

B.TECH DEGREE EXAMINATIONS: NOV/DEC 2014

(Regulation 2009)

Seventh Semester

B.TECH. TEXTILE TECHNOLOGY

TTX119: Technical Textiles

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. Among the following fibres, which is not inherently flame retardant?
 - a) Nomex
 - b) PBI
 - c) PBO
 - d) High Performance Polyethylene
2. ----- is a biodegradable synthetic fibre.
 - a) Nylon 6
 - b) PET
 - c) PLA
 - d) HPPE
3. ----- is the primary filtration mechanism effecting submicron particles.
 - a) Sieving
 - b) Diffusion
 - c) Impaction
 - d) Interception
4. The fabric structure most suitable for filtration is
 - a) plain weave
 - b) satin weave
 - c) purl
 - d) nonwoven
5. Among the following fibres, ----- fibre is the least resistant to biodegradation when it is used as implantable material.
 - a) polypropylene
 - b) nylon
 - c) PTFE
 - d) polyester
6. The most common synthetic fibre used for the manufacture of geo-textile is
 - a) Polypropylene
 - b) Nylon
 - c) Acrylic
 - d) Polyester
7. ----- fabric is the most efficient for thermal insulation.
 - a) Woven
 - b) Knitted

- b) (i) Explain the mechanism of solid/liquid filtration with a neat diagram. (8)
(ii) Discuss the performance-related test procedures for filters. (6)
23. a) (i) Discuss the essential properties of geotextiles. (8)
(ii) Discuss the composition of wound care material and their functions. (6)
- (OR)**
- b) (i) Explain the principle of soil reinforcement using geotextiles. (7)
(ii) Discuss the textile materials used as implantable materials. (7)
24. a) (i) Discuss in brief the main functional criteria for military textiles. (8)
(ii) Choose fibre and fabric structure for thermal protective coats. (6)
- (OR)**
- b) (i) Discuss fibres, fabric and compositions for ballistic protection. (8)
(ii) Explain the textile materials used for biological and chemical warfare protection. (6)
25. a) (i) Discuss the application of textiles in aircraft. (7)
(ii) Describe technical requirements for seat covering. (7)
- (OR)**
- b) (i) Discuss the textile materials used in car interiors. (7)
(ii) Explain fibre, fabric structure and finishing treatment used for the manufacture of tarpaulins. (7)
