22 Firms' costs, revenue and objectives

1 Which is a fixed cost of production for a manufacturing firm?

A electricity charges

c rental payments

B overtime pay

D workers' wages

2 What is the term used to describe the costs of production that have to be paid regardless of how much a firm produces or sells?

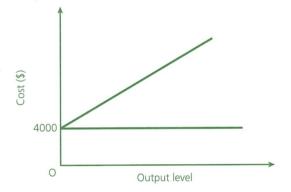
A average

C total

B fixed

D variable

3 What is the correct label for the upwards sloping line shown in the graph below?



A average costs

fixed costs

total costs

D variable costs

4 A firm's variable costs are \$20 000 in a given week when its output is 2000 units, while fixed costs are \$10 000. What is the value of the firm's average costs?

A \$5

B \$10

C \$15

D \$20

5 The payment received by a firm from the sale of its goods and/or services is known as

A income

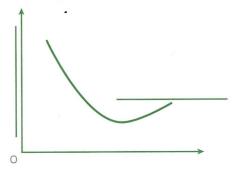
C salaries

B revenue

D total costs

6 The diagram below shows economies of scale. Identify appropriate labels to complete the diagram.

[2 mark



| 7 | The table below shows a firm's fixed and variable costs of production at different |
|---|--|
| | levels of output. Calculate the level of output where average costs are at their lowest. |

[2 marks]

[2 marks]

| Output (units) | Fixed costs (\$) | Variable costs (\$) | Total costs (\$) | Average costs (\$) |
|----------------|------------------|---------------------|------------------|--------------------|
| 100 | 2000 | 400 | | |
| 200 | 2000 | 760 | | |
| 300 | 2000 | 1200 | | |
| 400 | 2000 | 2320 | | |

The table below shows the total costs of a firm at different levels of output. It sells each unit for \$20.

| Quantity produced (units) | 20 | 30 | 40 | 50 |
|---------------------------|-----|-----|-----|-----|
| Total cost (\$) | 200 | 285 | 360 | 460 |
| Average cost (\$) | | | | j |

| a | Calculate the level of output required to minimise average costs. | | [2 marks] |
|-----|--|----------------------|---|
| | | 3 | |
| ••• | | | |
| ••• | | | • |
| ••• | | | |
| b | Calculate how many units the firm needs to produce and sell in order t | to maximise profits. | [2 marks] |

Study the data for a firm below and answer the questions that follow.

| Output (tonnes) | Total cost (\$) | Total revenue (\$) |
|-----------------|-----------------|--------------------|
| 0 | 1000 | 0 |
| 100 | 2000 | 1500 |
| 200 | 2800 | 3000 |
| 300 | 3700 | 4500 |
| 400 | 5200 | 6000 |

| a | Calculate | the | unit | price | from | the | data | above. |
|---|-----------|-----|------|-------|------|-----|------|--------|
|---|-----------|-----|------|-------|------|-----|------|--------|

[2 marks]

| b | Calculate the leve | el of output at whi | ch average costs are i | ninimised for the firm. | [2 mar |
|-------|---|--|---|---|----------------|
| | | | | | |
| | | | | | |
| C | Calculate the prof | it at each level of | output. | | [2 ma |
| | Output (tonnes) | Total cost (\$) | Total revenue (\$) | Profit (\$) | |
| | 0 | 1000 | 0 | | |
| | 100 | 2000 | 1500 | | |
| | 200 | 2800 | 3000 | | |
| | 300 | 3700 | 4500 | | |
| | 400 | 5200 | 6000 | | |
| •••• | | | | | |
| of of | output. The currentits products is \$5. | nt level of demand 50. | | 's average variable cost) 500 units per month. Bakery. | |
| of of | output. The curren its products is \$5. Calculate the mor | nt level of demand 50. nthly total costs of | at Nina's Bakery is 20 |) 500 units per month. Bakery. | The average pr |
| of of | output. The currentits products is \$5. Calculate the more | nt level of demand 50. In the total costs of the costs o | at Nina's Bakery is 20 f production at Nina's each month for Nina's |) 500 units per month. Bakery. | The average |