

Surname	Centre Number	Candidate Number
First name(s)		2



GCE AS/A LEVEL – NEW

2540U10-1



MONDAY, 5 JUNE 2023 – MORNING

**DIGITAL TECHNOLOGY
UNIT 1
Innovation in Digital Technology**

Paper version of on-screen assessment
2 hours

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen. Do not use gel pen or correction fluid.
Write your name, centre number and candidate number in the spaces at the top of this page.
Answer **all** questions.
Write your answers in the spaces provided in this booklet. If you run out of space, use the additional page(s) at the back of the booklet, taking care to number the question(s) correctly.

INFORMATION FOR CANDIDATES

The number of marks is given in brackets at the end of each question or part-question.
You are reminded of the necessity for good English and orderly presentation in your answers.



JUN232540U10101

Answer **all** questions.

1. Ffion has received a router for use in the home. The router is a hybrid of a router, switch and wireless access point.

(a) State the purpose of the following pieces of hardware. [3]

(i) Router

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(ii) Switch

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(iii) Wireless Access Point

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(b) Ffion believes there will be better performance if the PC is plugged directly into the router using an Ethernet cable. Recommend, with a reason, a category of Ethernet cable that could be used. [2]

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3. Describe the following tests used to confirm human-level Artificial General Intelligence (AGI).

(a) The Turing test

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(b) Nilsson's Employment test

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5. Four main changeover methods are used when introducing a new digital technology system.

(a) Name the four main methods. [4]

Method 1:

Method 2:

Method 3:

Method 4:

(b) Describe **two** of the methods, giving **one** advantage and **one** disadvantage for each. [6]

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6. Describe the health issues related to human-computer interaction and their impact when using both mobile and desktop devices. [6]

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7. Gruff understands that the term social media refers to a computer-based technology that facilitates the sharing of ideas, thoughts, and information through virtual networks and communities.

(a) Gruff would like to begin to use social media sites for business. Compare **two** sites that Gruff could use, considering at least **two different** functions for each site. [6]

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(b) Gruff has seen stories in the press that some companies have encountered legal and ethical issues due to their use of social media.

(i) Explain **one** legal problem that Gruff’s business could face due to using social media. [2]

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(ii) Explain **one** ethical problem that Gruff’s business could face due to using social media. [2]

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8. Kacper has bought a smart speaker to complement the other smart devices already in the house. Discuss the advantages and disadvantages of linking all the smart devices to the smart speaker. [8]

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10. Masmaat is a junior doctor working in the NHS. Discuss how Artificial Intelligence (AI) can be used to help doctors such as Masmaat. [10]

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END OF PAPER



