



ASSESSMENT and
QUALIFICATIONS
ALLIANCE

Mark scheme

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GCE

Information and Communication Technology

Unit ICT1

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Unit 1: Information: Nature, Role and Context

Overall guidelines

1. All examples accepted should be clearly related to the subject area and should not be “generalised” examples.
2. Attention should be paid to ensure that marks are not awarded for simple restating of the question or the stem, often involving the exact same terms.
3. The answers should be providing evidence of more than “man in the street’s” knowledge of ICT.
4. It should be remembered that scripts could be seen after they are marked and so consistency of approach and correct mechanics of marking are essential.
5. Rules on positioning of ticks and marks are to aid in checking and remarking of scripts.
6. Do not expect the candidate to use the exact wording given in the mark scheme. If you are in doubt as to the correctness of an answer given by the candidate, consult your Team Leader.
7. Where one-word answers are acceptable this will be indicated on the question paper.

Specific marking guidelines

8. The basic rule is one mark one tick. The tick to be positioned at the point where the mark is gained in the answer and definitely not in the margin.
9. The only figures in the margin should be sub-totals for parts of questions and a final ringed total for a whole question.
10. Where questions are divided into parts *a*, *b* and so on, and a mark is indicated for each on the paper, a mark should be positioned at the end of the appropriate response in the margin.
11. There should in effect be a mark in the margin at every point there is one on the question paper and a number of ringed totals, which relates directly to the number of questions on the paper.
12. Where a question has only one part, the total for that question should be written once and then again and circled. This allows for easy checking that totalling and transcription of marks is correct.
13. All zero values should be crossed through.
14. All blank spaces should be crossed through with a vertical line through the text space – not in the margin.
15. All writing must be marked as read, either by the presence of ticks or by striking through the script with a vertical line.
16. All blank pages must be crossed through.
17. Where candidates have added extra to their answers later in the script, the total mark should be indicated as including *x* from page *y*. The total mark should be in the position where the answer starts.

18. The use of the following symbols/marks is acceptable:
- BOD – where the benefit of the doubt is given for the point the candidate is making. This is generally where poor writing or English is an issue. Its widespread use should be avoided.
 - Underlining of subject specific terminology, which is misused or incorrect e.g. encoding rather than encryption, information rather than data.
 - Underlining can also be used to highlight clearly incorrect statements or the use of a generalised phrase such as quicker, user friendly and so on.
 - An omission mark ^ should be used where the candidate has given insufficient information to gain a mark. This is particularly useful when a teacher or student looks at scripts against a mark scheme.
 - It may be appropriate to indicate where the same point has been covered more than once by an arrow or where a point has been covered in several lines of prose by the use of brackets.
 - The use of letters associated with ticks **may** be used to indicate different areas being marked in a question, particularly to indicate the different bullet points in an essay. This will be outlined at standardisation.
19. **No** other symbols or comments should be used.
20. Markers are responsible for checking
- The transposition of marks to the front sheet
 - That all work has been marked on each script
 - That all marks for individual questions are totalled correctly
 - That the script total is transferred to the box at the top right of the script.
 - That they **clearly** initial the script, under the total at the top right, so it is possible for the Principal Examiner to identify each marker's work.

Unit 1 Information: Nature, Role and Context

- 1 Explain what is meant by the term Information and Communication Technology. 3 marks

Use of computer related technology/computers/computer related examples(1)

Plus any 2 marks from the following:

Input/collection/gathering/ (1)

Processing/manipulation/changing/sort/organise(1)

Storage(1)

Transfer/pass on/send/exchange/shared(1)

Output/accessing/produced/find/find out(1)

- 2 With the aid of suitable examples, distinguish between data and information. 4 marks

Data is raw facts or figures or a set of values, facts, figures measurements, records of transactions(1)
example(1)

Not a single value

Bar code is acceptable

Raw material gets BOD

2 marks

Information is data which has been processed or converted to give it meaning or is data in context or data that has been organised (1) example (1)

