

Answer ALL the questions in Section A and Section B.

SECTION A

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

1. All of the products listed below belong to a manufacturing sector.
- (a) Tick the **two** boxes below where the products belong to the **printing and publishing** sector.

Products	Tick two boxes below
Headache tablet	
Theatre ticket	
Metal step ladder	
Chilli powder	
Neoprene glove	
Christmas card	

(2)

- (b) Tick the **two** boxes below where the products belong to the **paper and board** sector.

Products	Tick two boxes below
Library book	
Walking boots	
Safety overalls	
Cereal box	
Olive oil	
Steering wheel	

(2)

Q1

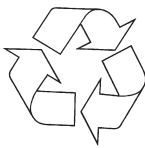

(Total 4 marks)



2. The two tables below show some symbols that represent environmental features on some packaged products.

(a) Complete **Table 1** by naming each symbol.


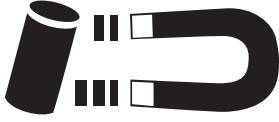
Table 1

Symbol	Symbol name	Use
		A symbol commonly used on cardboard packaging to identify that the packaging is recyclable.
		Used to tell people that the manufacturer has paid a fee towards the packaging recovery.

(2)

(b) Complete **Table 2** by explaining what each symbol is used for.

Table 2

Symbol	Symbol name	Use
	Reminder symbol	
	Horseshoe magnet	

(4)

Q2

(Total 6 marks)



Leave blank

3. Draw a straight line to link each term listed below to the correct key area.

Each key area can be used more than once.

Term

Key area

Assembly robot

(1)

Information and
Communications Technology
(ICT)

Thermochromic inks

(1)

Spreadsheet

(1)

Control technology

Acrylic

(1)

Programmable logic
controllers (PLCs)

(1)

Modern materials

Word processing

(1)

Q3

(Total 6 marks)



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4. Fast food packaging belongs to the printing and publishing, paper and board sector.

(a) (i) Name **one** other product from this sector, apart from **fast food packaging**, that utilises in its manufacture a modern material and process control.

.....
(1)

(ii) Explain the purpose of this product.

.....
.....
.....
(2)

(b) (i) State **one** stage in the manufacture of the product you named in 4(a)(i) where control technology is used.

.....
(1)

(ii) Explain **one** advantage to the **manufacturer** of using control technology at this stage.

.....
.....
.....
(2)

(c) (i) State **one** modern material used in the manufacture of the product you named in 4(a)(i).

.....
(1)

(ii) Describe how this modern material improves the key features of the product.

.....
.....
.....
.....
(2)

(Total 9 marks)

Q4



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5. Information and Communications Technology (ICT) is used by manufacturers of printing and publishing, paper and board products.

(a) (i) Give **one** example of **where** a database could be used by a manufacturer.

.....
(1)

(ii) Explain **one** benefit to the manufacturer of using a database relating to this example.

.....
.....
(2)

(b) (i) Give **one** example of communications technology as used by a manufacturer.

.....
(1)

(ii) Explain **one** benefit to the manufacturer of using communications technology relating to this example.

.....
.....
(2)

(c) Explain **one** benefit to the **retailer** of the manufacturer using ICT.

.....
.....
(2)

(Total 8 marks)

Q5



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6. Systems and control technology is now used by manufacturers to organise, monitor and control production.

- (a) Name **two** different examples of systems and control technology.
- (b) Describe the traditional method each has replaced.
- (c) Explain **one** benefit to the manufacturer of using each replacement systems and control technology.

