

Unit 4

Operations

Management

Categorised

Past Papers

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- 1 Klaus is a sole trader who owns a window cleaning business. In the past, he cleaned windows himself, but now he is the manager and employs other people to do the cleaning. In order to attract new customers, Klaus puts advertisements for his business in local shop windows. Klaus plans to continue to expand his business, but knows he will need more capital.

Table 1 shows data for a typical week for Klaus' business.

Table 1

Average price per customer	\$10
Variable cost per customer	\$2
Weekly overheads	\$400
Number of customers	60

- (a) What is meant by the term 'variable cost'?

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..... [2]

- (b) Identify **two** advantages to Klaus of using local shop windows to advertise his business.

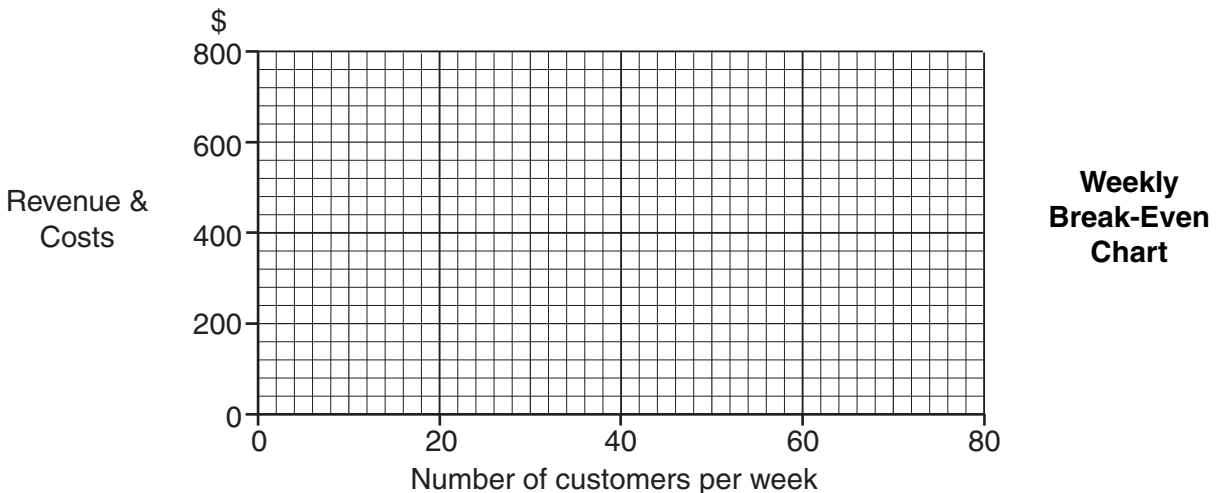
Advantage 1:

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Advantage 2:

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- (c) Using the data given in Table 1, draw a break-even chart for Klaus' business.



[4]

(d) Identify and explain **three** management functions that Klaus performs.

For
Examiner's
Use

Function 1:

Explanation:

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Function 2:

Explanation:

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Function 3:

Explanation:

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(e) Recommend to Klaus **two** appropriate ways in which he could raise capital to expand his business. Justify your answer.

Way 1:

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Way 2:

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- 1 Stilvan always wanted to run his own business. When he left school he borrowed money from his parents to start a gardening business. The business name is Stilvan Grass Cutters. Stilvan bought some equipment to cut grass and trees. Stilvan delivers leaflets to people's homes to promote his business.

Table 1 shows data for a typical week for Stilvan's business.

Table 1

Average price per customer	\$15
Variable cost per job	\$7
Weekly overheads	\$320
Number of customers	50

Demand for his services is seasonal and this causes problems for Stilvan.

- (a) Identify **two** objectives that Stilvan might have had when he set up his business.

Objective 1:

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Objective 2:

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- (b) Identify **two** advantages of using leaflets as a method of promotion.

