



**General Certificate of Secondary Education  
2025**

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**Digital Technology**

Unit 1:

(Compulsory Core)

Digital Technology

**[GDG11]**

**THURSDAY 22 MAY, AFTERNOON**

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**MARK  
SCHEME**

## General Marking Instructions

### Introduction

Mark schemes are published to assist teachers and students in their preparation for examinations. Through the mark schemes teachers and students will be able to see what examiners are looking for in response to questions and exactly where the marks have been awarded. The publishing of the mark schemes may help to show that examiners are not concerned about finding out what a student does not know but rather with rewarding students for what they do know.

### The Purpose of Mark Schemes

Examination papers are set and revised by teams of examiners and revisers appointed by the Council. The teams of examiners and revisers include experienced teachers who are familiar with the level and standards expected of students in schools and colleges.

The job of the examiners is to set the questions and the mark schemes; and the job of the revisers is to review the questions and mark schemes commenting on a large range of issues about which they must be satisfied before the question papers and mark schemes are finalised.

The questions and the mark schemes are developed in association with each other so that the issues of differentiation and positive achievement can be addressed right from the start. Mark schemes, therefore, are regarded as part of an integral process which begins with the setting of questions and ends with the marking of the examination.

The main purpose of the mark scheme is to provide a uniform basis for the marking process so that all the markers are following exactly the same instructions and making the same judgements in so far as this is possible. Before marking begins a standardising meeting is held where all the markers are briefed using the mark scheme and samples of the students' work in the form of scripts. Consideration is also given at this stage to any comments on the operational papers received from teachers and their organisations. During this meeting, and up to and including the end of the marking, there is provision for amendments to be made to the mark scheme. What is published represents this final form of the mark scheme.

It is important to recognise that in some cases there may well be other correct responses which are equally acceptable to those published: the mark scheme can only cover those responses which emerged in the examination. There may also be instances where certain judgements may have to be left to the experience of the examiner, for example, where there is no absolute correct response – all teachers will be familiar with making such judgements.

- 1 (a) C [1]  
 (b) B [1]  
 (c) B [1]  
 (d) D [1]

AVAILABLE  
MARKS

4

2 (a)

Statement	True or False
Bitmap graphics use layers while vector graphics use a grid of pixels.	<b>FALSE</b> [1]
Bitmap graphics use a grid of pixels, while vector graphics use mathematical equations.	<b>TRUE</b> [1]
Bitmap graphics are ideal for creating logos, while vector graphics are better suited for photographs.	<b>FALSE</b> [1]

[3]

- (b) 4,800 [1]

(c)

Formula	Tick (✓)
Bit Rate * Bit Depth	
Bit Depth * Sample Rate	✓

[1]

- (d) Advantage = \_\_\_A\_\_\_ [1]

6

- 3 (a) The ability to move/transfer/take data/digital content between software application/platform [1] without having to re-enter the data [1] [2]

(b)

Reason	File Format
For viewing documents that are readable but not easily editable.	PDF [1]
To reduce the file size while maintaining image quality.	JPEG [1]
Used for higher audio quality, especially in professional audio editing.	WAV [1]

[3]

5

- 4 (a) Booting/Bootup/Bootup Do not accept "boot" on its own Start up sequence [1] [1]

- (b) Operating systems are **SOFTWARE** [1] that **MANAGE** [1] computer hardware and software **RESOURCES** [1]. An operating system provides the user with a working **INTERFACE** [1]. [4]

- (c) 2 /2.048 Gigabytes Do not accept 2048 Megabytes as it asks for GB Do not require GB to be included with number. [1]

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Example of Data	Data Type (The same data type cannot be used twice.)
£24	Currency
1.5	<b>Real/Number</b> [1] Numeric/Double/Float [1]
Mathematics book	<b>Text/Short Text/String</b> [1]
14/06/2025	<b>Date or Date/Time</b> [1]
Y	<b>Boolean</b> [1] Character [1]

[4]

(b) (i) Any **two** from: First mark for “Check.” Second mark for what check does.

A process/software check/automatic check/

A computer check [1] that ensures the data entered is sensible/ reasonable/It cannot not check the accuracy of data/reference to meeting criteria [1]

[2]

(ii)

**Sports Shopping Site**

Customer Number *(required field)*

Customer Name

Customer Postcode

Customer Age between 18 and 65

[3]

A Presence [1]

Length [1]

B Format [1]

C Range [1]

(c) Any **two** from:

Mention of an acceptable function

Sorting, [1] Filtering. [1] Totals [1] Do not accept user friendly or laid out

Allow mark for readability/understanding [1]

[2]

11

Feature	Tick (✓)
Report grouping	
Rows and Columns	✓
Mail Merging	
Conditional Formatting	✓

[2]

Statement	TRUE/FALSE
Enable users to perform calculations.	TRUE
Cannot assist the user in making informed choices or predictions.	FALSE
Offer tools to create charts and graphs that visually represent data.	TRUE

[3]

(c) B9:D9 Do not accept dash or for example 9B:9D [1]

(d) =sum(E3:E7) / =E3+E4+E5+E6+E7 [1]

(e)

IF Statement	Tick (✓)
=IF(C3=no,H3,(H3+G1))	
=IF(C4="Yes",H3,(H3+\$G\$1))	
=IF(C3="No",H3,(H3+\$G\$1))	✓

[1]

(f) Any **two** from:  
A function [1] used to search for a value/in a column/or a table cell range [1] return a value [1] [2]

7 (a) Statement Number 2 [1]

(b) In the Fetch Execute Cycle, the CPU systematically processes instructions from a **PROGRAM** [1], enabling the computer to run software, perform computations, and carry out various **TASKS** [1]. This cycle repeats continuously, allowing the CPU to execute a **SEQUENCE** [1] of instructions and make the computer function effectively. [3]

