

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 1

Unit 1: Introduction to Manufacturing

Wednesday 16 May 2012 – Morning

Time: 45 minutes

Paper Reference

**MP101/01**

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.

## Information

- The total mark for this paper is 30.
- 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 ►

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**Answer ALL questions.**

**ALL questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.**

- 1** A person that repairs the machines used to make cheese would work for which **one** of the following business process departments?

<b>A</b>	Production	<input type="checkbox"/>
<b>B</b>	Deployment	<input type="checkbox"/>
<b>C</b>	Maintenance	<input type="checkbox"/>
<b>D</b>	Distribution	<input type="checkbox"/>

**(Total for Question 1 = 1 mark)**

- 2** The main business process of marketing would do which **one** of the following tasks?

<b>A</b>	Take finished products to the shops	<input type="checkbox"/>
<b>B</b>	Organise payments	<input type="checkbox"/>
<b>C</b>	Produce advertisements	<input type="checkbox"/>
<b>D</b>	Order raw materials from the supplier	<input type="checkbox"/>

**(Total for Question 2 = 1 mark)**

- 3** Which main business process ensures that there are enough materials available to make products?

<b>A</b>	Production	<input type="checkbox"/>
<b>B</b>	Supplies	<input type="checkbox"/>
<b>C</b>	Distribution	<input type="checkbox"/>
<b>D</b>	Marketing	<input type="checkbox"/>

**(Total for Question 3 = 1 mark)**



4 The drawing below shows a shipping container.



This type of container is designed for:

A	marketing	<input type="checkbox"/>
B	maintenance	<input type="checkbox"/>
C	distribution	<input type="checkbox"/>
D	packaging	<input type="checkbox"/>

(Total for Question 4 = 1 mark)

5 Which **one** of these spin-off industries would link with a dairy?

A	A manufacturer of washing machines	<input type="checkbox"/>
B	A manufacturer of non-ferrous metals	<input type="checkbox"/>
C	A manufacturer of white spirit	<input type="checkbox"/>
D	A manufacturer of plastic bottles	<input type="checkbox"/>

(Total for Question 5 = 1 mark)

6 A business that produces wood care products reduces its emissions.

For an employee of the business this would mean:

A	improved working conditions	<input type="checkbox"/>
B	improved pay	<input type="checkbox"/>
C	improved career prospects	<input type="checkbox"/>
D	inferior working conditions	<input type="checkbox"/>

(Total for Question 6 = 1 mark)



7 A manufacturer of aerospace satellites locates its factory near to a university.

What would be a demographic reason for this?

A	Crime is less likely	<input type="checkbox"/>
B	Highly skilled labour is readily available	<input type="checkbox"/>
C	Land will be very low cost	<input type="checkbox"/>
D	Loans will be available to buy machinery	<input type="checkbox"/>

(Total for Question 7 = 1 mark)

8 A manufacturer that delivers products by lorry is building a new factory.

Where should the factory be built?

A	Near a motorway	<input type="checkbox"/>
B	Near a health centre	<input type="checkbox"/>
C	Near a football stadium	<input type="checkbox"/>
D	Near a car wash	<input type="checkbox"/>

(Total for Question 8 = 1 mark)

9 A manufacturer of earth moving equipment is considering investing several million pounds in new tooling.

The **most** likely reason for this would be:

A	to increase short-term costs	<input type="checkbox"/>
B	to increase long-term profits	<input type="checkbox"/>
C	to decrease the amount of rent it has to pay	<input type="checkbox"/>
D	to increase its dependence on fossil fuels	<input type="checkbox"/>

(Total for Question 9 = 1 mark)

10 The law requires all manufacturers to control emissions from their factories.

The reason for this is to:

A	reduce costs	<input type="checkbox"/>
B	reduce the amount of materials used	<input type="checkbox"/>
C	reduce the use of fossil fuels	<input type="checkbox"/>
D	reduce damage to the environment	<input type="checkbox"/>

(Total for Question 10 = 1 mark)



11 The most effective way for a cake maker to reduce its energy usage would be to:

A	improve the efficiency of its ovens	<input type="checkbox"/>
B	reduce the size of the cakes	<input type="checkbox"/>
C	increase the size of the cakes	<input type="checkbox"/>
D	only bake during the day	<input type="checkbox"/>

(Total for Question 11 = 1 mark)

12 Which manufacturing sub-sector produces ships?

A	Chemicals, polymers and pharmaceuticals	<input type="checkbox"/>
B	Processing and print	<input type="checkbox"/>
C	Textile and clothing	<input type="checkbox"/>
D	Engineering manufacture	<input type="checkbox"/>

