



## Exam Questions

### Warm-Up Questions:

1. What is commonly used as a the reference point when working with x,y,z coordinates?
2. Describe how a template is used as a production aid to make identical shapes from a material.
3. What is the name of the raw material that metals are extracted from?

### Worked Exam Questions:

1. A company is producing a batch of shelving units. The shelving units need side panels that have pre-drilled holes for the shelf supports. They have decided to use a drilling jig to make the holes.

a) Describe what a jig does.

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

b) Give **two** advantages of using a drilling jig instead of making out and drilling the holes by hand.

1. ....

2. ....

2. Paper and card are made from cellulose fibres, which can come from wood chips.

a) Explain how wood chips can be converted into cellulose fibres.

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



b) Describe the process used to convert these fibres to white paper.

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

c) Name **one** other raw material that can be used to make paper and board.

.....



# Exam Questions

1. Cotton and polyester fibres are commonly used to make clothes.

a) What are the raw materials used to make cotton and polyester yarns?

Cotton: .....

Polyester: .....

b) Explain how obtaining these raw materials can negatively impact the environment.  
Give **two** ways for each material.

i. Cotton

1. ....  
.....

2. ....  
.....

ii. Polyester

1. ....  
.....

2. ....  
.....

c) Choose **one** of these raw materials.

Use sketches and/or notes to give a detailed description of how it is converted to yarn.

Material: .....



## Revision Questions

This section is done and dusted – time to see [how much](#) you can remember.

- Try these questions and [tick off each one](#) when you [get it right](#).
- When you've done [all the questions](#) for a topic and are [completely happy](#) with it, tick off the topic.

### Selecting Materials

- 1) Give three factors that you should consider when selecting a material to use in a product
- 2) Suggest two disadvantages of using a material that is not widely available
- 3) Isaac is hand-crafting a one-off chair made from expensive mahogany.   
Suggest two reasons why Isaac needs to sell it at a high price.

### Forces and Stresses

- 4) Which type of force acts to squash or shorten an object?
- 5) The photo on the right shows someone abseiling down a wall.   
What type of force is acting on the climbing rope?





- 6) Name one type of industrial cutting machine that uses shear to cut materials.
- 7) Explain why stainless steel is useful for making products that are used outdoors

**Scales of production**

- 8) Put one-off, batch and mass production in order of scale (from smallest to largest)
- 9) What type of production is normally used to make a product prototype?
- 10) How is batch production carried out?
- 11) Suggest an example of a product that is likely to be mass produced.
- 12) Give one reason why continuous production runs non-stop.

**Quality Control and Production Aids**

- 13) A board needs to be cut with dimensions of 135 x 180 mm with a tolerance of + 3mm  
Which of the following falls within the stated tolerance?   
**A:** 38.1 X 177.5 mm   **B:** 134.4 x 183.2 mm   **C:** 133.9 x 181.8 mm   **D:** 138.0 x 176.7 mm
- 14) What is a go/no go fixture used for?
- 15) Describe what a registration mark is used for.
- 16) a) What is a reference point?   
b) Give two ways in which reference points aid production

- 17) What are pattern  or textiles products normally made from?   
**A:** fabric   **B:** tissue paper   **C:** board   **D:** tracing paper
- 18) Adam is making a one-off product. Explain why using a jig won't save him time overall

**Production of Materials**

- 19) a) Which raw material are plastics usually made from?   
b) What is fractional distillation?
- 20) a) Which of the following is an example of regenerated fibre?   
**A:** cotton   **B:** silk   **C:** viscose   **D:** polyester  
b) Name two synthetic fibres
- 21) Give two ways in which mining metals can harm the environment.