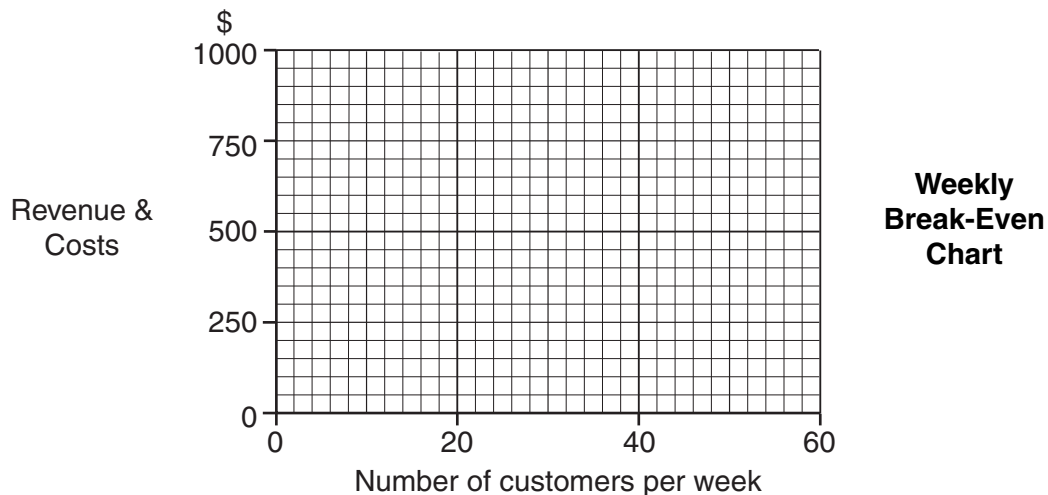
Advantage 1:

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Advantage 2:

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- (c) Using the information given in Table 1, draw a break-even chart for Stilvan's business.



[4]

- (d) Identify and explain **three** problems that seasonal demand can cause for Stilvan's business.

For
Examiner's
Use

Problem 1:

Explanation:

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Problem 2:

Explanation:

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Problem 3:

Explanation:

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- (e) Stilvan wants to make his business more profitable. Recommend ways in which this could be achieved. Justify your answer.

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- 1 Carlos was made redundant from his job in a factory. He used his redundancy money and some of his savings to start a new business. He bought a boat to give trips to tourists on a river near his home. The boat cost him \$150 000. Table 1 shows the revenue and cost estimates that Carlos made.

Table 1

Revenue per boat trip	\$80
Variable cost per boat trip	\$30
Average number of boat trips per week	25
Weekly overhead costs [fixed costs]	\$500

Carlos wanted his business to give him job security and to give a return on his investment of at least 20% each year. He estimates that annual profits will be \$37 500.

- (a) What is meant by ‘made redundant’?

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- (b) Identify **two** examples of overhead costs that Carlos might incur.

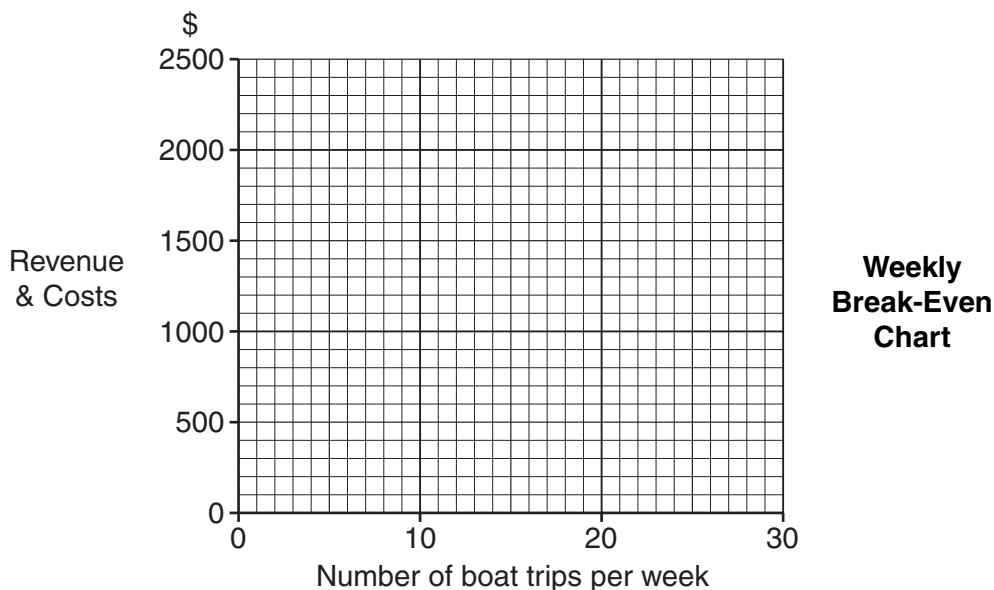
Example 1: www.igcsebusiness.co.uk

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Example 2:

..... [2]

- (c) Using the information given in Table 1, draw a break-even chart for Carlos’ business.



