

Surname	Centre Number	Candidate Number
First name(s)		2



GCE AS/A LEVEL

2540U10-1



S24-2540U10-1

MONDAY, 3 JUNE 2024 – MORNING

DIGITAL TECHNOLOGY – AS unit 1 Innovation in Digital Technology

Paper version of on-screen assessment

2 hours

2540U101
01

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.



JUN242540U10101

Answer **all** questions.

1. Rob is starting a company and will need the employees to sit in front of a desktop PC for up to 7 hours a day.

(a) Advise Rob on the health risks that can arise from sitting in front of a computer for long periods of time and how these issues can be mitigated. [6]

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(b) Rob has been advised that a touch sensitive interface is the best option for visitors to use when signing in at reception. Evaluate this advice. [6]

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2. Describe the potential positive and negative impacts of the Internet of Things (IoT) on individuals and society.

[6]

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2540U101
03



3. (a) Machine Learning is a subset of Artificial Intelligence. Describe Machine Learning and how it differs from traditional algorithms used in Artificial Intelligence. [3]

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(b) Describe supervised, semi-supervised, and unsupervised learning within the context of Machine Learning. [6]

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4. Frankie owns a company and has been told that maintenance of the digital systems is required.

(a) Discuss why it is important to maintain digital technologies after they have been released. [3]

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(b) Explain the difference between different types of software maintenance. [6]

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6. Cari's company is looking to update its booking system and is considering different development methodologies.

(a) Explain Waterfall and Big Bang methodologies, and how their advantages and disadvantages make them suitable for the company. [6]

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(b) Cari understands that testing is very important to ensure the new booking system is working correctly. Explain Alpha and Beta testing. [5]

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7. Describe User-Centred Design (UCD) in terms of the following:

[8]

- visibility
- accessibility
- legibility
- language.

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8. Describe the legal, ethical, and professional implications of the different uses of social media by individuals and organisations. [7]

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9. Name and describe the four stages within the S-curve model of the digital development life cycle. Describe the economic benefits and the classification of users that take up new technologies. [10]

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