CAMBRIDGE
International Education

Cambridge IGCSE™

INFORMATION AND COMMUNICATION TECHNOLOGY **0417/11**

Paper 1 Theory **May/June 2025**

MARK SCHEME

Maximum Mark: 80

Published

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge International will not enter into discussions about these mark schemes.

Cambridge International is publishing the mark schemes for the May/June 2025 series for most Cambridge IGCSE, Cambridge International A and AS Level components, and some Cambridge O Level components.

Generic Marking Principles

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptions for a question. Each question paper and mark scheme will also comply with these marking principles.

GENERIC MARKING PRINCIPLE 1:

Marks must be awarded in line with:

- the specific content of the mark scheme or the generic level descriptors for the question
- the specific skills defined in the mark scheme or in the generic level descriptors for the question
- the standard of response required by a candidate as exemplified by the standardisation scripts.

GENERIC MARKING PRINCIPLE 2:

Marks awarded are always **whole marks** (not half marks, or other fractions).

GENERIC MARKING PRINCIPLE 3:

Marks must be awarded **positively**:

- marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- marks are awarded when candidates clearly demonstrate what they know and can do
- marks are not deducted for errors
- marks are not deducted for omissions
- answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

GENERIC MARKING PRINCIPLE 4:

Rules must be applied consistently, e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

GENERIC MARKING PRINCIPLE 5:

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

GENERIC MARKING PRINCIPLE 6:

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

Annotations guidance for centres

Examiners use a system of annotations as a shorthand for communicating their marking decisions to one another. Examiners are trained during the standardisation process on how and when to use annotations. The purpose of annotations is to inform the standardisation and monitoring processes and guide the supervising examiners when they are checking the work of examiners within their team. The meaning of annotations and how they are used is specific to each component and is understood by all examiners who mark the component.

We publish annotations in our mark schemes to help centres understand the annotations they may see on copies of scripts. Note that there may not be a direct correlation between the number of annotations on a script and the mark awarded. Similarly, the use of an annotation may not be an indication of the quality of the response.

The annotations listed below were available to examiners marking this component in this series.

Annotations

Annotation	Meaning
	Omission or to indicate where a company brand name has been used
	Incorrect
FT	Follow through
Highlighter	Information copied from the text
ISW	Ignore subsequent work
LNK	Two statements are linked
MAX	Maximum number of marks that can be awarded
NAQ	Not answered question
Off-page comment	Allows comments to be entered at the bottom of the RM marking window and then displayed when the associated question item is navigated to.
On-page comment	Allows comments to be entered in speech bubbles on the candidate response.
PE	Principal examiner has approved the mark
REP	Repeat
SEEN	Indicates that work/page has been seen including blank answer spaces and blank pages.
	Correct

Mark scheme abbreviations
/ separates alternative words / phrases within a marking point
// separates alternative answers within a marking point
underline actual word given must be used by candidate (grammatical variants accepted)
max indicates the maximum number of marks that can be awarded
( ) the word / phrase in brackets is not required, but sets the context
Note: No marks are awarded for using brand names of software packages or hardware.

The following <u>must</u> be applied
Examiners **must** ensure that annotations are placed so they can be easily seen in white space where or close to where the mark is awarded
Before submitting a script please check all ticks match the marks
At the end of prose answers/long answer place an annotation at the end of the answer to show that the whole answer has been read, unless a marking annotation has been placed nrea or at the end of the answer.
On any blank pages place **one** SEEN annotation
Read the whole sentence before marking it
If an answer is blank then use SEEN and award NR, but if anything has been written for example 'Don't know','?' etc then use NAQ and award 0.
If an answer has been attempted and crossed out and no other answer written then attempt to mark it.

Question	Answer	Marks
1	Actuator Printer	**2**

Question	Answer	Marks
2(a)(i)	**Two** from: It is a text editor It creates / stores / prints / formats text Allows users to type text	**2**
2(a)(ii)	**Two** from: Software that controls / manage / regulates programs / external hardware It can change its environment It is an automatic system	**2**
2(a)(iii)	**Two** from: Small piece of software / program Used to help the user carry out specific tasks	**2**
2(b)	**One** from: So that it can be read / processed by the computer Computers only understand / read / process digital data	**1**
2(c)	**One** from: So that it can be used to control devices So can be used with any analogue device Users can understand analogue data	**1**

Question	Answer	Marks
3	**For** Max **five** from: Digital system therefore the voice quality is better You do not need a dedicated device as it has microphone / camera built in It is portable Keeps a call log More secure calls Can have group video calls Can use existing networks **Against** Max **five** from: Signal can be lost if device is moved Increased lagging / lip sync Needs a reliable internet connection May have difficulty communicating on speaker / microphone Small screen makes it difficult to see the other person Safety issues if used on the move	**6**

