

Textiles and Design

Section II (continued)

Marks

Question 13 — Properties and Performance of Textiles (10 marks)

- (a) Explain how a finishing technique can be used to enhance fabric performance for a specific end-use. 2

~~Stain-resistant~~ ^{Non-pilling} Finishing techniques have allowed work clothes to become much more comfortable and easier to care for. By diminishing pilling clothes will be less abrasive and last longer and maintain a professional appearance.

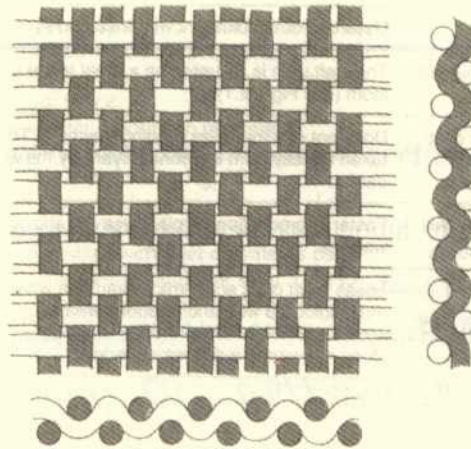
- (b) Explain the impact ONE technological advance in machinery has had on the production of textiles. 2

The jet roller printer has had enormous impact on the printing of consistent designs to accommodate a large demand and increased market size. For example surfwear designs use a repeated image or label creating their apparel items.

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Question 13 (continued)

- (c) Identify the fabric structure in the diagram. Explain why it is an appropriate structure for a cotton hat. 2



This is a plain weave and is suitable for a cotton hat as it does not stretch, does not let UV rays pass through (as the yarns are tight leaving little gaps). This weave would maintain the shape, would be easy to wash and would most importantly be durable.

- (d) (i) Identify a specific end-use that requires excellent abrasion resistance in a fabric. 1

Mens work pants (farming)

- (ii) Describe how the fabric structure, yarn structure and fibre content optimise abrasion resistance. 3

The fabric structure would need to be preferably ~~denim~~ strong and durable and to ~~restrain~~ resist stretching out of shape. Denim would be a good choice in fabric as it is 100% cotton fibre and could be finished with soil resistant finishes. The fabric would allow for rubbing against machinery - coping with numerous washes and **End of Question 13** not break the fibres would not break easily thus resisting abrasion and ¹⁰ - therefore lasting longer.