

Write your name here	
Surname	Other names
Edexcel Principal Learning	Centre Number
	Candidate Number
Manufacturing and Product Design	
Level 3	
Unit 1: Manufacturing Business Principles	
Sample Assessment Material	Paper Reference
Time: 1 hour 30 minutes	MP301/01
You do not need any other materials.	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.

N37441A

©2009 Edexcel Limited.
2/2



Turn over ►

edexcel 
advancing learning, changing lives

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

1 Key business structures and functions are needed in a manufacturing enterprise.

(a) Which key function would take part in each of the following activities?

(4)

Activity

Devising new techniques or processes and suggesting how they could be applied.

Key function

Activity

Providing support where products are repaired to ensure smooth operation.

Key function

Activity

Considering the types of customers that may buy a product and how to advertise it to them.

Key function

Activity

Applying new materials or technologies to new and improved products.

Key function



(b) Logistics and distribution are **key business functions**.

Explain why logistics and distribution are needed in a large-scale manufacturing enterprise?

(2)

.....

.....

.....

.....

(Total for Question 1 = 6 marks)



2 (a) In a manufacturing enterprise, management have defined roles and responsibilities.

(i) State a key responsibility of the **managing director** of a large-scale manufacturing enterprise.

(1)

.....
.....

(ii) Justify why this key responsibility needs to be performed by the **managing director**.

(2)

.....
.....
.....
.....

(b) Explain the role of a **sales manager** in a manufacturing enterprise.

(2)

.....
.....
.....
.....

(Total for Question 2 = 5 marks)



3 Entrepreneurship and leadership are important in a manufacturing enterprise.

State and discuss **one** reason why they are important.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

(Total for Question 3 = 4 marks)



5 In a manufacturing enterprise, economic factors such as the world market economy, globalisation and interest rates affect business operations and sustainability.

(a) State **one** other economic factor and outline the effect it has on a manufacturing enterprise.

(2)

.....

.....

.....

.....

(b) Define the term globalisation:

(2)

.....

.....

.....

.....

(c) Describe how a change in interest rates will affect decisions to investment in a manufacturing enterprise.

(4)

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

(Total for Question 5 = 8 marks)



6 In a manufacturing enterprise, environmental issues affect business operations and sustainability.

(a) Name **one** environmental issue that could affect a manufacturing enterprise.

(1)

.....
.....

(b) Describe how a manufacturing enterprise could reduce the impact of this environmental issue on its business operations.

(2)

.....
.....
.....
.....

(Total for Question 6 = 3 marks)



(b) List **two** different factors that would need to be taken into account if the enterprise decided to relocate its factory to another part of the UK.

(2)

.....

.....

.....

.....

(Total for Question 7 = 11 marks)



8 (a) Identify **one** element of a business plan.

(1)

.....

.....

(b) Define what is meant by the term strategic plan:

(2)

.....

.....

.....

(c) Describe **one** reason why a medium-scale manufacturing enterprise has put **staff training** at the forefront of its strategic planning.

(2)

.....

.....

.....

(Total for Question 8 = 5 marks)



9 (a) A manufacturing enterprise will set a **budget** for the development of a new product.

Illustrate what the term **budget** means in this situation.

(2)

.....

.....

.....

(b) A manufacturing enterprise will carry out market research before a product is developed.

Explain why market research is a **financial investment** in this situation.

(3)

.....

.....

.....

.....

.....

(Total for Question 9 = 5 marks)



10 A manufacturing enterprise is considering purchasing new and improved machinery to replace old and unreliable machinery. The new machinery will have the benefits of new technology.

(a) Relative to this example, illustrate what is meant by the term Return on Investment (ROI).

(2)

.....

.....

.....

.....

(b) Evaluate the impact on profitability of purchasing new machinery.

(4)

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

(Total for Question 10 = 6 marks)



11 Manufacturing enterprises use techniques to improve performance.

Explain activities that should take place in a manufacturing enterprise as a result of using a **lean manufacturing** approach.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

(Total for Question 11 = 4 marks)



13 Manufacturing enterprises use financial planning documents.

A partly completed Profit and Loss Account for a manufacturing enterprise is shown below.

PROFIT & LOSS ACCOUNT 2007/8			
	(£000)	(£000)	(£000)
Income			
Turnover			4200
Cost of Sales			
Materials	3000		
Wages	1300		
Total		(4300)	
GROSS PROFIT/LOSS			(100)

Considering the table above, suggest **two** actions that this manufacturing enterprise could take to help it recover from these financial difficulties.

.....

.....

.....

.....

(Total for Question 13 = 2 marks)



14 A manufacturing enterprise purchases new machinery for £85,000 on 1st January 2008.

It is estimated that the machine will have a residual value of £20,000 and a useful economic life of 4 years.

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

(a) Using the formula for straight line depreciation,

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

Calculate the annual straight line depreciation charge.

(2)

£



(b) Complete the balance sheet for 31st December 2010.

(2)

BALANCE SHEET at 31st December 2010

	Liabilities (£)	Assets (£)
Machine at cost	85,000	
Accumulated depreciation		
Machine at net book value		

(Total for Question 14 = 4 marks)



15 In a full year, a manufacturing enterprise generates total sales of £500,000. Its costs include:

- £100,000 for materials and wages, 60% of which is wages
- £25,000 for advertising
- £50,000 for utilities
- £50,000 for renting the factory

In the table below, write, in the correct position, the missing details.

