



11. (a) Classify Technical Textiles. Discuss in detail about the scope and developments taken place in the field of Technical Textiles. (4 + 6 + 6)

Or

- (b) Describe the High performance Ultra fine and novelty fibres. And also explain the various applications of the same in Civil and Agricultural engineering. (8 + 8)
12. (a) Explain the Woven and knitted textiles used for the production of reinforcement composite material. (8 + 8)

Or

- (b) Explain the application of filtration fabrics and also explain the quality testing procedure for the same. (6 + 10)
13. (a) Explain in detail the geotextile Structure and its essential properties. Also discuss the applications of geotextile in the field of Civil Engineering. (5 + 5 + 6)

Or

- (b) Discuss in detail the "Extra - Corporeal Devices" and "Healthcare and Hygiene Textile Products". (8 + 8)
14. (a) Explain the recent developments in Military Textile material. Also discuss about biological warfare protection clothing. (8 + 8)

Or

- (b) Discuss in detail the "Camouflage Concealment" and "Ballistic Protective Textile Material" with reference to defence clothing. (8 + 8)
15. (a) Describe the different types of textile materials used in the field of transportation.

Or

- (b) Write detailed notes on :
- (i) Future prospects for transportation textiles. (8)
- (ii) Tyre cords and hoses. (8)