

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

1. (a) Polyester is a very versatile fibre.

(i) Polyester has thermoplastic properties.

State **four** other properties of polyester.

1

2

3

4

(4)

(ii) Textured yarns come from thermoplastic filament fibres, such as polyester.

Name **two** other fibres that have thermoplastic properties.

1

2

(2)

(b) Explain **one** characteristic that a textured yarn would bring to **one** of the following products.

- Fleece jacket
- Tights
- Underwear

Chosen product

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(2)



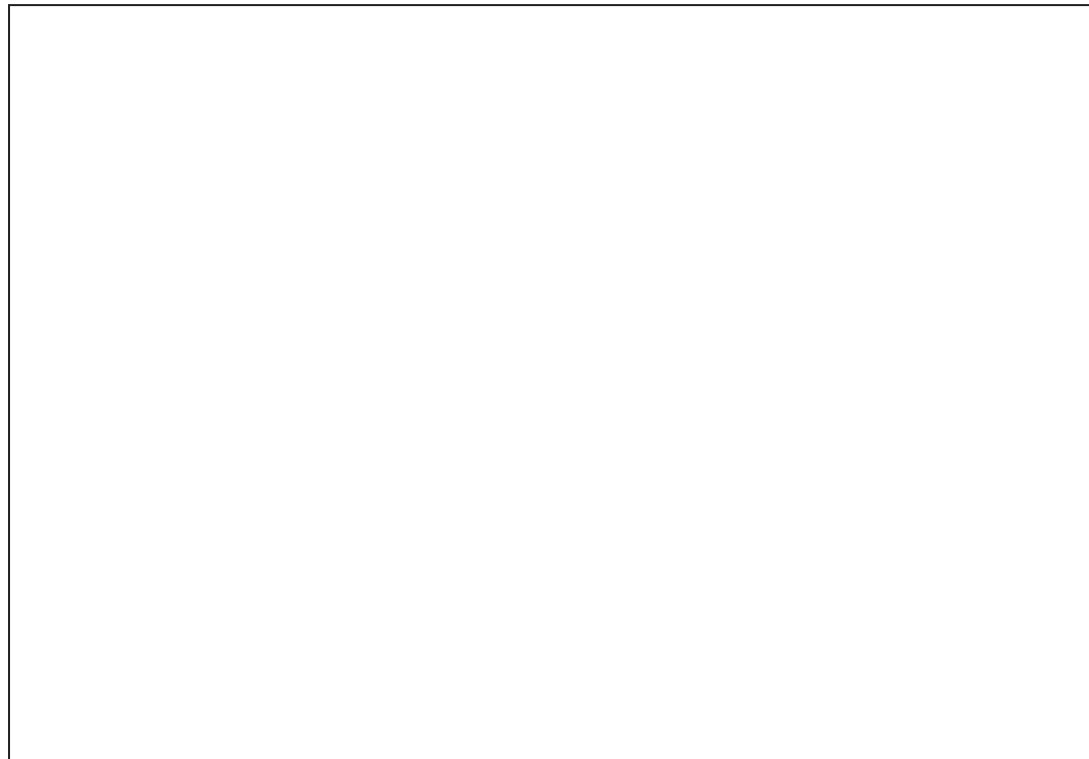
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(c) Explain why nylon needs to be ironed at a low temperature.

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(2)

(d) In the space below, draw a labelled diagram of a core spun yarn.



(2)

Q1

(Total 12 marks)

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3

Turn over



2. Knitted fabrics have always been popular for a variety of reasons.

(a) State the type of fabric produced by the following:

- Flatbed knitting machines
- Circular knitting machines

Flatbed knitting machines

Circular knitting machines

(2)

(b) Explain why a rib knitted fabric is suitable for socks.

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(2)

(c) (i) State **two** advantages of weft knitted fabrics.

- 1
- 2

(2)

(ii) Explain **two** disadvantages of weft knitted fabrics.

- 1
- 2

(4)



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(d) CNC knitting machines incorporate elements of CAD and CAM.

Describe how CNC machining makes the production of knitted fabric more flexible.

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(2)

(e) Give **two** reasons why corduroy is suitable for use in children's clothing.

1

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2

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(2)

(Total 14 marks)

Q2

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5

Turn over



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3. Figure 1 shows a cotton shopping bag.



Figure 1

(a) The shopping bag could be used for carrying food.

Name and justify **one** finish that could be used on the cotton fabric for a food shopping bag.

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(2)



(c) Describe **two** quality control checks that could be carried out on the attached pocket.

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(4)

(Total 12 marks)

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Q3



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4. (a) CAD and CAM have improved efficiency in the mass production of textile products.

Describe how CAD has improved efficiency for **two** of the following stages:

- preparation of production patterns
- grading
- lay plan design

Chosen stage 1

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Chosen stage 2

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(4)

(b) Describe how CAM has improved efficiency for **one** of the following stages:

- fabric spreading
- fabric cutting

Chosen stage

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(2)



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(c) Textile manufacturers will benefit by testing their products using external quality standards.

Explain **two** advantages to a manufacturer of testing using external quality standards.

1

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2

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(4)

Q4

(Total 10 marks)



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5. ICT is a useful tool for designers and companies.

(a) Explain **two** advantages to the designer of using **one** of the following CAD processes:

- virtual modelling
- 2D/ 3D modelling

Chosen process

1

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2

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(4)

(b) Production planning is required for efficient manufacturing.

(i) Describe **two** ways in which ICT could be used in production planning.

1

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(4)

(ii) Identify **two** aspects of production planning.

1

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2

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(2)

(Total 10 marks)

Q5



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6. (a) Describe **three** differences between traditional 'make through' (one off) manufacture and a 'cellular quick response' (batch production) manufacture.

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(6)

(b) Explain **three** reasons why quality control in high volume (mass) production using CAM is better than human testing.

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(6)

Q6

(Total 12 marks)

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7. Mass production has meant that products are more readily available to the consumer.

(a) (i) Explain **two** other advantages that mass production has had for consumers.

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2

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(4)

(ii) Explain **one** disadvantage that mass production has had for consumers.

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(2)

(b) Explain **two** effects that moving textile manufacturing to a less developed country has had on that country.

1

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2

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(4)

Q7

(Total 10 marks)

TOTAL FOR PAPER: 80 MARKS

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