

Write your name here

Surname

Other names

**Edexcel
Principal Learning**

Centre Number

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Candidate Number

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Manufacturing and Product Design

Level 3

Unit 1: Manufacturing Business Principles

Thursday 24 May 2012 – Afternoon

Time: 1 hour 30 minutes

Paper Reference

MP301/01

You may use a calculator.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided
– *there may be more space than you need.*

Information

- The total mark for this paper is 90.
- The marks for **each** question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►

P39844A

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PEARSON

Answer ALL questions. Write your answers in the space provided.

1 State the key business functions that would be responsible for dealing with the following activities.

Activity

Asking the opinions of potential customers regarding new products.

Key Business Function

(1)

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Activity

Ensuring goods are delivered efficiently to customers.

Key Business Function

(1)

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(Total for Question 1 = 2 marks)

2 Outline **two** characteristics that define a micro-enterprise.

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2

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(Total for Question 2 = 4 marks)



6 (a) Explain how a manufacturer could take advantage of fluctuating raw material costs.

(4)

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(b) Explain, using an example for each, the difference between direct and indirect costs.

(4)

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(Total for Question 6 = 8 marks)



9 A machine tool manufacturer is considering relocating within the UK.

Outline **three** reasons why the manufacturer would relocate.

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3

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(Total for Question 9 = 6 marks)



10 (a) Define what is meant by the term **strategic plan**.

(2)

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(b) Outline **two** reasons why a manufacturer would invest in staff training.

(4)

1

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2

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(Total for Question 10 = 6 marks)



11 A toy manufacturer is looking to improve efficiency by introducing Kaizen principles and a Kanban system into its production facility.

(a) Describe what is meant by the term **Kanban**.

(3)

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(b) Discuss how Kaizen principles can improve the toy manufacturer's production efficiency.

(6)

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(Total for Question 11 = 9 marks)



12 Explain why marketing is key to the sustainability of a manufacturing enterprise.

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(Total for Question 12 = 6 marks)



14 A manufacturing enterprise purchases a new machine for £160 000 on 1st January 2013. It is estimated that the machine will have a residual value of £40 000 and a useful economic life of 6 years.

The enterprise has an accounting end of year of 31st December.

(a) Using the formula for straight line depreciation,

$$Dpn = \frac{C - R}{N}$$

calculate the annual straight line depreciation charge.

(2)

Space for working

Answer:

(b) Complete the balance sheet for 31st December 2016.

(2)

Balance sheet at 31st December 2016

	Liabilities (£)	Assets (£)
Machine at cost	160 000	
Accumulated depreciation	
Machine at net book value	

(Total for Question 14 = 4 marks)



15 A manufacturing enterprise generates total annual sales of £240 000.

Its costs include:

Advertising	£12 000
Rent/rates	£32 000
Materials	£45 000
Utilities	£29 000
Wages	£93 000

(a) In the table below write the missing details in the correct position.

(4)

PROFIT AND LOSS ACCOUNT			
	£000	£000	£000
Income			
Turnover			
Cost of Sales			
Total			
GROSS PROFIT/LOSS			
Promotions			
Total			
Expenses			
Total			
NET PROFIT/LOSS BEFORE TAX			

Question 15 continues on page 16



(b) Express the net profit/loss in percentage terms.

Show your working.

(2)

Space for working

Answer:

(Total for Question 15 = 6 marks)

TOTAL FOR PAPER = 90 MARKS

