

General Certificate of Education

Information and Communication Technology

5521/6521

ICT1

Mark Scheme

2006 examination – January series

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.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of candidates' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

Unit 1 Information: Nature, Role and Context

Examiners: the answers given in this mark scheme are exemplars. Credit must be given for other correct answers not given in the mark scheme. Please refer to Team Leaders where there is any doubt.

1	<p><i>10.2 Value and Importance of Information</i></p> <p><i>Name, and give an example of, three characteristics of information that give it value and importance.</i></p>	<i>(6 marks)</i>
	<p>The following are EXAMPLES/EXPANSION only</p> <p>Accuracy/correct (1) - this means that the information on an invoice must be exact to the nearest penny otherwise customers may complain /incorrect stock figures may cause the manager to re-order the wrong amounts (1)</p> <p>Up to Date (1) – a five year old list of e-mail addresses would be out of date and may mean that people have changed address and cannot be contacted (1)</p> <p>Relevant for a particular use (1)– the information on a sales summary would not be relevant to the manager of the payroll department (1)</p> <p>Complete (1) incomplete sales information might give rise to an incorrect sales forecast (1)</p> <p style="text-align: right;">3 times (2,1,0)</p>	

<p>2</p>	<p><i>10.6 Role of Communication Systems</i></p> <p><i>A company that manufactures electrical goods intends to set up a website to advertise its range of products and to take orders on-line.</i></p> <p><i>(a) Give two factors that the company should consider when deciding on a name for its website, and state why each factor should be considered.</i></p> <p><i>(b) Having decided upon a name for the site, describe what else the company must do before it can use the name.</i></p> <p><i>(c) Give four ways in which the company could use the facilities available on the Internet to encourage visitors to use its site.</i></p>	<p><i>(4 marks)</i></p> <p><i>(2 marks)</i></p> <p><i>(4 marks)</i></p>
	<p>a) One mark for example (FACTOR) 2x(2,1,0) Two from: Length/short/”snappy” Meaningful name/ Easy to remember Initial letter/extension Appropriate for business/relates to business No one else has same name/unique</p> <p>One Mark For Saying Why Need To Consider It; Matching any two from: Easy to type in Easy to remember Meaning attached Names must be unique Copyright issues More effective in search engines</p> <p>b) One Mark for Action and one Mark for expansion. The candidate can gain 2 marks for giving two actions but not just two expansions. (2,1,0)</p> <p>Possible answers include: Check no one else has the same name (1) can’t have duplicate domain names/must be unique(1) Register/copyright/buy the domain name (1) so becomes legally the company’s/someone else claims it/trade mark issues (1)</p> <p>c) 4x1 Possible answers include: Register with search engines (1) Place adverts/popups/links on other sites etc (1) Use of cookies (1) Meta tag (1) Function on site for visitors to add e-mail address of friends (1)</p>	

<p>3</p>	<p><i>10.9 The Legal Framework</i></p> <p><i>(a) Name the following:</i></p> <p><i>(i) legislation designed to protect companies and individuals who produce software;</i></p> <p><i>(ii) legislation designed to protect the privacy of individuals whose personal data is held by others.</i></p> <p><i>(b) State two duties of the Information Commissioner.</i></p>	<p><i>(1 mark)</i></p> <p><i>(1 mark)</i></p> <p><i>(2 marks)</i></p>
	<p>a) i) Copyright, Designs and Patents Act (1) Copyright law/act (1) licensing law/act (1) Software copyright/ Software licensing (1)</p> <p>ii) Data Protection Act (1)</p> <p>b) (2x1) to enforce and oversee (1) the Data Protection Act 1998 to promote good information handling (1) to provide guidelines (1) to investigate complaints (1) to act as ombudsman (1)</p>	

<p>4</p>	<p><i>10.4 Capabilities and Limitation of Information and Communication Technology</i> <i>10.5 The Social Impact of Information and Communication Technology</i></p> <p><i>For each of the following organisations, state one use it can make of ICT and give one benefit to the organisation of this use. The uses of ICT must be different in each case.</i></p> <p><i>(a) A newspaper.</i></p> <p><i>(b) A supermarket.</i></p> <p><i>(c) A travel company.</i></p> <p><i>(d) The Police.</i></p>	<p><i>(2 marks)</i></p> <p><i>(2 marks)</i></p> <p><i>(2 marks)</i></p> <p><i>(2 marks)</i></p>
	<p>4 x (2,1,0)</p> <p>One mark for an ICT example which must be different in each case</p> <p>One mark for benefit to the organisation</p> <p>Example: a) a newspaper can be sent copy/report/article by e-mail (1) as it is in electronic format it saves staff time and costs for editing (1)</p>	