Question	Answer	Marks
4(a)	Data that is on the boundary of the acceptable range.	**1**
4(b)(i)	Any integer from 1 to 10	**1**
4(b)(ii)	**One** from: 1 10	**1**
4(b)(iii)	**One** from: Any number below 1 Any number above 10 Any letters / characters / symbols Any non-integers	**1**

Question	Answer	Marks
5(a)	**Benefits** Max **five** from: The video can be viewed on many devices Allows the user to view more up to date movies Allows the user to connect from anywhere in the world using a device with an internet connection More videos available than physical discs Can view the video without downloading saves storage space **Drawbacks** Max **five** from: Needs a reliable internet connection Needs fast broadband connection User does not own the video There is a monthly subscription to pay More liable to lag if internet speed is too low May be lip sync problems	**6**
5(b)	**Three** from: Process in which the file size is reduced while maintaining its integrity Creates a smaller file for computer storage Allows the data to be transferred quicker therefore reduces lag A process that re-encodes the file data	**3**

Question	Answer	Marks
6	**For** Max **five** from: More up to date than maps Can find the fastest / cheapest / best route Can redirect a driver enroute if the road is blocked Can use GIS features to show road closures Driver does not have to memorise all routes Tells driver how long it will take // Tells the driver the cost of the journey **Against** Max **five** from: May not recognise the destination if it is newly built Very dangerous to set up the systems whilst driving Requires the driver to download the updated maps Can lose the satellite signal in certain areas due to tall buildings Requires the driver to use common sense as the system could lead the driver down unsuitable roads Over reliance on the technology	**6**

Question	Answer	Marks
7	Max **three** from: A set of rules Relates to the writing / presentation of the documents produced within a company Gives a consistent look and feel across the company Strengthens company's brand Max **three** from: Consistent font style used Consistent font size used Consistent colours to be used Consistent placing of the logo	**4**

Question	Answer	Marks
8(a)	Parallel	**1**
8(b)	Pilot	**1**
8(c)	Phased	**1**

Question	Answer	Marks
9(a)	**Three** from: A device that broadcasts data to every device connected to it Connects multiple computers / devices together Acts as a repeater to amplify signals which deteriorate after traveling long distances over cables Extends a network	**3**
9(b)	**One** from: If the LAN is too large increases signal traffic / weakens signals If the LAN is too large it takes up bandwidth Cannot differentiate between the devices on the network therefore sends to all	**1**

Question	Answer	Marks
10(a)(i)	**Two** from: Involves watching people use the current system to see how it works / errors in the process Allows the systems analyst to see the input, process and output of the current system Due to the Hawthorne effect the results may not be reliable	**2**
10(a)(ii)	**Two** from: One to one method of question and answer // Face to face conversation Its between the analyst and employee Allows the analyst to find more information about a particular topic Allows the interviewer to evaluate the answer	**2**
10(b)	**Four** from: Algorithms Data capture / input forms Data structures File structures Flowcharts Input formats Output formats Screen / printout layouts Testing strategy / plan Validation routines	**4**
10(c)	**Three** from: So it meets the needs of a client To remove any errors from the new system To make sure it produces the correct output Check the software does not crash / works properly under normal operations	**3**
10(d)	**Three** from: Test data Reason for test Actual outcomes Remedial action	**3**

Question	Answer	Marks
11(a)	**Two** from: It scans the document Compares the word typed with its dictionary If the words match it moves on to the next word If the words do not match it highlights the word	**2**
11(b)	**Two** from: It does not appear in the dictionary The word may be a person's name / place / noun The word may be a scientific / Latin word The spell check software may have been set up for another variant of language e.g. US English The word may be mistaken for another word Repeated words could be removed Does not understand the context of the word or phrase	**2**

Question	Answer	Marks
12(a)	**Two** from: The correct / acceptable way of communicating over the internet Internet etiquette Respects other user's views Displays common courtesy when sending messages	**2**
12(b)	**Six** from, for example: Do not be abusive Example of use Be clear with your message Be concise in the message Keep message free of personal data Posts can be read by anyone // Example of personal data Always check spelling and grammar Excessive spelling and grammar mistakes are seen it could be classed as spam Respect people's privacy Do not send messages that could embarrass recipients Do not use all capital letters Capitalised words can be classed as shouting Do not use too many emoticons / slang / text speak... Emicrons / slang annoy people Read emails carefully before sending Example and a reason	**6**

Question	Answer	Marks
13(a)	**Two** from: Gaining unauthorised access / without consent (1st) to a computer system / data (1) Allow **one** mark for an example of the consequence of hacking Identity theft Misuse of personal information Data can be deleted / edited / corrupted on a system	**2**
13(b)	**Three** from: Use of strong passwords Passwords that do not contain personal information Change passwords frequently Long password Use of biometric passwords	**3**

Question	Answer	Marks
14(a)	**One** from: gif jpg png	**1**
14(b)	**One** from: csv pdf rtf txt	**1**
14(c)	**One** from: css htm html	**1**