[4]

(d) Identify and explain **three** methods that Carlos could use to promote his new business.

For
Examiner's
Use

Method 1:

Explanation:

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Method 2:

Explanation:

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Method 3:

Explanation:

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..... [6]

(e) Carlos wanted his business to give him job security and a return on capital of at least 20%. Do you think that his business will help him achieve these objectives? Justify your answer.

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2 Just4U manufactures motor car parts. The production methods are capital intensive. The management believes that the company benefits from economies of scale. However, problems with the workers in the factory have led to poor quality production. Despite this, the Managing Director believes that the company must continue to grow if it is to achieve its objectives. The business is planning a takeover of a competitor.

(a) What is meant by 'capital intensive'?

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(b) Identify **two** objectives that a business like Just4U might have.

Objective 1:
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Objective 2:
..... [2]

(c) Identify and explain **two** economies of scale from which Just4U could benefit.

Economy of scale 1:
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Explanation:
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Economy of scale 2:
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Explanation:
..... [4]

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(d) Identify and explain **two** problems that poor quality might create for Just4U.

Problem 1:

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Explanation:

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Problem 2:

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Explanation:

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(e) Do you think that a takeover of a competitor will benefit the shareholders of Just4U? Justify your answer.

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For
Examiner's
Use

2 Gresham Textiles manufactures high quality clothing. Production is labour intensive. Managers are paid more than production line workers in the factory. The business is investing in automated machinery. The management also wants to introduce lean production methods.

(a) What is meant by 'labour intensive'?

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(b) Identify **two** suitable sources of finance that Gresham Textiles could use to finance the investment in automated machinery.

Source 1:
Source 2: [2]

(c) Identify and explain **two** reasons why factory managers are paid more than production line workers at Gresham Textiles.

Reason 1:
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Explanation:
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Reason 2:
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Explanation:
..... [4]

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(d) Identify and explain **two** ways lean production methods could reduce costs in the factory.

For
Examiner's
Use

Way 1:

Explanation:

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Way 2:

Explanation:

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(e) Do you think that a change to automated methods of production would benefit **customers** of Gresham Textiles? Justify your answer.

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5 Sachs-Tech makes parts for the mobile phone industry. Sales have risen very quickly. The company needs a new factory to meet demand. The management is not sure where to build the factory. The company is currently looking to recruit three new production supervisors. The Human Resources manager, Manuel, is busy writing a job description and person specification for these supervisor roles.

(a) What is meant by a 'job description'?

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(b) Identify **two** possible features of a person specification.

Feature 1:
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Feature 2:
..... [2]

(c) Identify and explain **two** suitable places where Manuel could advertise the vacancies.

Place 1:
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Explanation:
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Place 2:
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Explanation:
..... [4]

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- (d) Identify and explain **three** factors that Sachs-Tech should consider when deciding where to locate a new factory.

For
Examiner's
Use

Factor 1:

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Explanation:

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Factor 2:

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Explanation:

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Factor 3:

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Explanation:

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- (e) The Finance manager is worried that the business might be growing too quickly. Do you think he is right to be worried? Justify your answer.

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2 Bray Electrics is a large manufacturing company. The company makes engine parts for the car industry using batch production. The Managing Director is always looking for ways to introduce new technology in the business. He believes 'our workers like change'. He is interested in using lean production methods.

(a) What is meant by 'batch production'?

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(b) Identify **two** ways of measuring the size of a company.

Way 1:
Way 2: [2]

(c) Identify and explain **two** benefits of lean production for a business.

Benefit 1:
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Explanation:
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Benefit 2:
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Explanation:
..... [4]

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- (d) Identify and explain **three** advantages to the management of Bray Electrics of introducing new technology in the business.

