3.5 Firms and production

Name: _____ Class: _____ Date: _____ **Total: 17 marks**

KEY WORDS economies of scale • productivity • diseconomies of scale • labour-intensive • capital-intensive

Objective

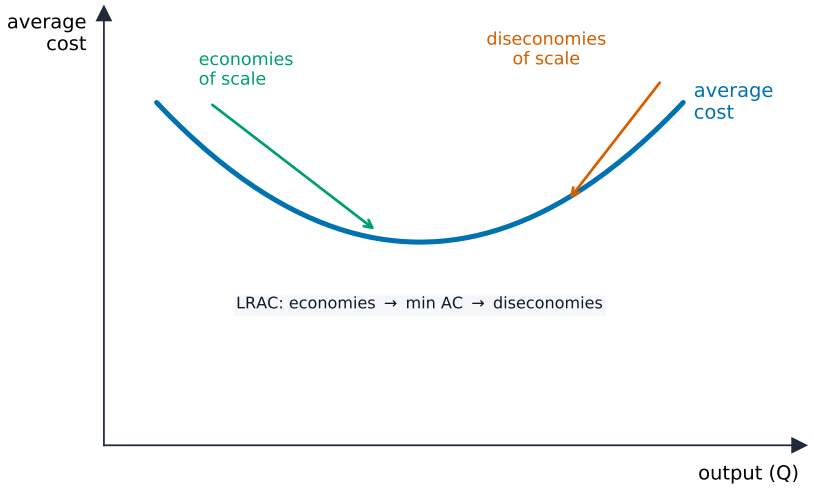
Build the skills to answer exam questions on **firms and production** – **labour- and capital-intensive** production, **productivity**, and **economies and diseconomies of scale**.

You must be able to:

- distinguish labour-intensive from capital-intensive production
- explain productivity and how to raise it
- explain economies and diseconomies of scale

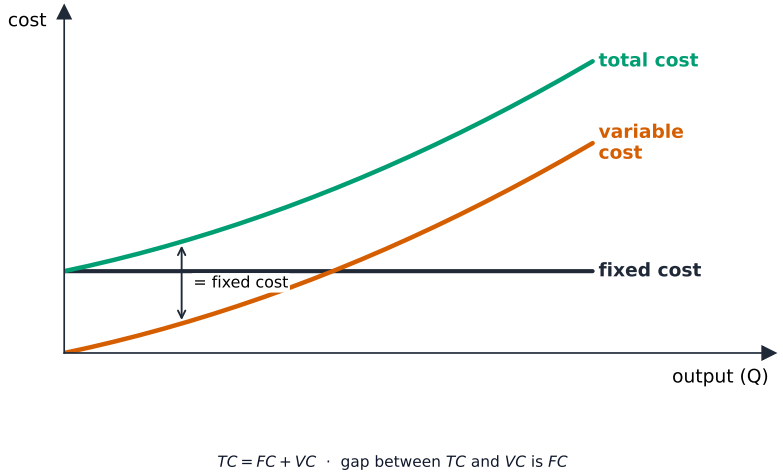
1 Key knowledge and worked examples

Production and scale



The cost per unit changes as a firm grows

- **Labour-intensive**: mostly workers (hand-made crafts). **Capital-intensive**: mostly machines (a car factory).
- **Productivity**: output per worker/machine; raise it by training, better machines, good management.
- **Economies of scale**: average cost falls as output rises (bulk buying, big machines). **Diseconomies** raise it if too big (hard to manage).



The cost behind the scale decision: fixed plus variable cost, averaged over output

Answer shapes: K + App + An + Ev (a justified judgement, for discuss questions).

2 Practice

2.1 State the difference between labour-intensive and capital-intensive production. [2]

2.2 Define the term *productivity*. [2]

2.3 Define the term *economies of scale*. [2]

3 Exam-style questions

3.1 Economies of scale mean that, as a firm produces more, its: [1]

- ☐ **A** average cost per unit falls
- **B** average cost per unit rises
- **C** total cost falls
- **D** revenue falls

3.2 Explain two ways a firm could raise its productivity. [4]

3.3 Analyse why a firm's average cost may fall and then rise as it grows larger. [6]

Solutions

IGCSE Economics answers are marked by **level of response**: award **K** knowledge, **App** application, **An** analysis and **Ev** a justified judgement.

Each answer shows the steps, then the **result**.

2.1

- **labour-intensive** uses mostly labour; **capital-intensive** uses mostly machines (K)

2.2

- **productivity** is **output per worker** (or per machine) in a set time (K)

2.3

- **economies of scale** are the fall in **average cost per unit** as a firm increases its output (K)

3.1 A

- economies of scale mean **average cost per unit falls** (K)
- B is diseconomies; C confuses total with average; D is not the definition

3.2

- for **each** of two ways: K + An
- e.g. **training**: skilled workers make more and fewer mistakes → output per worker rises
- e.g. **better machines**: modern equipment does more in the same time → output per worker rises

3.3

- as a firm grows it gains **economies of scale**: bulk buying, large machines, cheaper borrowing → average cost **falls** (K + An)
- if it grows too large, **diseconomies of scale** set in: hard to manage, slow messages, workers feel less important (An)
- average cost **rises again** – there is a lowest-cost size (An)