections shown, 1 m.</p> <p>Joins mouse, keyboard and printer to monitor, 1m.</p>	2 marks
b	<p>These points.</p> <p>Draws a reasonable line or star topology.</p> <p>File server and 3 computers correctly and clearly located.</p> <p>Other network hardware correctly and clearly located.</p> <p>Connection to other networks correctly and clearly located.</p>	2 marks
c	<p>Any reasonable, for example:</p> <p>Storage on a hard disk is non volatile; storage in memory is volatile.</p> <p>RAM is a microchip; a hard disk is one or more magnetic disks.</p> <p>RAM is a microchip; a hard disk is physically a disk.</p> <p>RAM has no moving parts; a hard disk spins.</p>	3 marks
Total		7 marks
4a	<p>Any reasonable, for example:</p> <p>Record the temperature more frequently.</p> <p>Record the temperature during the day and at night.</p> <p>Record the temperature using several weather stations at different locations.</p>	2 marks
b	<p>Any reasonable, for example:</p> <p>Wind speed; wind direction; light; rainfall</p>	3 marks
c	<p>Any reasonable advantage, for example.</p> <p>Up-to-date information can be collected more quickly.</p> <p>Information could be collected more frequently.</p> <p>A weather station could be located where a person could not reasonably go very often.</p> <p>Any reasonable disadvantage, for example.</p> <p>The information may not be collected if there is a power cut.</p> <p>The information may not be collected if the computer breaks down.</p> <p>Set up costs are more expensive.</p> <p><i>Allow no more than 2 advantages and no more than 2 disadvantages.</i></p>	3 marks
Total		8 marks

5a	<p>These points.</p> <p>D systems design</p> <p>A documentation</p> <p>C testing</p>	3 marks
b(i)	<p>Any reasonable, for example:</p> <p>The font is too small.</p> <p>The user documentation is not in simple English.</p> <p>The user documentation does not relate to how the computer system is used in VideoNow's business.</p> <p>Layout is too dense.</p> <p>No illustrations to show where to point and click.</p>	3 marks
(ii)	<p>Any reasonable. For example:</p> <p>On a web site.</p> <p>As a printed manual.</p> <p>Help in the software.</p> <p>Accept email help as a part of documentation, but not telephone help lines.</p> <p>On floppy disk.</p>	1 mark
Total		7 marks
6a	<p>Any reasonable advantage, for example:</p> <p>The engineer should know how the system works.</p> <p>The engineer should be able to consult other experts if there are problems.</p> <p>Any reasonable disadvantage, for example:</p> <p>ConLev may not know Gregory House well enough to plan the installation of the system in the most effective way.</p> <p>Different engineers may call at different times, and their work may not be consistent.</p> <p><i>Allow at most 2 advantages and at most 2 disadvantages.</i></p>	3 marks
b	<p>Any reasonable advantage to the environment.</p> <p>For example:</p> <p>It is easier to control the heating because this is done centrally.</p> <p>The central heating system can be adjusted for optimum fuel economy, e.g. the temperature can be automatically adjusted depending on a person's presence or otherwise.</p> <p>The temperature can be automatically adjusted depending on a person's presence or otherwise.</p> <p>The amount of fuel used can be monitored more easily.</p> <p>Any reasonable disadvantage to the environment.</p> <p>For example:</p> <p>Rooms could be heated even if they are not being used.</p> <p>The heating system has more components and is more complex and so is more likely to go wrong.</p> <p>If the system is set to maintain a given temperature, it will try to do so even if the windows are open.</p> <p>If the computer breaks down the heating may not work throughout the building.</p> <p>The computer hardware is not easily recycled.</p> <p><i>Allow at most 3 advantages and at most 3 disadvantages</i></p>	4 marks
Total		7 marks

7a	Any reasonable, for example: Security threat 1: A virus can be downloaded attached to an email. Prevention 1: Use a virus checker to detect and automatically delete emails with viruses. Security threat 2: Others intercept and read your email. Prevention 2: Encryption.	4 marks
b	Any reasonable. Any solution must leave the hardware useable. For example. Secure computers to the bench. Locate computer rooms off the ground floor. Restrict access to computer rooms using swipe cards and locks. Use security film or wire grills on the windows. Supervise computer rooms when they are in use. Have a WebCam to record who is using the hardware. Mark the equipment with an identification, e.g. UV Keep computers out of sight. Don't eat or drink while using a computer. NOT passwords to access the computer.	3 marks
Total		7 marks

8a	<p>Any reasonable advantage. For example: Internet banking/shopping is open 24/7. Customers can get a bank statement at any time. Customers can set up bill payments in advance. Goods are usually cheaper than in High Street shops. A wider range of goods is available. Goods can be delivered to any address, so it is easier to send people presents. You can do your banking or shopping without leaving home. Goods can be delivered to your home.</p> <p>Any reasonable disadvantage. For example: If the bank's Internet site is not available access to a customer's account is very limited.</p> <p>The range of services offered can be very limited compared with a conventional bank. You can't always talk to someone when you need advice. You may not know exactly what you are buying until it is delivered. To return goods you have to post them back. If the goods you ordered are not available, other goods may be substituted and you may not want these. Goods may take a long time to be delivered. You must have a computer and/or Internet access.</p> <p><i>Allow at most 2 advantages and at most 2 disadvantages.</i></p>	3 marks
b	<p>Any reasonable advantage. For example: You may receive advertising for goods you are interested in. Companies may develop new products if they know in advance that there is a market for them. Companies may develop better products if they know what customers want.</p> <p>Any reasonable disadvantage. For example: You may receive a lot of junk mail. You may receive a lot of junk email. You may receive a lot of information about goods that you are not interested in. Telesales persons may ring you up and try to sell you goods.</p> <p><i>Allow at most 2 advantages and at most 2 disadvantages.</i></p>	3 marks
d	<p>Any reasonable. For example: Personal information must be: fairly and lawfully processed processed for limited purposes adequate, relevant and not excessive accurate not kept longer than necessary processed in accordance with the data subject's rights secure not transferred to other countries without adequate protection.</p>	2 marks
Total		8 marks