For
Examiner's
Use

Advantage 1:

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Explanation:

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Advantage 2:

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Explanation:

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Advantage 3:

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Explanation:

..... [6]

- (e) The Managing Director believes 'our workers like change'. Do you think that all the workers at Bray Electrics would like the introduction of new technology? Justify your answer.

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5 Sachs-Tech makes parts for the mobile phone industry. Sales have risen very quickly. The company needs a new factory to meet demand. The management is not sure where to build the factory. The company is currently looking to recruit three new production supervisors. The Human Resources manager, Manuel, is busy writing a job description and person specification for these supervisor roles.

(a) What is meant by a 'job description'?

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..... [2]

(b) Identify **two** possible features of a person specification.

Feature 1:
.....
Feature 2:
..... [2]

(c) Identify and explain **two** suitable places where Manuel could advertise the vacancies.

Place 1:
.....
Explanation:
.....
Place 2:
.....
Explanation:
..... [4]

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- (d) Identify and explain **three** factors that Sachs-Tech should consider when deciding where to locate a new factory.

For
Examiner's
Use

Factor 1:

.....

Explanation:

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Factor 2:

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Explanation:

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Factor 3:

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Explanation:

..... [6]

- (e) The Finance manager is worried that the business might be growing too quickly. Do you think he is right to be worried? Justify your answer.

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1 IRKAM is a company that produces high quality doors for hotels and offices. The company currently uses job production. The Managing Director, Abdul, believes that quality control is important. He is looking for ways to increase productivity. All workers receive on-the-job training. Abdul is thinking of including off-the-job training as well.

(a) What is meant by 'productivity'?

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..... [2]

(b) What is meant by 'on-the-job training'?

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(c) Identify and explain **one** advantage and **one** disadvantage of off-the-job training for IRKAM.

Advantage:
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Explanation:
.....

Disadvantage:
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Explanation:
..... [4]

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(d) Identify and explain **two** reasons why quality control might be important to IRKAM.

For
Examiner's
Use

Reason 1:

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Explanation:

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Reason 2:

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Explanation:

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(e) Over the past three years there has been a large increase in demand for IRKAM's doors. Do you think job production is still the best method of production for IRKAM? Justify your answer.

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4 Defoe is a private limited company. It manufactures water-pumps using batch production methods which are labour intensive. It buys raw materials in small quantities. The Managing Director wants to increase profits next year. She is planning to introduce capital intensive methods in the factory.

(a) What is meant by 'batch production'?

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..... [2]

(b) Identify **two** benefits to Defoe of buying raw materials in small quantities.

Benefit 1:
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Benefit 2:
..... [2]

(c) Identify and explain **two** appropriate sources of finance that Defoe could use to invest in capital intensive methods of production.

Source 1:
Explanation:
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Source 2:
Explanation:
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..... [4]

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(d) Identify and explain **three** benefits to Defoe of using capital intensive methods.

For
Examiner's
Use

Benefit 1:

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Explanation:

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Benefit 2:

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Explanation:

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Benefit 3:

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Explanation:

..... [6]

(e) Would the employees of Defoe benefit from the change to capital intensive methods of production? Justify your answer.

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1 Earnshaw is a company that buys raw materials and components in bulk. It uses them to manufacture furniture using flow production methods. Productivity in the factory is high. Currently Earnshaw has high costs of holding stock. The Managing Director wants to introduce lean production methods.

(a) What is meant by 'productivity'?

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..... [2]

(b) Identify **two** advantages to Earnshaw of buying raw materials in bulk.

Advantage 1:
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Advantage 2:
..... [2]

(c) Identify and explain **two** features of flow production.

Feature 1:
.....
Explanation:
.....
Feature 2:
.....
Explanation:
..... [4]

(d) Identify and explain **three** benefits to Earnshaw of using lean production methods.

For
Examiner's
Use

Benefit 1:

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Explanation:

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Benefit 2:

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Explanation:

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Benefit 3:

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Explanation:

..... [6]

(e) 'If Earnshaw is to grow in the future then its unit production costs must fall'.
Do you agree? Justify your answer.

