



**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 <b>two</b> boxes below |
|-----------------------|-----------------------------|
| Soy sauce             | <input type="checkbox"/>    |
| Chocolate bar wrapper | <input type="checkbox"/>    |
| Baseball cap          | <input type="checkbox"/>    |
| China mug             | <input type="checkbox"/>    |
| Paperback book        | <input type="checkbox"/>    |
| Carbonated water      | <input type="checkbox"/>    |

(2)

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

| Products           | Tick <b>two</b> boxes below |
|--------------------|-----------------------------|
| MP3 player         | <input type="checkbox"/>    |
| CD booklet         | <input type="checkbox"/>    |
| DVD case           | <input type="checkbox"/>    |
| Business card      | <input type="checkbox"/>    |
| Credit card        | <input type="checkbox"/>    |
| Referee's red card | <input type="checkbox"/>    |

(2)

Q1

(Total 4 marks)



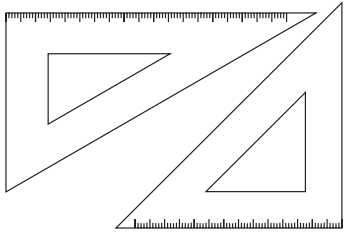
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2. The table shows some drawing equipment used when designing products.

Complete the table by:

- (a) Naming each piece of drawing equipment;
- (b) Explaining what each piece of drawing equipment is used for.

The first one is done for you.

| Drawing equipment   | Equipment name | Use   |
|---|----------------|---|
|  | Set squares    | Drafting aids used with a drawing board and parallel motion to produce accurate technical drawings. |

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|---|--|--|
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(3)

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|---|--|--|
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(3)

(Total 6 marks)

Q2



Leave blank

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

Each key area can be used more than once.

**Term**

**Key area**

Computer Integrated Manufacturing (CIM)

Information and Communications Technology (ICT)

Holographic card

Process control

Modern materials

Phosphorescent pigments

Internet sites

Control technology

Databases

Q3

(Total 6 marks)



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

(a) (i) Name **one** other product from this sector, apart from **blister packaging**, that utilises in its manufacture control technology and modern materials.

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(1)

(ii) Explain how the product can be used.

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.....  
(2)

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

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(1)

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

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(2)

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

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(1)

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

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(2)

(Total 9 marks)

Q4



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5. Computer-aided manufacture (CAM) and Computer-aided design (CAD) are both used by manufacturers of printing and publishing, paper and board products.

(a) (i) Give **one** example of where Computer-aided manufacture (CAM) is used by a manufacturer.

.....  
(1)

(ii) Explain the benefits to the **manufacturer** of using Computer-aided manufacture (CAM) relating to the example given in 5(a)(i).

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

(b) (i) Give **one** example of how Computer-aided design (CAD) is used by a manufacturer.

.....  
(1)

(ii) Explain the benefits to the **manufacturer** of using the Computer-aided design (CAD) relating to the example given in 5(b)(i).

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

(c) Explain **one** benefit to the **retailer** of the manufacturer using Computer-aided manufacture (CAM).

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

(Total 8 marks)

Q5



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6. Communications technology is now widely used by manufacturers.

- (a) Name **two** examples of communications technology.
- (b) Describe the traditional communications method it has replaced.
- (c) Explain **one** benefit to the manufacturer of using this replacement.

**Example 1**

Communications technology 1 .....  
..... (1)

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

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

**Example 2**

Communications technology 2 .....  
..... (1)

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

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

(Total 8 marks)

Q6



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7. Handling information and data is an essential feature in printing and publishing, paper and board companies.

Explain the benefits information and data handling systems have on:

(a) production efficiency .....

.....

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(2)

(b) marketing .....

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(2)

(Total 4 marks)

Q7

**TOTAL FOR SECTION A: 45 MARKS**





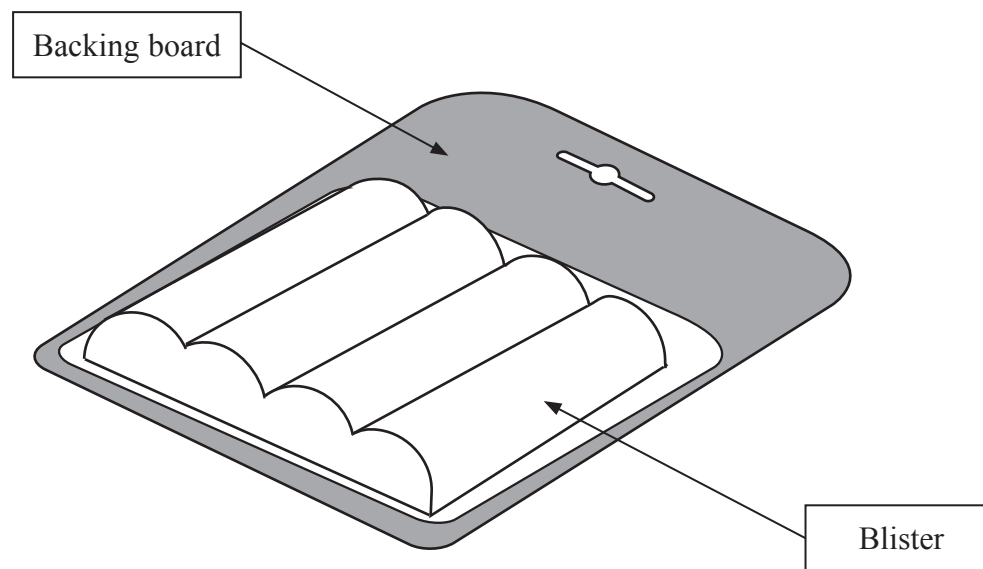
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**SECTION B**

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

The diagram below shows a blister package.