Example 1

Systems and control technology 1
.....
(1)

Method it has replaced
.....
(1)

Benefit of replacement
.....
.....
(2)

Example 2

Systems and control technology 2
.....
(1)

Method it has replaced
.....
(1)

Benefit of replacement
.....
.....
(2)

(Total 8 marks)

Q6



<p>7. Computer-aided manufacture (CAM) is an essential feature in printing and publishing, paper and board manufacturing companies.</p> <p>Explain one benefit CAM has for the:</p> <p>(a) Manufacturer</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p style="text-align: right;">(2)</p> <p>(b) Consumer</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p style="text-align: right;">(2)</p> <p style="text-align: right;">(Total 4 marks)</p>	<p>Leave blank</p>
<p>TOTAL FOR SECTION A: 45 MARKS</p>	

Q7



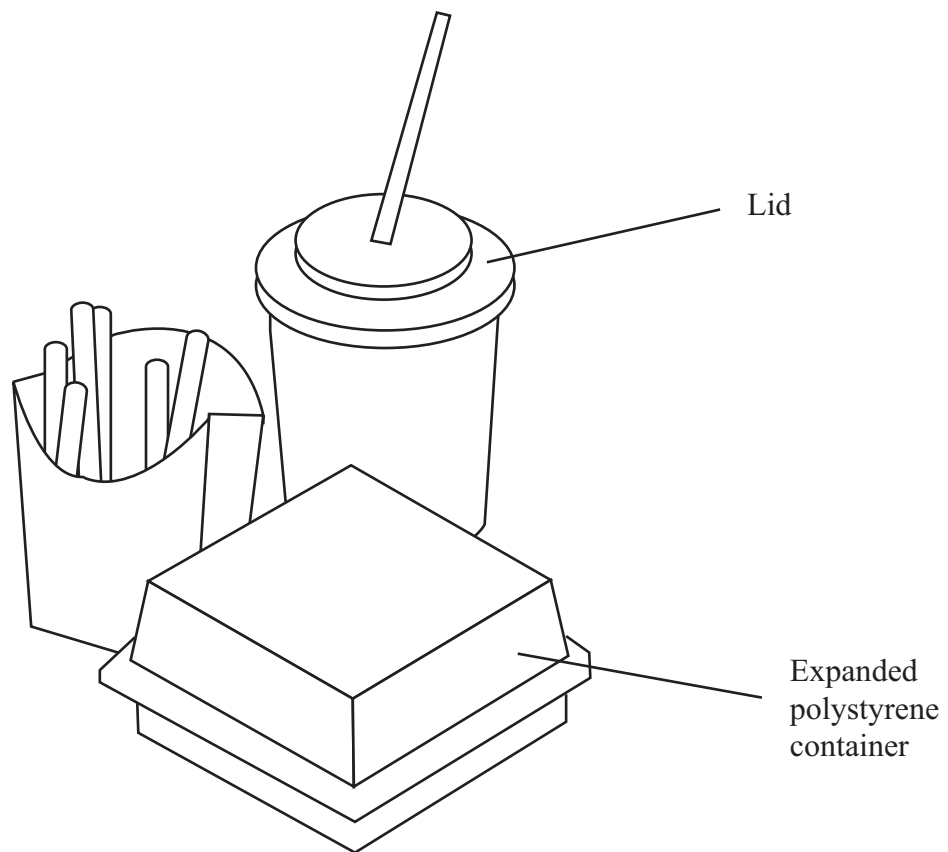
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SECTION B

Answer ALL the questions in this section with reference to the manufacture of mass produced fast food packaging. Write your answers in the spaces provided.

The diagram below shows fast food packaging.