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1 Akbar Metal is a private limited company. It manufactures parts for the bicycle industry. Workers are paid by piece rate. 60% of the company's products are sold to one customer. Akbar Metal plans to introduce flow production to meet increased demand. 'It's a good idea' says the Production manager. 'We will need to buy new machinery. This should lead to cost savings. We need to decide which source of finance to use.'

(a) What is meant by 'piece rate'?

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.....[2]

(b) Identify **two** possible cost savings for Akbar Metal of using new machinery.

Cost saving 1:
.....
Cost saving 2:
.....[2]

(c) Identify and explain **two** possible advantages to Akbar Metal of selling 60% of its products to one customer.

Advantage 1:
.....
Explanation:
.....
Advantage 2:
.....
Explanation:
.....[4]

- (d) Identify and explain **three** possible problems of flow production for businesses like Akbar Metal.

For
Examiner's
Use

Problem 1:

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Explanation:

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Problem 2:

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Explanation:

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Problem 3:

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Explanation:

..... [6]

- (e) Explain **two** suitable sources of finance for the purchase of new machinery. Recommend which source Akbar Metal should use. Justify your answer.

Source 1:

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Source 2:

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Recommendation:

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..... [6]

5 Salters manufactures cans for drinks. It uses flow production methods. Its machinery is inefficient and often breaks down. The company holds a lot of stock of raw materials and finished products. It cannot respond quickly to changes in customer demand. The management is planning to invest in new machinery, although the capital costs would be high. The factory employees are worried about this plan and strike action is possible. In 2013 Salters made a loss.

(a) Identify **two** features of flow production methods.

Feature 1:
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Feature 2:
.....[2]

(b) What is meant by 'inefficient'?

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.....[2]

(c) Identify and explain **two** problems to Salters of not responding quickly to changes in customer demand.

Problem 1:
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Explanation:
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Problem 2:
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Explanation:
.....[4]

(d) Identify and explain **two** effects on Salters of holding a high level of stock.

Effect 1:

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Explanation:

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Effect 2:

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Explanation:

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..... [6]

(e) Do you think Salters should invest in new machinery? Justify your answer.

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3 ABC manufactures a range of cars. ABC plans to build a new type of car at its factory in country X. This will expand production capacity at the factory by 100 000 cars per year. ABC hopes to benefit from economies of scale, which should help to reduce the break-even level of output. 'It's good that we have motivated workers' said the Operations manager. ABC plans to start exporting some of its cars.

(a) What is meant by 'break-even level of output'?

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..... [2]

(b) Identify **two** factors which could influence employee motivation at ABC.

Factor 1:
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Factor 2:
..... [2]

(c) Identify and explain **two** economies of scale that ABC could benefit from.

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Economy of scale 1:
Explanation:
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Economy of scale 2:
Explanation:
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..... [4]

(d) Identify and explain **two** possible problems for ABC of increasing production.

Problem 1:

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Explanation:

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Problem 2:

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Explanation:

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..... [6]

(e) Do you think it is a good idea for ABC to start exporting some of its cars? Justify your answer.

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For
Examiner's
Use

3 SENG manufactures cameras. Last year its market share increased by 2% to 18%. Production is capital intensive. This allows SENG to use lean production methods such as just-in-time. Cameras have a short product life cycle. SENG spends \$200m each year on extension strategies. The Marketing manager thinks that an increase in market share will lead to higher profits.

(a) What is meant by 'capital intensive?'

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.....[2]

(b) Identify **two** possible reasons why cameras might have a short product life cycle.

Reason 1:
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Reason 2:
.....[2]

(c) Identify and explain **two** possible advantages to SENG of using lean production.

Advantage 1:
.....
Explanation:
.....
Advantage 2:
.....
Explanation:
.....[4]

- (d) Identify and explain **two** possible extension strategies that SENG could use for one of its types of camera.

Strategy 1:

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Explanation:

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Strategy 2:

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Explanation:

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.....[6]

- (e) Do you think that an increase in market share will always lead to higher profits for SENG? Justify your answer.

