



Cambridge International AS & A Level

CANDIDATE
NAME



CENTRE
NUMBER

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INFORMATION TECHNOLOGY

9626/33

Paper 3 Advanced Theory

May/June 2026

1 hour 45 minutes

You must answer on the question paper.

No additional materials are needed.

INSTRUCTIONS

- Answer **all** questions.
- Use a black or dark blue pen.
- Write your name, centre number and candidate number in the boxes at the top of the page.
- Write your answer to each question in the space provided.
- Do **not** use an erasable pen. Do **not** use correction fluid or tape.
- Do **not** write on any bar codes.
- You may use an HB pencil for any diagrams, graphs or rough working.
- Calculators must **not** be used in this paper.

INFORMATION

- The total mark for this paper is 70.
- The number of marks for each question or part question is shown in brackets [].

This document has **12** pages.

1 The purpose of network protocols is to specify the rules for communication between devices in an Internet Protocol (IP) network. Network protocols can include rules that specify how networked devices are identified.

(a) Describe **two** other rules that are specified by network protocols for communication between devices.

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[2]

(b) Describe how the Internet Protocol (IP) enables a device to be identified on a network.

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[2]

(c) Internet Protocol version 4 (IPv4) is being replaced with Internet Protocol version 6 (IPv6).

Explain why it has become necessary to replace IPv4 with IPv6.

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[2]



- (d) Data packets transmitted over IP networks have a header which contains the version of IP that created the header.

Describe other information that is contained in the header of an IP packet.

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- (e) State **one** difference between the structure of the header of an IPv4 packet and the structure of the header of an IPv6 packet.

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2 A project manager is trying to find the critical path through a project.

(a) Describe what is meant by the critical path.

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(b) The first step in finding the critical path through a project is to list the tasks necessary to complete the project.

Describe **four** other steps that a project manager could take to find the critical path.

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3 Web-based project management software (PMS) is used for supporting projects.

(a) PMS can be used to support the costing and the scheduling of a project.

Describe **two** other features of a project that can be supported by PMS.

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(b) Discuss the benefits of using web-based PMS.

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5 (a) Explain why cryptocurrencies are considered to be a potential risk to the global economy.

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(b) Describe **one** way in which a government has tried to reduce the risk from cryptocurrencies.

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7 Drop-down boxes are a type of form control used in online input forms.

(a) State **two** reasons why form controls are used in input forms.

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(b) Describe **four** drawbacks of using drop-down boxes.

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8 A graphic designer can export a bitmap image from image editing software in different file formats.

(a) Explain why a graphic designer would export an image in Portable Network Graphics (PNG) format.

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(b) Identify and describe a file format used for bitmap images that would be suitable for displaying an animated logo on a web page.

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9 HTML elements can be hidden from view by the display property.

(a) The display property of an element can be set using the JavaScript statement:

```
document.getElementById(id).style.display = "none"
```

Describe how this statement is used in JavaScript to hide HTML elements.

[4]

(b) HTML elements can also be hidden using the visibility property in the JavaScript statement:

```
document.getElementById(id).style.visibility = "hidden"
```

Explain why JavaScript programmers prefer to use this statement instead of the statement given in **9(a)**.

[3]





- 10** Individuals can enhance their experience of the real world by using augmented reality (AR) to overlay computer-generated objects onto real world objects.

Discuss the benefits and drawbacks of the use of augmented reality (AR) by a tourist visiting a city.

[8]

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