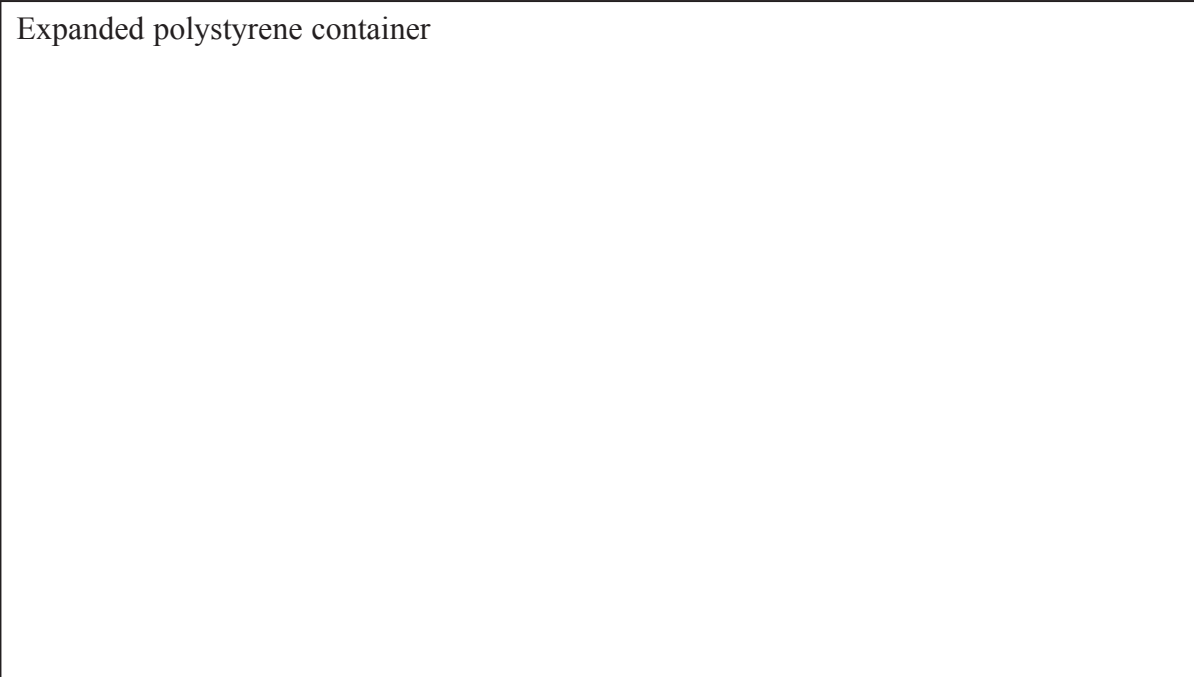


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8. In the boxes below, explain, using notes and sketches:

(a) the function of the expanded polystyrene container

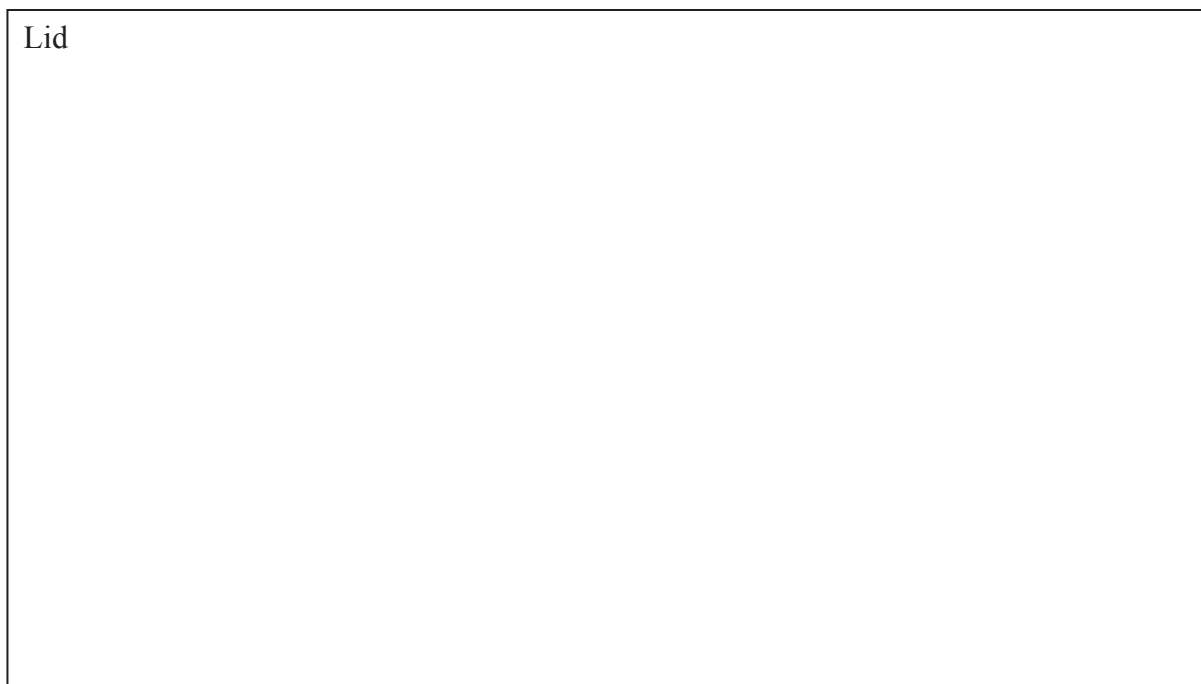
Expanded polystyrene container



(3)

(b) the function of the lid.

Lid



(3)

(Total 6 marks)

Q8

11

Turn over



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9. (a) The following table shows some of the main stages in manufacturing fast food packaging.

(i) Complete the table below by giving the **two** missing stages in manufacturing fast food packaging.

Stages in manufacturing	
1	
2	Marketing
3	Production planning
4	
5	Production
6	Assembly and finishing
7	Packaging and dispatch

(2)

(ii) State the stage in manufacturing where the fast food packaging would be advertised in catalogues.

Stage

(1)

(b) Describe the following **two** stages in the manufacture of fast food packaging.

(i) Production

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

(3)

(ii) Packaging and dispatch

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

(3)

(Total 9 marks)

Q9



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10. Mass produced fast food packaging is manufactured using modern materials and processes.

(a) (i) Name **one** specific material, other than polystyrene, commonly used in the production of fast food packaging.

.....
(1)

(ii) Explain how this material has helped to improve the characteristics of fast food packaging.

.....
.....
(2)

(b) Explain why vacuum forming is a suitable process for the production of the lid of the cup.

.....
.....
(2)

(c) State **two** production processes, other than vacuum forming, used in the manufacture of fast food packaging.

Process 1

Process 2

(2)

(d) Explain how the use of modern materials has helped the **manufacturer** of fast food packaging to increase sales.

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.....
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(3)

(Total 10 marks)

Q10

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11. Automation is used in the manufacture of fast food packaging.

- (a) Describe **two** examples of automation used at the **production** stage of the manufacture of fast food packaging.
- (b) Explain **one** benefit to the **manufacturer** of applying each type of automation.
- (c) Explain **one** benefit to the **consumer** of applying each type of automation.

Example 1

Automation Example 1
.....
..... (2)

Benefit to manufacturer
.....
..... (2)

Benefit to consumer
.....
..... (2)

Example 2

Automation Example 2
.....
..... (2)

Benefit to manufacturer
.....
..... (2)

Benefit to consumer
.....
..... (2)

(Total 12 marks)

Q11

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12. The use of computer-aided manufacture (CAM) and control technology in the manufacture of fast food packaging has brought changes.

(a) (i) State **one** change CAM has had on the type and size of the workforce.

Change
(1)

(ii) Explain **two** different effects this change has had on the type and size of the workforce.

Effect 1
.....
(2)

Effect 2
.....
(2)

(b) (i) State **one** change control technology has had on the global environment.

Change
(1)

(ii) Explain **two** different effects this change has had on the global environment.

Effect 1
.....
(2)

Effect 2
.....
(2)

Q12

(Total 10 marks)

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13. Modern materials are used in the manufacture of fast food packaging.

(a) Explain how modern materials have impacted environmentally in terms of product disposal.

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(4)



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(b) Explain how the use of modern materials and components has impacted on development costs and product costs.

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(4)

Q13

(Total 8 marks)

TOTAL FOR SECTION B: 55 MARKS

TOTAL FOR PAPER: 100 MARKS

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