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- 1 PYG is a private limited company based in country A. PYG makes metal cans for food products using flow production. The Operations Director has been looking at the operations data in Table 1. Last year PYG found it difficult to replace the 15 production workers who left the company. Most of PYG’s output is exported. The Operations Director thinks there could be more advantages than disadvantages to relocating production to another country.

Table 1: Operations data

	2013	2014
Output per week	660 000	800 000
Number of employees	20	25

- (a) What is meant by a ‘private limited company’?

.....

 [2]

- (b) Calculate the output per employee per week in 2014.

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 [2]

- (c) Identify and explain **two** reasons why calculating output per employee is important for PYG.

Reason 1:

 Explanation:

 Reason 2:

 Explanation:
 [4]

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(d) Identify and explain **two** possible problems for PYG of using flow production.

Problem 1:

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Explanation:

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Problem 2:

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Explanation:

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(e) Do you think that the advantages of relocating production to another country would be greater than the disadvantages for PYG? Justify your answer.

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- 3 NCE manufactures cars in 4 factories using flow production. NCE’s Human Resources Director thinks good induction training helps achieve high productivity. Factory X is its most efficient factory. Last year the size of the new car market fell by 20%. NCE now has to make 400 workers redundant at one of its other factories. ‘I am pleased NCE is a large business’, said the HR Director, ‘I think a small business cannot survive in this competitive market.’

Table 2: NCE operations data for 2014

Number of cars made	Number of employees
168 000	2800

- (a) What is meant by ‘flow production’?

.....

 [2]

- (b) Calculate the output per employee in 2014.

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 [2]

- (c) Identify and explain **two** ways in which induction training might benefit NCE.

Way 1:

 Explanation:

 Way 2:

 Explanation:
 [4]

- (d) Identify and explain **two** factors that NCE would need to consider in deciding which workers to make redundant.

Factor 1:

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Explanation:

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Factor 2:

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Explanation:

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- (e) The HR Director thinks that 'a small business cannot survive in this competitive market'. Do you agree with this view? Justify your answer.

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- 1 TWH makes a range of toys using batch production. TWH's Managing Director, Dylan, plans to invest in new technology to reduce average costs. 'It's the only way to increase efficiency as I do not know how we can improve employees' motivation' he said. Dylan cannot decide on whether it would be better to use retained profits or a long term loan as the source of finance.

Table 1: Data for 2014

Number of toys made per week	260 000
Number of employees	500
Average wage per hour paid by TWH	\$6
Average wage per hour paid by similar businesses	\$6.50

- (a) What is meant by 'average cost'?

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- (b) Calculate the output per employee per week in 2014.

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- (c) Identify and explain **two** possible advantages to TWH of using batch production.

Advantage 1:

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Explanation:

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Advantage 2:

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Explanation:

..... [4]

(d) Identify and explain **two** ways that TWH could improve the motivation of its employees.

Way 1:

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Explanation:

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Way 2:

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Explanation:

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(e) TWH can either use retained profit or a long term loan to finance the purchase of new technology. Which option do you recommend TWH should use? Justify your answer.

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- 1 PJK makes a range of luxury sports watches. Each watch is handmade by skilled workers. Quality assurance is important. The Operations Director has been looking at costs and prices as he wants to do a break-even analysis. This data is shown in Table 1. He is planning to invest in new technology to automate parts of the production process. The Operations Director thinks this is the best way to improve profitability.

Table 1: Costs and revenue (\$)

Price per watch	\$100
Variable cost per watch	\$50
Annual sales	6000
Annual fixed costs	\$200 000

- (a) What is meant by 'quality assurance'?

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- (b) Identify **two** ways in which break-even analysis might be helpful to PJK.

