



# Cambridge International AS & A Level

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## INFORMATION TECHNOLOGY

9626/32

Paper 3 Advanced Theory

February/March 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.



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[6]





[6]



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4 Details of transactions by cryptocurrencies are stored in blockchains.

(a) Describe how a blockchain stores the transaction details.

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..... [4]

(b) Describe **two** drawbacks of using blockchains to store cryptocurrency transactions.

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5 Artificial intelligence (AI) is rapidly becoming part of our everyday life.

(a) Define artificial intelligence (AI).

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..... [2]

(b) Describe **two** benefits of using AI.

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(c) Describe **two** limitations of AI.

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- 6 The TCP/IP suite of network protocols is made up of layers that control the transmission of data packets. The layers include the application layer and the transport layer.

(a) Describe functions of the application layer.

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..... [3]

(b) Describe functions of the transport layer.

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- 7 Two activities that occur in the initial stages of a project are the creation of a project scope and the identification of success criteria.

(a) State the information that should be included in a project scope.

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(b) Describe what is meant by success criteria.

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**8** Discuss the benefits of using holographic imaging in medicine.

[6]

- 9 A data flow diagram (DFD) shows the flow of data between elements.

The DFD is incomplete. It should show the flow of data when a passenger:

- enquires about a bus ticket for travel to and from a city
- buys a bus ticket for the travel

Complete the DFD by drawing the missing symbols around each element and adding arrows to show the flow of data.

enquiry

passenger

ticket displayed

ticket reservation system

ticket creation system

information about  
buses into city

report to bus  
company  
administration

information about  
buses from city

ticket reservation storage

[6]





10 Video content can be accessed and watched on a smartphone using data streaming.

(a) Describe what is meant by data streaming.

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..... [2]

(b) Describe **three** benefits of accessing and watching video content by data streaming.

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(c) Data streaming can also be used to access and listen to audio content.

Apart from audio and video streaming, state **one** other use of data streaming.

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..... [1]





- 11 A software engineer has created a banking app. The engineer wants the app to have a long lifespan.

Analyse the role of software maintenance in the lifespan of the banking app.

[8]

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