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Dec.-22-0338

TE-702 (Technical Textile)

B.Tech. 7th (CBCS)

Time : 3 Hours

Max. Marks : 60

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt Five questions in all, selecting one question from each Section A, B, C and D. Section E is compulsory.

SECTION - A

1. Define technical textiles. Write in detail about the technical fabric structure woven and knitted fabrics with reference to their use as technical textiles. (3+7=10)

OR

2. What is filtration? Explain in detail the role of fibre, fabric construction and finishing treatment in filter fabric manufacturing. (10)

SECTION - B

3. (a) Define geotextiles. List the different fibres used for geotextile applications. Discuss the suitability for use of the following fibres as geotextiles: a) Jute b) Polypropylene. (6)
- (b) Geotextiles help to improve the service life of roads. Justify with examples (4)

OR

4. Define medical textiles. Classify them based on their application. (10)

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SECTION - C

5. Explain various types of Protective textiles based on their functional requirements. (10)

OR

6. What do you mean by sport tech. Describe in detail the various areas where textile is being used in the field of sports. (10)

SECTION - D

7. Explain in detail the important properties and requirements in automotive textiles. (10)

OR

8. Write short notes on :

- (a) Use of textile in agriculture
(b) Use of technical textiles in hoses (5+5=10)

SECTION - E

9. (i) Define composites.
(ii) What do you mean by limit oxygen index ?
(iii) What is carbon fibre? Where is it used?
(iv) What do you mean by extra corporal devices?
(v) Which fibres are used in chemical protective clothes?
(vi) Discuss any two applications of PTFE.
(vii) What are the specific requirements in swimming costume?
(viii) What are laminated fabrics? Mention its two applications.
(ix) Mention two uses of polybenzimidazole (PBI) fibre.
(x) What are the differences between conventional textiles and technical textiles? (10×2=20)