DO NOT Allow simple labelling as an example unless this is described in a software context
2 marks

NB: Can get the mark for the example, without getting the definition mark
Allow meaningful data=Information

Examples of Data and Information do not have to be related

- 3 An opticians keeps records in a database of all its customers who have had eye tests. Eye test reminders are sent out to customers when they are due. Customers who do not make appointments after two reminders have been sent out have their details deleted from the database.
Describe **two** possible reasons why **these** customer details are deleted from the database. 4 marks

2*(2,1,0)

To comply with Data Protection Act(1) plus business advantage/explanation (1)

Reduce storage required (1) plus business advantage/explanation (1)

Speed issues (1) plus business advantage/explanation (1)

Other similar answers acceptable

MARKS ARE DEPENDENT

Do not accept other **reasons for deleting the data** – that is given in the question for example people may have moved house/died

- 4 You have been asked to write a job description for a vacancy on a software company's help desk team. State, giving a reason for each one, **two** personal qualities that are relevant to the job, which you would ask for in the description. 4 marks

Any 2 × 2 marks. 1 for quality one for reason which must be relevant to help desk scenario

Willing to work flexible hours (1) – user support roles require the ability to stick at problems and see them through, may entail working when users don't need equipment e.g. installing new software or fault correction (1)

Be able to communicate well orally (1) – to enable efficient and effective communication with users/or colleagues – e.g. interviewing and questioning effectively to find out what is wrong/giving instructions (1)

Good written communication skills (1)– ability to write clear documentation both technical and end users for recording faults clearly and documenting solutions (1)

Ability to work as part of a team (1) – means able to exchange views, share information/ better problem solving. (1)

Organisational skills/work under pressure (1)– ability to take orders, to be responsible for own work including to have several different jobs running concurrently (1)

Ability to listen/patience/approachable (1)– if cannot, then users wants are often misinterpreted or ignored and instructions not followed correctly/or users do not ask for help (1)

Perseverance/problem solving (1) – help desk tasks require the ability to stick at problems and see them through. (1)

Ability/willingness to learn new skills(1) as help desk operators need to keep up to date with changes in software (1).

N.B. If only state qualities and do not give reasons maximum is 2 marks and the **reasons must be relevant to the job i.e. to help desk scenario and not generalised..**

If “Communication Skills”, cannot then have separate marks for Written & Oral skills

DO NOT ACCEPT

INITIATIVE
MANAGERIAL SKILLS
TECHNICAL
PREVIOUS EXPERIENCE

- 5 A reporter on a newspaper is using the Internet to carry out research for an article that she is writing.
- (a) Describe how she can access a website when:
- (i) she knows the Uniform Resource Locator (URL) or address; 2 marks
 - (ii) she does not know the URL or address 2 marks
- (b) Describe using examples, **two** concerns that the reporter might have about information that has been obtained from the Internet. 4 marks
- a) i) Type in address/pick from favourites (1) into a browser (1)
- ii) Use search engine/internet directory (1) to find site (1)
- b) One mark for **e.g.** one mark for **WHY** it is a concern

Examples :

No control on content (1) Validity of information (1)

Copyright issues (1) if explained (1)

Accuracy/legality issues (1) if explained (1)

Up to date (1) if explained (1)

NOT Downloading a virus/corruption of files as this has nothing to do with the nature of the information obtained

- 6 A company offering security services for ICT systems includes the following quotation in its advertisements, "You're protected against hackers, viruses and worms. But what about the staff in the sales department?"

Describe **three** ways in which a company's own staff can be a weak point in its ICT systems.

6 marks

One mark stating **CAUSE (C)** of the weak point **i.e. what the staff may do**

One mark explaining the **EFFECT (E)** of the weak point **i.e. the effect on the system of what they do**

Annotate marks (C) and (E)

3 × (2, 1, 0)

Example :

Someone forgets to switch off/log off workstation **C** (1) – leaves data accessible to others **E** (1)

NO MARKS FOR ANYTHING ABOUT VIRUSES, HACKERS AND WORMS

NOT DISMISSED EMPLOYEES (BECAUSE THEY ARE NO LONGER EMPLOYEES!)

