1.9 Costs of Production and Economies and Diseconomies of Scale: Test Pack

AQA 7136 · Calculators not allowed · about 20 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer all questions. Use full sentences for all explain, assess and evaluate questions.

1 Multiple choice on short-run cost concepts: in the context of a manufacturing firm, which of the following is categorised as a fixed cost?

- ☐ A Rent on the factory building paid monthly
- ☐ B Wages of factory workers paid per hour
- ☐ C Cost of raw materials used per unit produced
- ☐ D Electricity bill that varies exactly with hourly output

(Total for Question 1 is 1 mark)

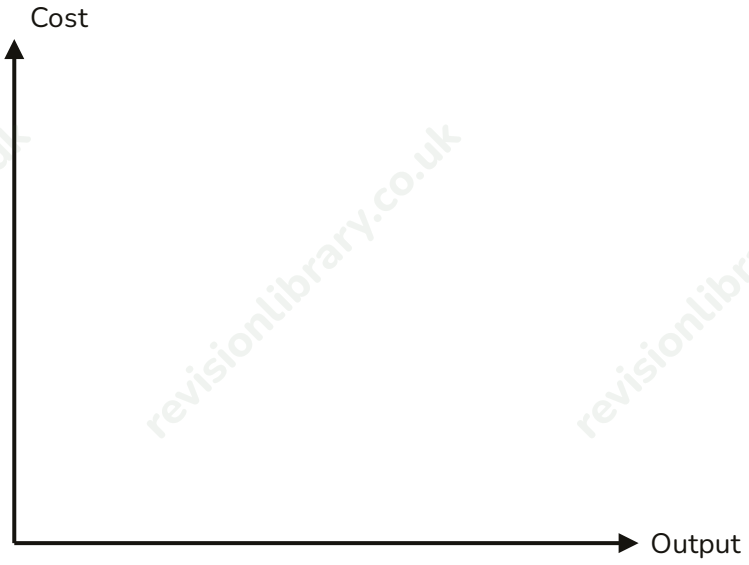
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2 Explain two causes of internal diseconomies of scale that might lead average costs to rise when a firm becomes very large.

(Total for Question 2 is 2 marks)

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3 Long-run average cost (LRAC) diagram question for a firm expanding over time. Draw a LRAC curve showing the typical U-shape with a minimum efficient scale (MES) and label the MES. Also sketch three short-run average cost (SRAC) curves tangent to the LRAC at different output levels, and label the point where the smallest SRAC is tangent to LRAC. In the context of the diagram, briefly explain what MES means for a firm deciding its plant size.



(Total for Question 3 is 4 marks)

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4 Define 'fixed cost' as used in short-run cost analysis for a firm producing goods.

(Total for Question 4 is 1 mark)

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5 Explain, with reference to marginal cost (MC) and average variable cost (AVC), how the law of diminishing returns in the short run affects the shape of the MC and AVC curves for a firm using more of a variable input with a fixed input.

(Total for Question 5 is 2 marks)

6 Explain how financial economies of scale reduce average costs for a growing firm when it seeks external finance for expansion.

(Total for Question 6 is 2 marks)

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Mark scheme · 1.9 Costs of Production and Economies and Diseconomies of Scale: Test Pack

Question 1

selects A, rent is a fixed cost independent of short-run output **B1**

Answer: A

Question 2

any one valid cause explained, e.g. coordination problems: management may struggle to coordinate many departments leading to inefficiency **M1**

a second, different valid cause explained, e.g. communication difficulties: longer chains of command increase delays and mistakes, raising average costs (accept others, e.g. poor motivation or alienation of workers, or loss of control) **A1**

Answer: Coordination problems and communication difficulties in very large firms increase inefficiency and raise average costs.

Question 3

correctly labelled LRAC curve, U-shaped with a clear minimum point labelled MES **B1**

three SRAC curves drawn and positioned so that each is tangent to LRAC at different outputs **B1**

lowest SRAC is drawn tangent at the MES point and this tangent point is labelled **B1**

brief explanation: MES is the lowest output at which long-run average costs are minimised, so plant size chosen at MES yields minimum average cost **B1**

Answer: Diagram with U-shaped LRAC and three tangent SRACs; MES labelled at LRAC minimum. MES is the lowest output where LRAC is minimised, guiding the efficient plant size choice.

Question 4

a cost that does not vary with the level of output in the short run, for example rent or insurance **B1**

Answer: A cost that does not vary with output in the short run, for example rent or insurance.

Question 5

diminishing marginal returns cause marginal product to fall as variable input increases with fixed inputs, so MC eventually rises **M1**

as MC rises it pulls AVC up after its minimum, giving the typical U-shape for MC and AVC (MC falls then rises; AVC falls then rises with MC intersecting AVC at AVC's minimum) **A1**

Answer: As more of a variable input is used with fixed inputs marginal product falls so MC rises; rising MC pulls up AVC after its minimum, producing the typical U-shaped MC and AVC curves.

Question 6

larger firms usually obtain loans at lower interest rates and raise capital more cheaply because they are lower risk and have better access to capital markets **M1**

this lowers interest and finance costs per unit, reducing average costs as the firm expands **A1**

Answer: Large firms can borrow more cheaply and access capital markets more easily, lowering per-unit finance costs and reducing average cost.

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