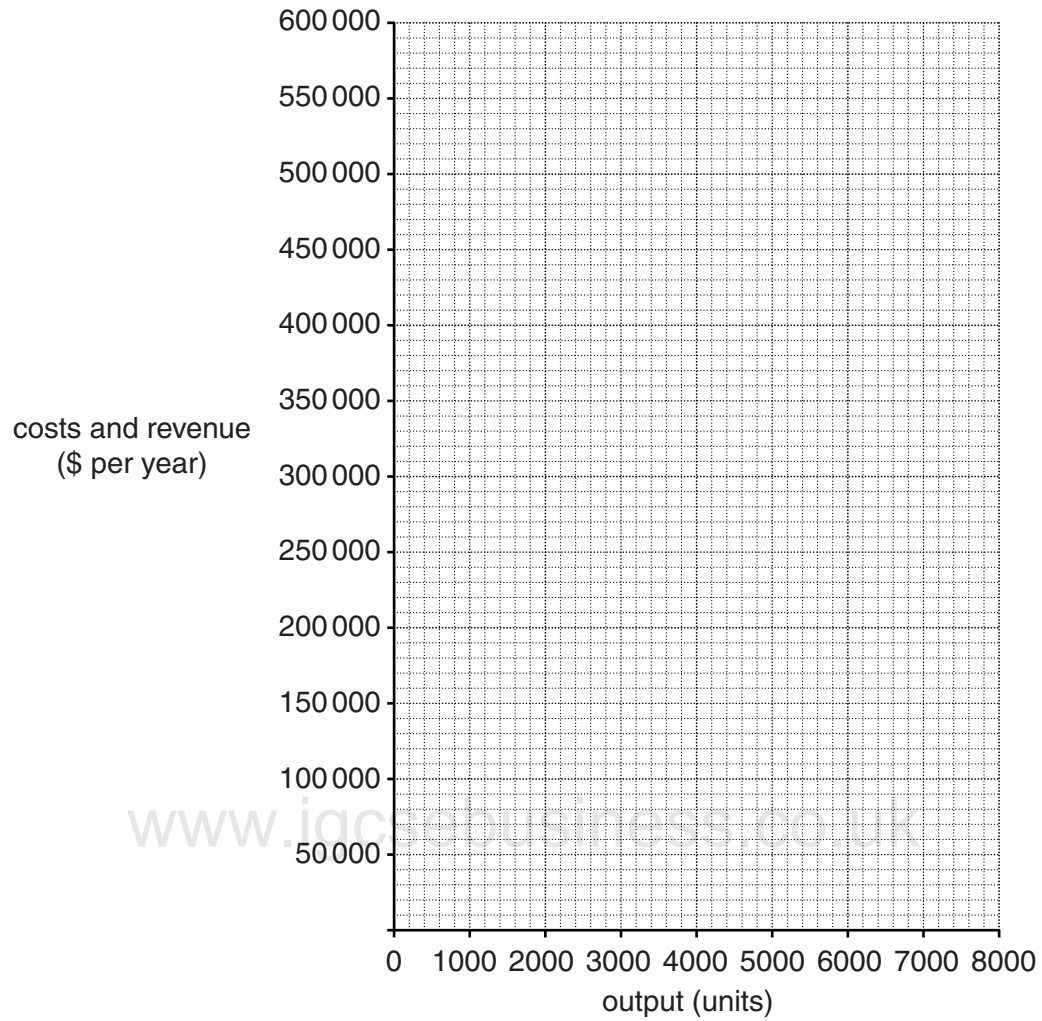
Way 1:

Way 2:
 [2]

(c) Using the information in Table 1, draw a break-even chart for PJK on Figure 1.

[4]

Figure 1



(d) Identify and explain **two** advantages to PJK of having skilled workers.

Advantage 1:

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Explanation:

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Advantage 2:

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Explanation:

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..... [6]

(e) Do you think that investing in new technology is the best way to improve profitability at PJK? Justify your answer.

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- 1 Gomez is the manager of a small computer repair business. Table 1 shows some costs and prices for his business. As it is a competitive market, Gomez knows it is important to maintain customer loyalty and revenue. Gomez knows that a lower break-even point would help improve profits. He thinks the best way to lower the break-even point is to raise prices.

Table 1: Cost and price information

Price per customer	\$30
Variable cost per customer	\$20
Average number of customers per month	140
Monthly fixed costs	\$1000

- (a) What is meant by 'revenue'?