PROFIT & LOSS ACCOUNT			
	(£000)	(£000)	(£000)
Income			
Turnover			
Cost of Sales			
Materials			
Wages			
Total			
GROSS PROFIT/LOSS			
Promotions			
Total			
Expenses			
Total			
NET PROFIT/LOSS BEFORE TAX			

(Total for Question 15 = 4 marks)



16 The following data is for two different projects being considered by the accountant of a manufacturing company. The accountant could use two methods of evaluating the financial risk.

(a) Use the:

- (i) payback period (in months) and
- (ii) return on investment

methods of evaluating financial risk to help you report whether Project A or B is the best option for the company. Show all your calculations and enter your answers in the table at the end.

(6)

Project	A	B
Period over which benefits are calculated	24 months	12 months
Costs		
Design and development	£72,400	£40,900
Promotion	£8,100	£4,700
Administration	£27,400	£12,700
Materials	£32,000	£15,000
Facilities	£76,600	£40,500
Evaluation costs	£4,100	£870
Public consultation costs	£0	£920
Total cost	£220,600	£115,590
Benefits		
Labour savings	£34,200	£24,100
Productivity increases	£90,940	£67,500
Other cost savings	£19,220	£16,124
Other income generation	£4,200	£0
Total benefits	£148,560	£107,724



Show your calculations here

	Project A	Project B
Payback period in months		
Return on investment		



(b) Report which project the company should select and state why.

(2)

.....

.....

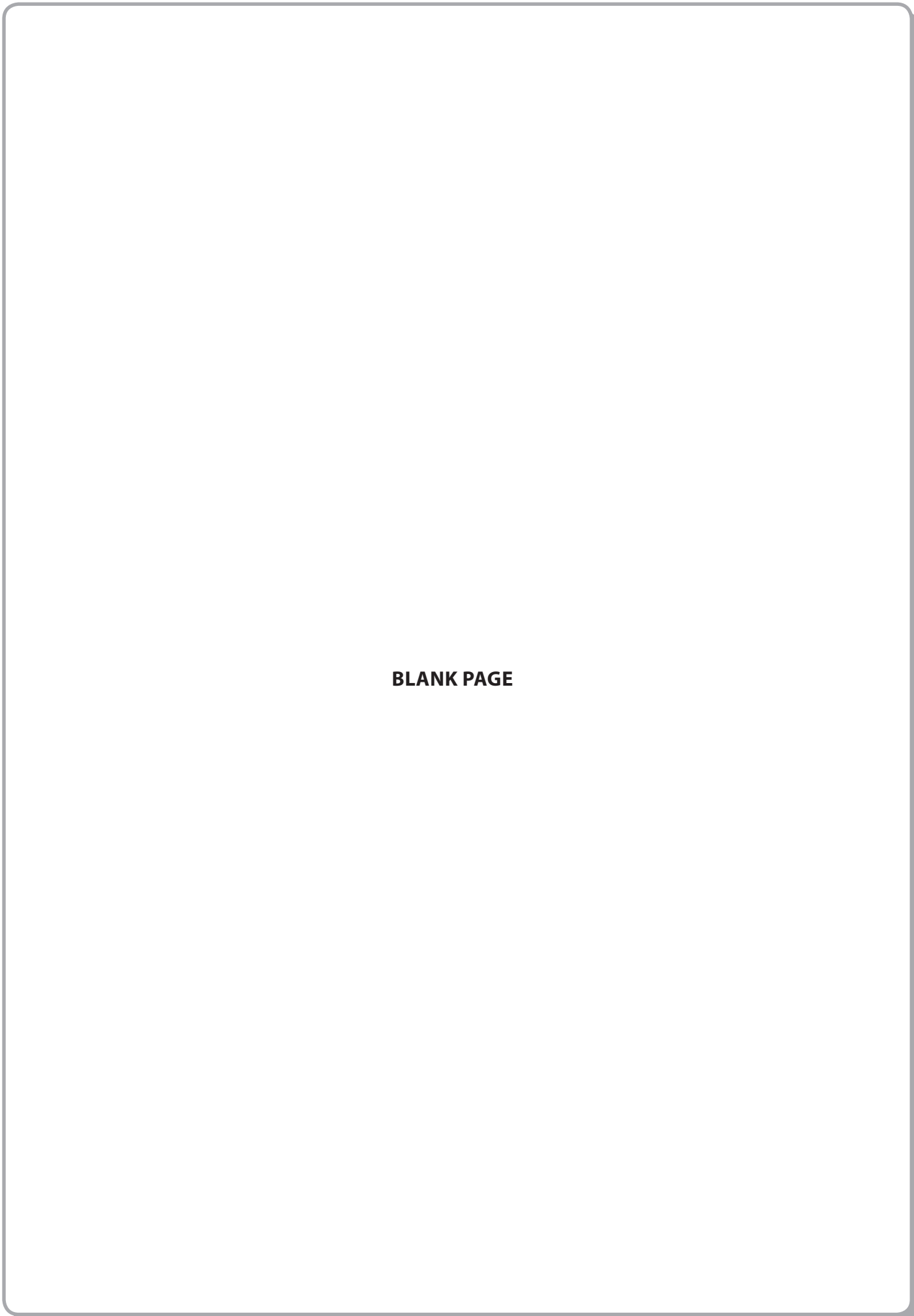
.....

.....

(Total for Question 16 = 8 marks)

TOTAL FOR PAPER = 90 MARKS





BLANK PAGE



N 3 7 4 4 1 A 0 2 3 2 4



BLANK PAGE