(Total for Question 12 = 1 mark)

13 Which **one** of the following is made by the food and drink manufacturing sub-sector?

A	Aspirin	<input type="checkbox"/>
B	Snack bars	<input type="checkbox"/>
C	Packaging	<input type="checkbox"/>
D	Cutlery	<input type="checkbox"/>

(Total for Question 13 = 1 mark)

14 Which manufacturing sub-sector produces man-made fibres?

A	Processing and print	<input type="checkbox"/>
B	Engineering manufacture	<input type="checkbox"/>
C	Chemicals, polymers and pharmaceuticals	<input type="checkbox"/>
D	Textile and clothing	<input type="checkbox"/>

(Total for Question 14 = 1 mark)



15 Which **one** of the following is made by the chemicals, polymers and pharmaceuticals sub-sector?

<b>A</b>	Plastic bottles	<input type="checkbox"/>
<b>B</b>	Paper	<input type="checkbox"/>
<b>C</b>	Packaging	<input type="checkbox"/>
<b>D</b>	Cardboard	<input type="checkbox"/>

(Total for Question 15 = 1 mark)

16 Which **one** of the following is made by the textile and clothing sub-sector?

<b>A</b>	Wet suits	<input type="checkbox"/>
<b>B</b>	Leather gloves	<input type="checkbox"/>
<b>C</b>	Spectacles	<input type="checkbox"/>
<b>D</b>	Fibreglass	<input type="checkbox"/>

(Total for Question 16 = 1 mark)

17 Which manufacturing sub-sector decommissions nuclear power stations?

<b>A</b>	Chemicals, polymers and pharmaceuticals	<input type="checkbox"/>
<b>B</b>	Processing and print	<input type="checkbox"/>
<b>C</b>	Engineering manufacture	<input type="checkbox"/>
<b>D</b>	Textile and clothing	<input type="checkbox"/>

(Total for Question 17 = 1 mark)

18 Mass produced electrical products are manufactured in Asia because:

<b>A</b>	labour costs are low	<input type="checkbox"/>
<b>B</b>	labour costs are high	<input type="checkbox"/>
<b>C</b>	raw materials are difficult to source	<input type="checkbox"/>
<b>D</b>	labour is difficult to source	<input type="checkbox"/>

(Total for Question 18 = 1 mark)



19 Lower production costs often result in which **one** of the following?

<b>A</b>	Higher quality products	<input type="checkbox"/>
<b>B</b>	Lower quality products	<input type="checkbox"/>
<b>C</b>	Better packaged products	<input type="checkbox"/>
<b>D</b>	VAT registered products	<input type="checkbox"/>

(Total for Question 19 = 1 mark)

20 Worldwide competition in the car manufacturing industry has resulted in which **one** of the following?

<b>A</b>	More work for people assembling cars in the UK	<input type="checkbox"/>
<b>B</b>	Less work for people assembling cars in the UK	<input type="checkbox"/>
<b>C</b>	Reduction in manufacturing quality	<input type="checkbox"/>
<b>D</b>	Reduction in manufacturing efficiency	<input type="checkbox"/>

(Total for Question 20 = 1 mark)

21 Which **one** of the following situations would result in a manufacturer having to pay the **most** for raw materials?

<b>A</b>	Lots of the raw materials available and a high level of demand for the materials	<input type="checkbox"/>
<b>B</b>	Lots of the raw materials available and a low level of demand for the materials	<input type="checkbox"/>
<b>C</b>	A small amount of the raw materials available and a high level of demand for the materials	<input type="checkbox"/>
<b>D</b>	A small amount of raw material available and low level of demand for the materials	<input type="checkbox"/>

(Total for Question 21 = 1 mark)

22 Changes in currency exchange rates would have the biggest effect on companies that compete in which of the following markets?

<b>A</b>	Local	<input type="checkbox"/>
<b>B</b>	Regional	<input type="checkbox"/>
<b>C</b>	National	<input type="checkbox"/>
<b>D</b>	International	<input type="checkbox"/>

(Total for Question 22 = 1 mark)



**23** A manufacturer of ice cream has to increase the selling price due to an increase in the cost of the milk used.

This increase would result in which **one** of the following?

<b>A</b>	Increased sales	<input type="checkbox"/>
<b>B</b>	Increased fixed costs	<input type="checkbox"/>
<b>C</b>	Reduced business	<input type="checkbox"/>
<b>D</b>	Reduced number of dairy cows	<input type="checkbox"/>

(Total for Question 23 = 1 mark)

**24** A manufacturer of clothing distributes its products throughout Britain and is considering relocating to reduce distribution costs.

