Solutions

Marking: **M1** a correct method, **A1** the correct answer, **B1** an independent mark.

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

2.1

the minimum profit needed to keep a firm in its current industry; when total revenue equals total economic cost, including opportunity cost

2.2

any two: bulk buying of inputs at lower prices; specialization of workers and managers; cheaper borrowing for large firms (financial); large, efficient machines (technical)

2.3

in the short run at least one factor, e.g. capital, is fixed; as more workers are added, each has less capital to work with; so after a point each extra worker adds less output: diminishing marginal returns; each extra unit of output then needs more labour, so its cost (MC) rises

2.4

MC: $8, 6, 8, 12, 16$; MC = MR = \$12 at $Q = \mathbf{4}$; profit $= 48 - 44 = \$\mathbf{4}$

2.5

the price is below ATC, so it makes a loss; but the price is above AVC, so it covers all variable costs and part of its fixed costs; shutting down would mean losing all fixed costs, so it should continue in the short run

3.1

(a) lower costs shift the firm's MC and ATC down; at the old price, P > ATC: abnormal profit, shaded; no barriers to entry, so new firms enter; industry supply shifts right and price falls; entry continues until P = minimum ATC: normal profit only; correctly labelled side-by-side firm and industry diagrams

(b) P = MC, so the value of the last unit to consumers equals its cost: allocative efficiency; output at minimum ATC: productive efficiency

3.2

if it produces, revenue does not cover variable costs; so every unit adds to the loss; if it shuts down, the loss is only its fixed costs; producing would give a loss larger than fixed costs, so shutting down minimizes the loss

exercises.lol exercises.com.cn