

B.TECH DEGREE EXAMINATIONS: MAY/JUNE 2013

Seventh Semester.

TEXTILE TECHNOLOGY

TTX119: Technical Textiles

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. The natural fibre used in geo textile is-----
 - a) Jute
 - b) cotton
 - c) nylon
 - d) polyester
2. High performance inorganic fibre is-----
 - a) Ramie
 - b) glass
 - c) acetate
 - d) copper
3. Fabric construction generally not used in filtration is-----
 - a) Plain weave
 - b) Twill weave
 - c) Satin weave
 - d) Pile weave
4. Pore size of typical jute geo textile is-----
 - a) 2mmx5mm
 - b) 11mmx18mm
 - c) 25mmx30mm
 - d) 75mmx100mm
5. Water absorption of jute geo textiles is-----
 - a) 485%
 - b) 1200%
 - c) 12%
 - d) 125%
6. Non implantable materials are-----
 - a) sutures
 - b) Artificial joints
 - c) Wound dressings
 - d) Vascular grafts
7. -----is a healthcare product
 - a) cap
 - b) Surgical gowns
 - c) shoes
 - d) T-shirt
8. The melting point of polypropylene is-----degree C
 - a) 225
 - b) 350
 - c) 100
 - d) 150
9. The property used for ballistic protection is-----
 - a) Very high strength and low elasticity
 - b) Low modulus

- c) High elasticity
d) High strength and high elasticity
10. Textile composites are mainly used in-----
- a) Agro textiles
b) filtration
c) Transpotation
d) medical

PART B (10 x 2 = 20 Marks)

11. What are the fibres used in technical textiles?
12. What are the properties required for geo textile materials?
13. Name the different structures used in technical textiles.
14. What are implantable materials?
15. What are breathable fabrics?
16. What are geosynthetics?
17. What are extracorporeal devices?
18. Name the products where textiles are used in transpotation.
19. What is water vapour permeability?
20. What are the different sectors of technical textiles application?

PART C (5 x 14 = 70 Marks)

21. a) Discuss in detail the different methods of production of technical fabrics.

(OR)

- b) Write a detailed note on the different fibres used in different technical textile applications.

22. a) Discuss in detail the fabric construction and properties required for application in agro field.

(OR)

- b) Discuss in detail the fibres used, fabric construction and properties required for application in filtration.

23. a) Discuss the applications of natural fibre geo-textiles in Civil engineering.

(OR)

b) Explain non implantable materials used in medical field and their properties.

24. a) (i) Discuss the use of textile materials for ballistic protections (7)
(ii) Explain the types of water vapour permeable barrier fabrics. (7)

(OR)

- b) (i) Discuss in detail flame retardant and heat protective textiles. (10)
(ii) Write down the criteria for the protection of the individual (4)

25. a) Explain the fibre property requirements and their application in transportation.

(OR)

b) Write short notes on:

- (i) tyre cords (7)
(ii) belts. (7)
