



Register Number:.....

**M.TECH DEGREE EXAMINATIONS: NOV / DEC 2014**

(Regulation 2013)

Third Semester

**APPAREL TECHNOLOGY**

P13FTE202: Medical Textiles

**Time: Three Hours**

**Maximum Marks: 100**

**Answer all the Questions:-**

**PART A (10 X 2 = 20 Marks)**

1. State the reason(s) for using ceramics as biomaterials.
2. Unipolymer composites are advantageous compared to different reinforcement and matrix. Justify.
3. Why do we prefer nonwoven materials in surgical gown manufacture?
4. What is method used to manufacture medical wipes?
5. Suggest any two methods of manufacturing compression bandages.
6. Recommend the fibres used to manufacture the bandages.
7. Alginate wound dressing is mostly preferred to cotton wound dressing. Why?
8. Summarize the functions of wound dressing materials.
9. What are the four key factors that decide the acceptance of implantable materials?
10. Name any two fibres used in the manufacture of ligament manufacture with justification.

**Answer any FIVE Questions:-**

**PART C (5 x 16 = 80 Marks)**

**Q.No:11 is Compulsory**

11. Explain the need for composites in medical applications with at least four different examples.

12. (i) How does plasma treatment provide barrier properties? (6)  
(ii) Tabulate at least five different fibres that are used in infection control with their suitability for such applications. (10)
13. How can one regulate / maintain the physiological functions using pressure garments? Explain with suitable examples.
14. (i) Differentiate the uses of a) gauze b) lint (c) wadding (6)  
(ii) Why do we prefer collagen, alginate and chitin for wound dressings? (10)
15. (i) Classify the sutures based on structure and nature of materials. (6)  
(ii) List any two fibres used in cardiovascular implants, their manufacturing methodology and their suitability as grafts. (10)
16. Explain the characteristics of artificial ligaments and tendons.

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