- 7 (a) With reference to the Data Protection Act of 1998, describe what is meant by the following terms:

(i) The Registrar (Information Commissioner); 2 marks

(ii) A data subject. 2 marks

- (b) State **three** items of data that a company must include in an entry on the Data Register.

3 marks

- (a) (i) **enforces and oversees** (1) the Data Protection Act 1998 and the Freedom of Information Act 2000.
reporting directly to the UK Parliament (1)
promotion of good information handling (1)
encouraging of codes of practice for data controllers (1)
 Provide guidelines (1)
 Investigate complaints (1)

Any two of the above points are acceptable

- (a) (ii) Data subjects are:
 Customers and clients (1)
 Complainants, correspondents and enquirers (1)
 Advisors, consultants and other professional experts (1)

Or alternatively living (1) identifiable (1) individuals, Someone data is held about (1)

Any two of the above are acceptable

- b) The name and address of the data controller/Company registration number/Contact details (1)
 Description of Purpose(s) data to be stored for (1)
 Data to be stored (classes) (1)
 Who will have access to the data (recipients) (1)
 Any organisations to whom data will be passed on (transfers) (1)
 Sources of data/how the data has been acquired(1)

Any three to maximum of 3 marks

- 8 *A company provides all new employees with an induction booklet including guidelines for working with ICT. State, giving a reason for each one:*
- (a) **Three health and safety guidelines** 6 marks
- (b) **Two guidelines to protect the company's data** 4 marks

- a) One mark for stating guideline **WHAT** and one mark for reason for inclusion **WHY i.e. why it helps to prevent health/safety problems**

Any 3 * (2, 1, 0) marks

Dependent marks

Examples:

You must not type without using the wrist rest provided (1) to prevent wrist strain/RSI (1) from wrists being bent

You must ensure that you use the screen filter provided (1) to prevent eye strain (1)

You must take breaks at intervals (1) to prevent stress/backache/neckache/blood clots/rsi (1)

ALLOW regular eye tests (1) to allow early identification of eye problems (1)

- b) Any 2 * (2, 1, 0) marks

Dependent marks

One mark for stating guideline **WHAT the worker should do** and one mark for reason for inclusion **WHY they should do it i.e. how it helps to protect the company's data**

Examples:

Do not disclose passwords to other people(1) prevents outsiders accessing data (1)

Do not use damaged floppies (1) prevents damage to disk drives (1)

- 9 *A company sales manager is working away from home and the office for a week. Describe two ways in which he can use ICT to send data to the office.* 4 marks

2*(2,1,0)

First mark

Device and what is sent (1)

What is sent can occur more than once

Examples

Laptop to send email

Webcam to send images (1)

Fax machine to send images (1)

Mobile phone to send text messages (1)

Modem to send email (1) special case

Second mark

Explicit indication of the context (1)

Example:

Using the device in a hotel/ Internet café (1)

NB Do not insist on WAP for mobile.

10 A local college has started running its courses on-line.

Describe:

- (a) **Two** advantages to a learner of following an on-line course; 4 marks
(b) **One** disadvantage to a learner of following an on-line course; 2 marks
(c) **Two** advantages to the course organisers, at the college, of providing a course on-line. 4 marks

One mark for saying **WHAT** they can do and one mark for saying **HOW** this is an advantage/disadvantage

Examples :

- (a) Can be followed at any time of day or night(1) means not constrained by course hours (1)
Saving time/cost (1) plus reason (1)
Easier to study at home (1) plus reason (1)
Cost issues (1) plus explanation (1)
- (b) Lack of face to face support (1) cause student to feel isolated (1)
Health issues (1) from too much use of pc (1)
- (c) Ability to reduce costs (1) as course only needs preparing once (1)
Unlimited audience in size or location (1) greater profits (1)

Do not accept benefits to tutor in part (c)