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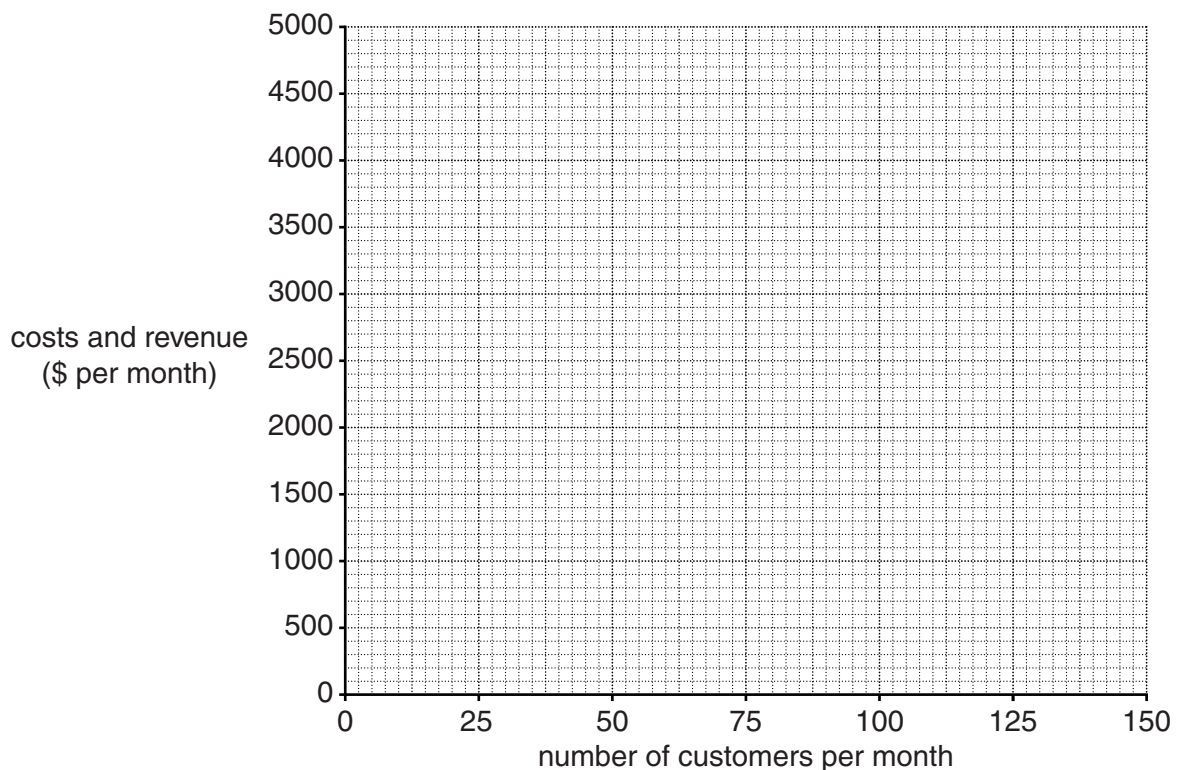
 [2]

- (b) What is meant by 'variable cost'?

.....

 [2]

- (c) Using the information in Table 1, draw a break-even chart for Gomez's business. [4]



(d) Identify and explain **two** methods that Gomez could use to maintain customer loyalty.

Method 1:

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Explanation:

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Method 2:

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Explanation:

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(e) Gomez thinks the best way to lower the break-even point is to raise prices. Do you agree? Justify your answer.

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4 Javid is a company that manufactures a range of luxury chocolates using batch production. Over the past year, profit has fallen due to increased competition. In order to cut costs, the Finance Director has suggested the company introduces new technology into the production process. The Human Resources Director is not sure that workers would benefit from the introduction of new technology.

(a) What is meant by 'batch production'?

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..... [2]

(b) Identify **two** advantages (other than cutting costs) to the company of using new technology.

Advantage 1:
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Advantage 2:
..... [2]

(c) Identify and explain **two** reasons why the quality of chocolates might be important to this company. www.igcsebusiness.co.uk

Reason 1:
.....
Explanation:
.....
Reason 2:
.....
Explanation:
..... [4]

(d) Identify and explain **two** problems that a fall in profit might cause for the company.

Problem 1:

.....

Explanation:

.....

.....

.....

Problem 2:

.....

Explanation:

.....

.....

..... [6]

(e) Do you think that the introduction of new technology would benefit Javid's workers? Justify your answer.

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..... [6]