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

(a) the function of the backing board

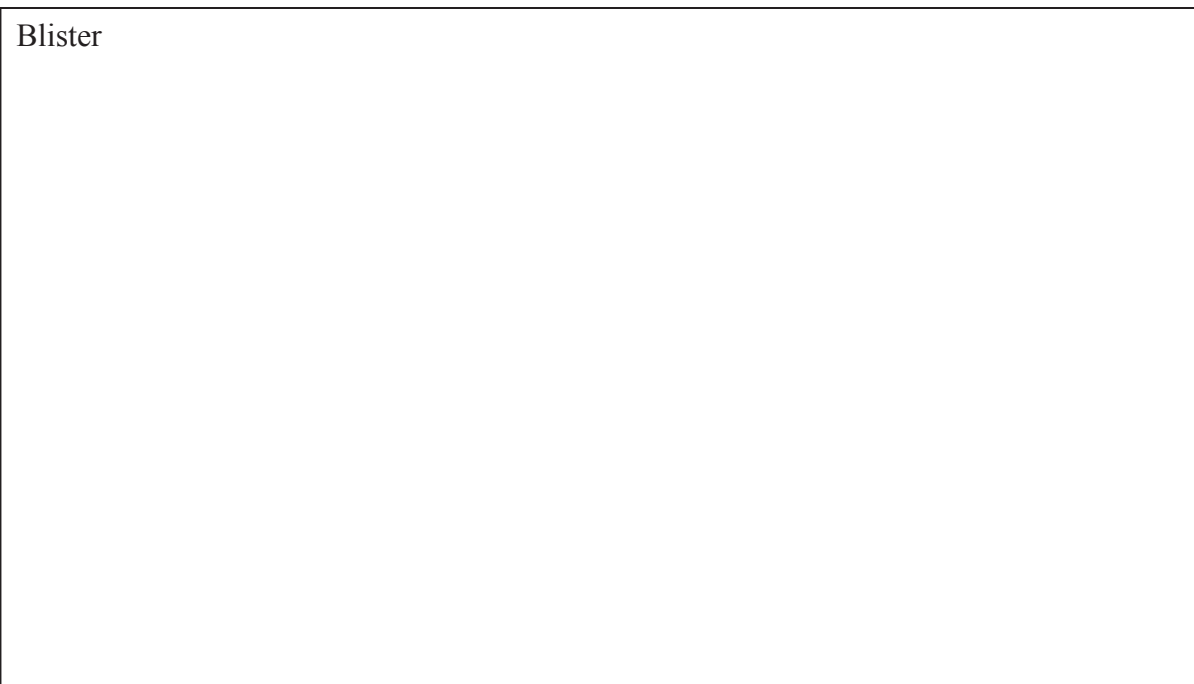
Backing board



(3)

(b) the function of the blister.

Blister



(3)

(Total 6 marks)

Q8



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9. (a) The following table indicates the main stages in manufacturing blister packaging.

|                              |
|------------------------------|
| Design                       |
|                              |
| Production planning          |
| Materials supply and control |
|                              |
| Assembly and finishing       |
| Packaging and dispatch       |

(i) Write in the table above the **two** missing stages in manufacturing blister packaging. (2)

(ii) State the stage where the blister is attached to the backing board.

Stage ..... (1)

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

(i) Production planning .....  
.....  
.....  
..... (3)

(ii) Packaging and dispatch .....  
.....  
.....  
..... (3)

(Total 9 marks)

Q9



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10. (a) Name the specific material commonly used in blister packaging to make the:

(i) backing board

..... (1)

(ii) blister.

..... (1)

(b) Thermoplastics are used to produce blister packaging.

(i) Name a suitable forming process for producing the blister.

..... (1)

(ii) Explain **two** properties of thermoplastics which make them suitable for packaging.

Property 1 .....

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.....

Property 2 .....

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(4)

(c) Explain how the use of modern materials has helped the **manufacturer** of blister packaging develop new products.

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(3)

(Total 10 marks)

Q10

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11. (a) Describe **two** quality control procedures used at the **production stage** of the manufacture of the blister package that utilise monitoring control technology.

(i) Quality control procedure 1

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(2)

(ii) Quality control procedure 2

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.....

(2)

(b) Explain **one** benefit of applying each quality control procedure, described in (a) above, to the **manufacturer**.

(i) Benefit of procedure 1

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.....

(2)

(ii) Benefit of procedure 2

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.....

(2)

(c) Explain **one** benefit of applying each quality control procedure, described in (a) above, to the **consumer**.

(i) Benefit of procedure 1

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.....

(2)

(ii) Benefit of procedure 2

.....  
.....

(2)

(Total 12 marks)

Q11



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12. (a) The utilisation of modern technology in the manufacture of blister packaging has brought changes. Explain these changes in:

(i) the type and size of the workforce .....

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.....

(2)

(ii) the working environment .....

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

(iii) the global environment .....

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(2)





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(b) Describe **one disadvantage** that modern technology has had on the workforce.

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(2)

(c) Describe **one advantage** that modern technology has had on the global environment.

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(2)

Q12

(Total 10 marks)

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**13.** Computer-aided design (CAD) and Computer-aided manufacture (CAM) are used in the manufacture of blister packaging.

(a) Describe how CAD is used by the manufacturer to increase market share.

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**(4)**



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(b) Describe how CAM is used to control manufacturing 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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