Jaya Engineering College

Department of Textile Technology

TT6401 CHARACTERESTICS OF TEXTILE FIBRES - II

1. Explain how to measure birefringence in a fiber.
2. Explain Bowden's shearing mechanism.
3. Bring out the importance of friction in fiber processing.
4. Explain the factors influencing the measurement of refractive index of fibres.
5. Explain any two technique of measuring the refractive index of fibres.
6. Explain the theories of fibre friction.
7. Explain the Amonton's law and Bowden's adhesion – shearing mechanism.
8. With suitable examples high light the various factors influencing i) Lustre of fibres ii) Wool's friction.
9. What is refractive index of fibres? Explain the methods used to measure the fibre refractive index.
10. Explain the role of friction in fibre processing.
11. Explain any two methods of measurement of fibre friction.
12. Describe any one method of determining the electrical resistance of fibers.
13. Describe the flammability characteristics of any three natural fibers.
14. Explain the methods of eliminating static charges in textile fibres
15. Explain the flammability characteristics of natural fibres
16. Write the following short notes : i) Static electricity elimination techniques
17. ii)Fibre structural changes on heating.
18. Explain the influence of various factors influencing di-electricity of fibres.
19. Explain the various structural changes that takes place in fibres on heating.
20. Explain the following fibre thermal properties i) Specific heat ii) Thermal expansion iii) Thermal conductivity-
21. What is heat setting? Explain in detail.
22. Explain the effect of frequency and moisture on dielectric properties of fibre
23. Explain the following thermal properties of fibre i) Glass transition and melting ii) Heat setting
24. Highlight the problems due to static electricity and discuss their remedial
25. measures.
26. 10. Define and explain : i) Thermal transitions. ii) Heat Setting
27. 11. Explain the measurement of resistance of textile fibres using null method.
28. 12. Write short notes on the following : i) Heat Setting of fibres ii) Dielectric
29. properties of fibres..
30. Discuss the following: i) Breaking strength ii) Work of rupture iii) Breaking extension iv) Work factor.
31. Explain the creep and stress relaxation experiments to study the time effects
32. Define torsional rigidity and drive an expression for bending/flexural rigidity.
33. Explain the various principles involved in tensile testing of fibres.
34. Explain the following fibre properties i) Flexural rigidity ii) Torsional rigidity

35. Explain the theory of stress-strain behaviour of various textile fibres at various humidity and temperature

36. Name the factors affecting refractive index of fibers.
37. Define fibre refractive index.
38. Define birefringence.
39. What is specular and diffuse reflection?
40. Name the factors influencing fibre luster.
41. Most of the man made fibres show excellent luster as compared with natural fibres – Reason out.
42. Define optical orientation factor.
43. Name the factors influencing the fibre luster.
44. What is the role of friction in fibre processing?
45. In general, the frictional property of wool fibre is completely different as compared with other textile fibres – Reason out.
46. State and define the orientation measuring parameter.
47. State Amontons law.
48. Why does wool felt?
49. Give the factors that are influencing the fibre electrical resistance.
50. Define Herman's orientation factor.
51. Brief the usefulness of fibre friction in the aspect of textile technology.
52. How birefringence of a fibre is related to its molecular orientation?
53. Name all the methods of measuring electrical resistance of fibers.
54. What are the critical factors affecting electrical resistance of fibers?
55. How do you eliminate static electricity in the processing of fibers?
56. What is heat-setting of fibres?
57. What is glass transition temperature?
58. Define heat setting.
59. Define specific heat.
60. Define electro static series
61. Define Tg.
62. Why most of the textile fibres are insulators?
63. Name any four methods of increasing the electrical conductivity of non conducting synthetic fibres.
64. What structural changes takes place in second order transition?
65. Name the various factors influencing the fibre electrical resistance.
66. Prediction of actual specific heat of fibre is very difficult even at constant regain – Justify.
67. Define the term " Mass Specific Resistance"
68. Why synthetic fibres develop more static charges?
69. What is felting of wool fibres?