Which location on the map below would make distribution costs the cheapest?



<b>A</b>	1	<input type="checkbox"/>
<b>B</b>	2	<input type="checkbox"/>
<b>C</b>	3	<input type="checkbox"/>
<b>D</b>	4	<input type="checkbox"/>

(Total for Question 24 = 1 mark)

**25** Which **one** of the following costs **must** an employer take into account?

<b>A</b>	Subsidised food for employees	<input type="checkbox"/>
<b>B</b>	Minimum hourly wage rate for employees	<input type="checkbox"/>
<b>C</b>	Payments towards private health care for employees	<input type="checkbox"/>
<b>D</b>	Providing employees with a company car	<input type="checkbox"/>

(Total for Question 25 = 1 mark)



**26** Manufacturers are often encouraged to reduce packaging for environmental and cost reasons.

Packaging that has been reduced **must** still:

<b>A</b>	advertise the contents	<input type="checkbox"/>
<b>B</b>	display the price of the contents	<input type="checkbox"/>
<b>C</b>	protect the contents	<input type="checkbox"/>
<b>D</b>	allow easy access to the contents	<input type="checkbox"/>

(Total for Question 26 = 1 mark)

**27** The cost of making a wooden cabinet is as follows:

Materials            £11.23

Labour                £17.39

Distribution        £3.33

What is the total cost of making one cabinet?

<b>A</b>	£31.59	<input type="checkbox"/>
<b>B</b>	£31.95	<input type="checkbox"/>
<b>C</b>	£35.91	<input type="checkbox"/>
<b>D</b>	£319.50	<input type="checkbox"/>

(Total for Question 27 = 1 mark)

**28** A radiator costs £12.50 to manufacture.

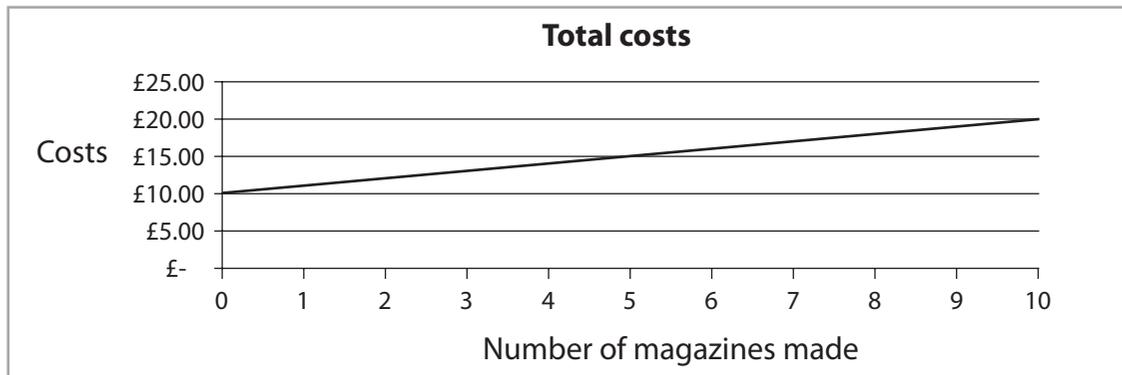
If the radiator is sold at a 28% profit what is the selling price?

<b>A</b>	£12.78	<input type="checkbox"/>
<b>B</b>	£15.20	<input type="checkbox"/>
<b>C</b>	£16.00	<input type="checkbox"/>
<b>D</b>	£40.50	<input type="checkbox"/>

(Total for Question 28 = 1 mark)



29 The total cost of producing magazines consists of fixed and variable costs. These are shown on the graph below.



Using the information from the graph, what is the fixed cost of producing this magazine?

<b>A</b>	£5.00	<input type="checkbox"/>
<b>B</b>	£10.00	<input type="checkbox"/>
<b>C</b>	£15.00	<input type="checkbox"/>
<b>D</b>	£20.00	<input type="checkbox"/>

(Total for Question 29 = 1 mark)

30 A baker produces a pizza every 10 minutes for 4 hours.

Each pizza has a value of £2.50.

What is the total value of pizzas made in 4 hours?

<b>A</b>	£10	<input type="checkbox"/>
<b>B</b>	£25	<input type="checkbox"/>
<b>C</b>	£60	<input type="checkbox"/>
<b>D</b>	£100	<input type="checkbox"/>

(Total for Question 30 = 1 mark)

**TOTAL FOR PAPER = 30 MARKS**



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