

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

Merimisation:- by applying this finishing technique, the cotton fabric has a more lustrous feel and look to it. It gives a better appearance and the cotton is more durable. (Reason why Levis Cotton is due to this is the material it is most likely to be used on).

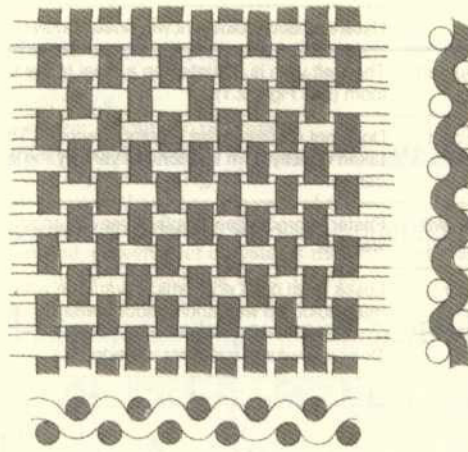
- (b) Explain the impact ONE technological advance in machinery has had on the production of textiles. 2

Spinnoret:- The spinnoret allow a quicker and more sufficient way of producing multi filament yarn structures thus saving time and effort of those workers who use to do it by hand. It has also allowed the textile industry to produce stronger and longer yarns.

Question 13 continues on page 10

Question 13 (continued)

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



Plain Weave: - This weave is durable and also allows air to pass through thus letting air into the hat for the hair to breathe. It is easy to care for and holds its shape substantially well.

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

Swimming Costume -

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

- The fabric structure needs to be durable in that it must stretch the correct way and have most of its strength where the fabric is most likely to abrade.

- The Yarn structure needs to be durable so the yarn structures do not snap or slowly abrade away.

- The fibre content needs to uphold that needed for the particular end use - In the case of a swimming costume, it must have to handle, sunlight, chlorine, salt water, sand, rocks and suntan lotions.

End of Question 13