



# Cambridge International AS & A Level

## ECONOMICS

9708/42

Paper 4 A Level Data Response and Essays

May/June 2024

2 hours



You must answer on the enclosed answer booklet.

You will need: Answer booklet (enclosed)

### INSTRUCTIONS

- Answer **three** questions in total:
  - Section A: answer Question 1.
  - Section B: answer **one** question.
  - Section C: answer **one** question.
- Follow the instructions on the front cover of the answer booklet. If you need additional answer paper, ask the invigilator for a continuation booklet.
- You may use a calculator.
- You may answer with reference to any economy you have studied where relevant to the question.

### INFORMATION

- The total mark for this paper is 60.
- The number of marks for each question or part question is shown in brackets [ ].

This document has 4 pages. Any blank pages are indicated.

## Section A

Answer all parts of Question 1.

1

### Developments in the electric vehicle (EV) industry

The advantage of the car is that it provides freedom for the consumer. However, the disadvantages of car use are that it creates congestion, carbon dioxide (CO<sub>2</sub>) and air pollution. These disadvantages led many countries to agree to replace internal combustion engine (ICE) cars with electric vehicles (EV) from 2030.

The successful introduction of EV is dependent on the development of battery technology and production of batteries to enable EV to drive a similar distance to ICE cars before they need re-charging. Better electrode design, battery assembly and chemistry are all technical aspects of battery production that could reduce costs, resulting in economies of scale from more efficient use of capital and labour. In addition to technical economies, there may well be purchasing economies of scale in battery production when buying raw materials and capital equipment in bulk.

Table 1.1 shows the estimated average costs of battery production for EV using two different technologies.

**Table 1.1 Average costs of battery production**

| Annual production<br>kwh (millions) | US \$ per kwh |              |
|-------------------------------------|---------------|--------------|
|                                     | Technology A  | Technology B |
| 0.5                                 | 115           | 120          |
| 2.0                                 | 105           | 90           |
| 4.0                                 | 98            | 80           |
| 10.0                                | 97            | 80           |

The shift to EV will cause redundancies for highly skilled mechanical engineers who have developed and refined the ICE. Often these workers are concentrated in specific areas, such as southern Germany.

The change from ICE cars to EV may also cause difficulties for governments in two ways. First, many countries rely on oil exports for a large part of their income. For example, Saudi Arabia receives 45% of its gross national income (GNI) from oil exports. Secondly, other governments place an indirect tax on petrol (gasoline) and diesel as part of their general revenue. For example, Singapore charges S\$0.41 per litre, approximately 17 % of the price.

*Sources: Applied Energy 286 (2021) Economies of scale in battery cell manufacturing, 25 April 2022, and The Singapore Independent, 28 March 2022*

- (a) Explain what is meant by internal economies of scale, using an example from the information. [3]
- (b) Consider what is meant by minimum efficient scale and to what extent the data in Table 1.1 suggest this has been achieved. [3]
- (c) Analyse, with the aid of a diagram, the likely impact of the change to EV on the labour market for workers producing ICE in southern Germany. [6]
- (d) Evaluate the likely macroeconomic effects of the switch to EV for both Saudi Arabia and Singapore. [8]

### Section B

Answer **one** question.

**EITHER**

- 2** Market failure exists in all economies.

Evaluate, with the aid of a diagram(s), the meaning of market failure and **two** policies a government may use to correct market failure. [20]

**OR**

- 3** Evaluate, with the aid of a diagram(s), whether excess profit (supernormal profit) is always necessary for the continued existence of firms in perfect competition and monopoly. [20]

### Section C

Answer **one** question.

**EITHER**

- 4** In 2022, many countries experienced a high rate of inflation caused by disruptions to the supply of goods and services arising from the Covid-19 pandemic and the conflict between Russia and Ukraine. In one country, the government cut taxes and the central bank raised interest rates.

Evaluate the likely impact of these policies on that government's ability to control inflation. [20]

**OR**

- 5** Evaluate the likely impact of globalisation on a low-income country's standard of living. [20]

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