A-LEVEL ECONOMICS • EXERCISE SHEET

7.5 Types of cost, revenue and profit, short-run and long-run production

Name: ____________ Class: ________ Date: __________ **Total: 24 marks**

KEY WORDS total cost 总成本 • economies of scale 规模经济 • average cost 平均成本 • diminishing returns 边际报酬递减 • normal profit 正常利润

Objective

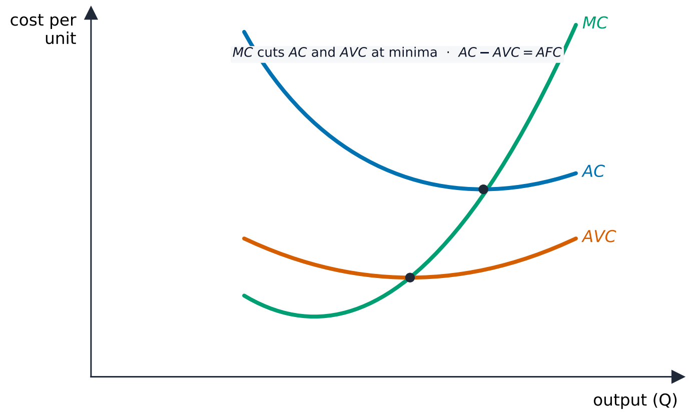
Build the skills to answer exam questions on **costs, revenue and profit** 成本、收益与利润 — short-run and long-run costs, **diminishing returns** 边际报酬递减, **economies of scale** 规模经济, and **normal and supernormal profit** 正常与超常利润.

You must be able to:

- define fixed, variable, average and marginal cost
- explain diminishing returns and economies of scale
- explain normal/supernormal profit and the profit-maximising rule (MR = MC)

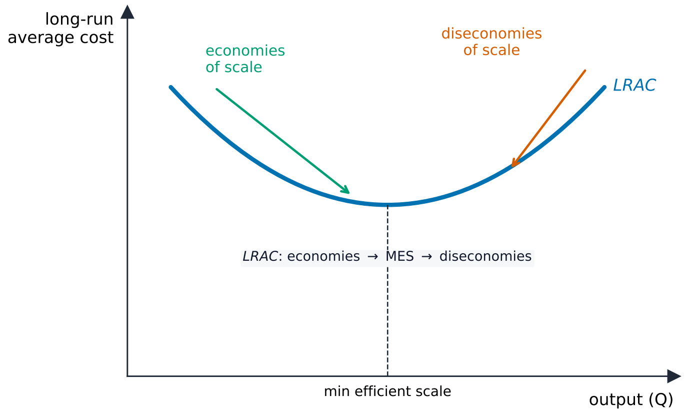
1 Worked examples

■ Short-run cost curves



Diminishing returns make marginal cost rise

- $AC = TC/Q$; $MC = \Delta TC/\Delta Q$. **Diminishing returns** 边际报酬递减: adding a variable factor to a fixed one eventually raises MC.
- **Economies of scale** 规模经济: long-run average cost falls as the firm grows; **diseconomies** raise it if too big.



The long-run picture: economies then diseconomies of scale give a U-shaped LRAC

- **Normal profit** 正常利润: just enough to stay (a cost); **supernormal** 超常利润: above normal.
- A firm maximises profit where **MR = MC**.

Answer shapes: an **Explain** [**up to 8**] answer may use a cost diagram (AO3); **Discuss** [**12**] adds a judgement (AO4).

2 Practice

2.1 Define the term *marginal cost.* [2]

2.2 State the difference between *normal* and *supernormal* profit. [2]

2.3 State the output rule for profit maximisation. [1]

3 Exam-style questions

3.1 A firm maximises profit at the output where: [1]

A average cost is lowest
B marginal revenue equals marginal cost
C total revenue is highest
D price equals average cost

3.2 Explain, using diminishing returns, why the marginal cost curve is U-shaped. [6]

3.3 Discuss why a firm's long-run average cost may fall and then rise as output increases. [12]