<p>5</p>	<p><i>10.7 Information and the Professional</i></p> <p><i>Using a different example of how an ICT professional would use each of the following personal skills, describe why that skill is important:</i></p> <p><i>(a) written communication skills;</i></p> <p><i>(b) listening skills;</i></p> <p><i>(c) problem solving skills.</i></p>	<p><i>(2 marks)</i></p> <p><i>(2 marks)</i></p> <p><i>(2 marks)</i></p>
	<p>ONE MARK FOR USE OF THE SKILL IN AN ICT CONTEXT & ONE MARK FOR EXPLAINING THE IMPORTANCE OF THE SKILL.</p> <p>Example answers include:</p> <p>a) Written communication skills – Use of ICT tool for writing end user documentation. (1) Clarity and understanding. (1)</p> <p>b) Listening skills – Help desk etc/writing programs. (1) Listen carefully to ensure understanding of a problem or end user requirements. (1)</p> <p>c) Problem solving skills –Debugging/help desk. (1) Consider different solutions and understand all of the problems from some clues that the end user has given to you. (1)</p> <p>NB Use of the skill must be ICT related in each case and clearly stated.</p>	

<p>6</p>	<p><i>10.1 Knowledge, Information and Data</i></p> <p><i>Explain, using examples, what is meant by each of the following terms:</i></p> <p><i>(a) data;</i></p> <p><i>(b) information;</i></p> <p><i>(c) knowledge.</i></p>	<p><i>(2 marks)</i></p> <p><i>(2 marks)</i></p> <p><i>(2 marks)</i></p>
	<p>a) Data are raw facts or figures, or a set of values, facts, figures, measurements, records of transactions (1) example (1)</p> <p>b) Information is data, which has been processed or converted to give it meaning (1) example (1)</p> <p>c) Knowledge is a “set of rules or concepts” used to interpret information or Knowledge is a “set of rules or concepts” used to make use of information or Knowledge is a “set of rules or concepts” applied to information (1) example (1)</p> <p>An example of knowledge might include the sales manager using sales data for last year to predict next year’s sales. His knowledge of sales trends allows him to interpret the sales information.</p> <p>DO NOT allow “traffic lights” examples.</p>	

<p>7</p>	<p><i>10.9 The Legal Framework</i></p> <p><i>People who access computer systems without authorisation can be prosecuted under the Computer Misuse Act (1990).</i></p> <p><i>(a) State and give an example of, each of the three sections of the Computer Misuse Act.</i></p> <p><i>(b) Why are there few prosecutions under the Computer Misuse Act?</i></p>	<p><i>(6 marks)</i></p> <p><i>(2 marks)</i></p>
	<p>Independent marks NB The mark is not for candidate writing unauthorised</p> <p>a) unauthorised access to material without any intent to do anything other than just gain access (1). An example would be the student who gains access to the administrative side of a college network or to another student’s user area. The person who tries to get into a system just for the sake of it.(1)</p> <p>unauthorised access with intent to commit, or to facilitate commission of, further offences (1). For example accessing bank records with the intent of committing fraud / Accessing personal details with the intent of committing blackmail.(1)</p> <p>unauthorised modification of computer material (1). For example changing the balance in a bank account/ altering someone’s credit status/ changing an examination mark.(1)</p> <p>b) Fear of effect on customers/reputation (1) if think their data/system is unsafe (1)</p>	<p>3x (2,1,0)</p> <p>(2,1,0)</p>

<p>8</p>	<p><i>10.6 Role of Communication Systems</i></p> <p><i>(a) With reference to the insert, give an explanation of the items marked:</i></p> <p><i>(i) X;</i></p> <p><i>(ii) Y;</i></p> <p><i>(iii) Z.</i></p> <p><i>(b) Two recipients of the e-mail, shown on the insert, are 'Reception' and 'Archive'.</i> <i>Explain why the complete e-mail address does not appear.</i></p> <p><i>(c) Give two benefits to an organisation of using e-mail</i></p> <p><i>(d) Give two limitations to an organisation of using e-mail</i></p>	<p><i>(2 marks)</i></p> <p><i>(2 marks)</i></p> <p><i>(2 marks)</i></p> <p><i>(2 marks)</i></p> <p><i>(2 marks)</i></p> <p><i>(2 marks)</i></p>
	<p>(a) (i) carbon copy (1) enables user to send a copy of the email to someone else(1)</p> <p>(ii) Any two from the following</p> <p>Attachment/File is attached (1)</p> <p>Name of file (1)</p> <p>Size of file (1)</p> <p>(iii) disclaimer (1) stating the sender takes no responsibility(1)</p> <p>(b) the recipients e-mail addresses have been added to the contacts/address book/ e-mail account (1) user has only to click onto their name and does not have to type in the full e-mail address (1)</p> <p>(c) Any 2x1</p> <p>it is almost instantaneous (1)</p> <p>employee does not have to be in the office (1)</p> <p>does not have to be formal (1)</p> <p>can send the same message to many people (1)</p> <p>(d) Any 2x1</p> <p>Excessive amounts of mail to deal with (1)</p> <p>Personal use which is wasting company time (1)</p> <p>Clogging up of network with mail messages (1)</p> <p>Excessive amounts of storage used on mail messages(1)</p> <p>Tendency to abruptness in e-mail (1)</p> <p>Lack of social interaction (1)</p> <p>Danger of viruses/security issues- Both need explanation (1)</p>	