(c)

Device	Answer	Purpose
Mouse	B	A. Capturing sound or voice input
3D Printer	D [1]	B. Controls the cursors movement on a computer screen
Graphics Digitiser	E [1]	C. Used with smartphones or tablets instead of a keyboard
Touch Screen	C [1]	D. Produces intricate three-dimensional objects
Microphone	A [1]	E. Captures the image drawn with a stylus pen

[4]

AVAILABLE MARKS

10

8

8 (a) Internet of Things [1]

(b) Statement	INTERNET/WWW
Uses HTTP to send requested web pages to users.	WWW [1]
Provides services such as email, social media, and search engines.	INTERNET [1]
Contains collections of files held on web servers that are connected by hypertext.	WWW [1]
A large global network of networks all around the world.	INTERNET [1]

[4]

(c) Transferring files/data [1]  
Connecting/linking peripherals or devices/or connecting/linking with an example [1] [2]

(d) Networking involves **LINKING** [1] computers that share data between them. These connected **DEVICES** [1] make use of communication **PROTOCOLS** [1] to transmit information over physical or wireless technologies. [3]

10

9 (a) Consumer Contracts Regulations [1]

(b) Scenario	Data Protection Act 1998	Computer Misuse Act 1990	Copyright Designs and Patents Act 1988
	Tick (✓)	Tick (✓)	Tick (✓)
An individual breaks into a company's computer system and modifies a client's data without authorisation.		✓	
A company collects data about its customers and processes it illegally.	✓		
An individual reproduces and distributes copyrighted material to a friend without permission.			✓

[3]

4

AVAILABLE MARKS
10
4

**10 (a)** Any **two** from:  
**CAUSE**  
 Using mouse continuously/Continuous clicking without a break [1]  
 Using a keyboard/Typing for extended periods [1] Using a joystick for  
 extended period [1]  
 Poor posture [1] [2]

**(b)** Any **two** from:  
**PREVENTION**  
 Use an ergonomic chair/adjustable chair/table [1]  
 Exercise/Stand up, stretch and walk around/take break from sitting [1]  
 Take a break is too vague  
 Maintain proper posture [1]  
 Keep feet flat on the floor [1]  
 Use footrest [1] [2]

4

**11 (a)**

<b>Cybercrime Examples</b>	<b>Threat</b>
When people tell harmful lies about someone or something online.	Cyber defamation [1]
When individuals or computers flood a system with too many requests, causing it to stop working properly.	Denial of Service [1]
When someone keeps bothering or scaring another person online.	Cyber stalking [1]

[3]

**(b) (i)** Any **two** from:  
 Malicious software [1] designed to harm a computer system or data/  
 gain unauthorised access to a computer system/damage the security  
 of a computer system [1] (reference to intentional damage) [2]

**(ii)** Any **one** from:  
 Virus/Trojan Horse/Worm/Key logger/Spyware [1]

6

**12 Level 0 ([0])**

Answer is not worthy of credit.

**Level 1 ([1]–[2])**

The candidate refers to one [1] or briefly two [2] of the disadvantages of online banking in the correct context. The candidate makes limited use of spelling, punctuation, and grammar. The meaning of the text is not always clear. The candidate displays a limited form and style appropriate to the question. The organisation of the answer is limited.

**Level 2 ([3]–[4])**

The candidate describes one [3] or two [4] of the disadvantages of online banking in the correct context. The candidate makes satisfactory use of spelling, punctuation, and grammar. The meaning of the text is usually clear. The candidate demonstrates a satisfactory form and style appropriate to the question. The organisation of the answer is satisfactory.

**Level 3 ([5]–[6])**

The candidate fully describes both disadvantages of online banking and are used in the correct context. The candidate uses a good standard of spelling, punctuation, and grammar. The meaning of the text is always clear. The candidate demonstrates a good standard of form and style appropriate to the question. The organisation of the answer is good.

Possible Answers:

**Security Concerns:**

- Cybersecurity threats.
- Identity theft/hacking into your bank account.
- A fraudulent email asking for login details.
- Unauthorised access to a user’s account.
- Weak passwords.

**Technical Issues:**

- Online banking relies on stable internet connections/computer/smartphone functionality.
- Technical glitches can lead to frustration and potential financial consequences.
- Maintenance/the web site goes down.
- Not all are computer literate/have access to the internet.

**Lack of Personal Interaction:**

- Lacks the face-to-face interaction/No face-to-face contact.
- Prefer speaking with a bank teller.
- Challenging to address specific concerns or receive personalized advice. [6]

Put an X if no marks awarded or no content.

**AVAILABLE  
MARKS**

6

13

Definition	Term
A type of computer short-term memory.	<b>RAM</b> [1]
Provides long-term storage for files, applications, and the operating system.	<b>Hard Drive</b> [1]
A type of very fast memory situated on or very close to the CPU.	<b>Cache</b> [1]
An extremely fast and portable device, suitable for transferring files between computers.	<b>Memory Pen</b> [1]
Determines how many cycles of processing the CPU can perform in one second.	<b>Clock Speed</b> [1]
Manages and coordinates the execution of instructions from the computer's memory	<b>Control Unit</b> [1]
A network typically not accessible to the public.	<b>Intranet</b> [1]
The name for the main cable on a Bus network.	<b>Backbone</b> [1]
Connects devices together on a wired network.	<b>Switch</b> [1]
A malicious software program designed to copy itself over and over again and attach itself to other programs.	<b>Virus</b> [1]

[10]

**Total**

AVAILABLE MARKS
10
<b>90</b>

Put an X if no marks awarded or no content.