

Mark Scheme for January 2012

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This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

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.

OCR will not enter into any discussion or correspondence in connection with this mark scheme.

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Question		Answer	Marks	Guidance															
1		<table border="1"> <thead> <tr> <th>Statement</th> <th>True (✓)</th> <th>False (✓)</th> </tr> </thead> <tbody> <tr> <td>A length check could be used with 10 character identity codes</td> <td>✓</td> <td></td> </tr> <tr> <td>A range check could be used with students' names in a database</td> <td></td> <td>✓</td> </tr> <tr> <td>An invalid character check could be used with 6 digit dates of birth</td> <td>✓</td> <td></td> </tr> <tr> <td>Check digits are used with the entry of examination marks</td> <td></td> <td>✓</td> </tr> </tbody> </table>	Statement	True (✓)	False (✓)	A length check could be used with 10 character identity codes	✓		A range check could be used with students' names in a database		✓	An invalid character check could be used with 6 digit dates of birth	✓		Check digits are used with the entry of examination marks		✓	4	
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2	(a)	<p>Two from</p> <p>The questions are fixed As the answers are anonymous..... they might not be totally accurate Users may not complete them/cannot be compelled to complete them/may be slow to complete them May not give an accurate overview of whole process Inputs and outputs may be difficult to identify</p>	2																
	(b)	<p>Two from</p> <p>Observation Interviewing users Examining documents of the current system</p>	2																

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7	<p>Three from:</p> <p>WAN is wide area network and LAN is a local area network Data transmission rates of a WAN tend to be slower than those of a LAN LAN is usually found within a building/a site/a school WAN is spread over a much larger area WAN can communicate via satellite/public communication system LAN uses dedicated cables / short range wireless communication.</p>	3	
8	<p>Three from One for feature, one for example</p> <p>Sound – eg head teacher’s key note speech / voiceovers Music – eg concerts Video – eg films of performances etc. Hyperlinks – eg to move from department to department Animation – eg moving text etc. Search engine – eg to find specific items Slide show – eg carousel of photos of school facilities Interactive games – eg Maths games</p>	6	
9	<p>Three from</p> <p>may be no need for shop premises / reduced costs of premises can supply customers from all over world / potentially larger customer base / more customers can trade continuously/not restricted to shop hours can trade in any currency fewer staff needed/reduced salaries customer records kept sales trends analysis email adverts to customers less wastage/less need for constant restocking</p>	3	

Question	Answer	Marks	Guidance
10	<p>Six from:</p> <p>Normal data is data which is within acceptable limits Any exam mark between 0 and 60 would be normal data, eg 56</p> <p>Abnormal data is data outside acceptable limits/of the wrong type Any exam mark greater than 60 or less than 0 is abnormal / text eg "sixty" / fractions eg 3.4</p> <p>Extreme data is data on the boundaries of acceptable limits Exam marks of 0 or 60 would be extreme data</p> <p>Examples can be descriptions or specific numbers</p>	6	
11	<p>Four from</p> <p>Some data has to be permanent... ...such as start up instructions ...operating system instructions ROM stores BIOS / games / washing machine instructions etc</p> <p>Some data needs to be temporary... ...such as data which needs to be changed RAM stores documents that user is currently working on</p> <p>Three max from ROM or RAM</p>	4	

Question		Answer	Marks	Guidance	
				Content	Levels of response
12		<p>Answers may include reference to:</p> <p>Encryption readable only to (decryption) key holder If data accessed by hacker encryption key can be broken at hacker's leisure</p> <p>Firewall Prevents unauthorised computers from accessing data Hackers can create false IP addresses/can block wanted traffic</p> <p>User ID/password Prevents unauthorised access by anyone without password Passwords can be forgotten</p> <p>Swipe card/electronic key/key-card/key Prevents access by unauthorised users Cards can be cloned/lost</p> <p>Biometric data Only authorised individuals can access systems Can be viewed as infringement of personal liberties/very expensive/fingerprints can be lifted</p>	9		<p>Level 3: (7–9 marks) Candidates will address all aspects of the question and discuss the advantages and disadvantages of a range of different methods. There may be a reasoned conclusion, indicating the need for a range of different methods. The information will be relevant, clear, organised and presented in a structured and coherent format. Specialist terms will be used correctly and appropriately.</p> <p>Level 2: (3–6 marks) Candidates will address all aspects of the question and discuss/consider the advantages and disadvantages of at least two different methods. The discussion/consideration may be one sided or limited. There may be an attempt at a conclusion. For the most part the information will be relevant and presented in a structured and coherent format. Specialist terms will be used appropriately and for the most part correctly.</p> <p>Level 1: (0–2 marks) Candidates will only produce a list of methods and/or only address the advantages or the disadvantages of one method. Answers may be simplistic with little or no relevance and may be in the form of a list. There will be little or no use of specialist terms.</p>

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		Security guards stops access to unauthorised personnel If personnel not known to guard and had forgotten proof of identity bona fide users can be refused access/not effective with online access			
13		<p>Answers may include reference to advantages and disadvantages such as:</p> <p>Don't have to pay robots Robots produce more consistent accuracy of work Robots don't take breaks Robots don't go on strike Initial cost of robots expensive Greater productivity from robots / work more consistently Can / Have to be reprogrammed for new tasks If there is an error will continue regardless unless human intervention Cleaner/healthier environment Unemployment More boring tasks Re-training / re-skilling De-skilling</p>	8		<p>Level 3: (7–8 marks) Candidates will address all aspects of the question and discuss a range of advantages and disadvantages to both company and workers. There may be a reasoned conclusion, indicating the need for a range of different methods. The information will be relevant, clear, organised and presented in a structured and coherent format. Specialist terms will be used correctly and appropriately.</p> <p>Level 2: (3–6 marks) Candidates will address all aspects of the question and discuss/consider some advantages and disadvantages to both company and workers. The discussion/consideration may be one sided or limited. There may be an attempt at a conclusion. For the most part the information will be relevant and presented in a structured and coherent format. Specialist terms will be used appropriately and for the most part correctly.</p>

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