

M.TECH. DEGREE EXAMINATIONS: NOVEMBER 2009

Third Semester

APPAREL TECHNOLOGY AND MANAGEMENT

P07FTE10 Nano Textiles and High Performance Clothing

Time: Three Hours

Maximum Marks: 100

Answer All Questions:-

PART A (10 x 2 = 20 Marks)

1. Mention the techniques used in the synthesis of nano phase materials.
2. List the characteristics of high performance fibres.
3. Furnish the characteristics of specialty finishes.
4. Outline the concept underlying in oil-repellent finish on textiles.
5. Mention the concept adopted in the development of breathable thermo wear.
6. Give a brief account on smart T-Shirts.
7. What are the implications of wearable electronics?
8. Highlight the concept adopted in the development of musical jackets.
9. Furnish the nano textile/apparel products developed for home furnishings.
10. Outline the concept involved in Nano-care fabric protection for stain repellency.

PART B (5 x 16 = 80 Marks)

11. (a) (i) Explain the electro spinning process of nano fibres. (8)
(ii) Discuss on the characteristics of nano fibres and its application in textiles and apparel. (8)
- (OR)**
- (b) Give a detailed account on the production of various types of fabrics from nano fibres and yarns. (16)
12. (a) (i) Explain the application of surface modification technique in specialty finishing of textiles. (8)
(ii) Explain the concept and the process of imparting breathable finish on fabrics. (8)

(OR)

- (b) (i) Explain the application of micro-encapsulation technique in specialty finishing of textiles. (8)
- (ii) Explain the mechanism and the process of imparting wrinkle free finish on fabrics. (8)
13. (a) (i) Describe the mechanism and development of temperature controlled garment. (8)
- (ii) Narrate the mechanism and development of undergarment for catheters. (8)

(OR)

- (b). Give a detailed account on the development of various high performances wears for health care applications. (16)
14. (a) Explain in-detail about the development of various types of wearable electronics for business executive applications. (16)
- (OR)**
- (b) Narrate the development of various types of wearable electronics for entertainment and recreational applications. (16)
15. (a) Describe the development of nano textiles and apparels for technical textiles applications. (16)

(OR)

- (b) Give a detailed account on the development of nano textiles and apparels for smart applications. (16)
