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BATHINDA

Ph.D. Entrance Examination of Textile Technology

1. Singeing of polyester is carried out
 - a) Before desizing
 - b) After desizing
 - c) After bleaching
 - d) After dyeing
2. Attachment of direct dye with cotton occurs through
 - a) Ionic bonding
 - b) Covalent bonding
 - c) Co-ordination attachment
 - d) H-bonding and Van der Waals attachment
3. Binders are invariably used in
 - a) Discharge printing
 - b) Transfer printing
 - c) Pigment printing
 - d) Resist printing
4. Flame retardant finish on any textile is based on its
 - a) Glass transition temperature
 - b) Pyrolytic temperature
 - c) Melting temperature
 - d) Use temperature
5. During dyeing of PAN with basic dye, most commonly used retarder belongs to
 - a) Amphoteric class
 - b) Anionic class
 - c) Cationic class
 - d) Polymeric class
6. Average molecular orientation can be measured by
 - a) X-ray diffraction
 - b) Scanning Electron Microscopy
 - c) Birefringence
 - d) Sonic Modulus
7. Average molecular weight of tyre cord grade nylon is
 - a) 10000
 - b) 20000
 - c) 30000
 - d) 40000
8. Die-swell will be maximum
 - a) During PET extrusion
 - b) During PP extrusion
 - c) During Nylon extrusion
 - d) During Lyocell extrusion

9. Online crystallization during spinning is highest in case of
- PET extrusion
 - PP extrusion
 - Nylon extrusion
 - Viscose extrusion
10. At room temperature, methylene chloride will dissolve
- Polyester
 - Viscose Rayon
 - Acrylic
 - Triacetate
11. Fibre to be used as a replacement of wool should have
- High and stable crimp
 - High crimp and moisture regain
 - Crimp and scale
 - Circular cross-section and high moisture regain
12. Which fibre will have highest melting point
- Nylon 6
 - Nylon 4
 - Nylon 66
 - Nylon 12
13. Slow speed spinning followed by drawing will produce fibres having
- Low strength and modulus
 - High strength and modulus
 - High modulus and elongation
 - None of the above
14. Dry-jet wet spinning is done when
- High performance fibres are to be produced
 - Melt spinning is not possible
 - There are differences in the dope and bath conditions
 - None of the above
15. Acrylic bulk yarn is generally produced by
- False Twist Texturing
 - Airjet Texturing
 - Gear Crimping
 - None of the above
16. Aramids are generally spun by
- Melt spinning
 - Dry spinning
 - Solution spinning
 - Any one of the above technique
17. Which of the following fibre exhibit highest tenacity.
- Polyester
 - Aramid
 - Steel
 - Zylon

18. Which of the following fibre exhibit highest moisture regain
- Polyester
 - Aramid
 - Steel
 - Zylon
19. Acrylic is generally polymerised through
- Bulk polymerisation
 - Emulsion polymerisation
 - Gas phase polymerisation
 - None of the above
20. The disperse reactive dyes were developed for
- Cotton
 - Nylon
 - Polypropylene
 - Polyester
21. The yarn tension level is maximum at
- Winding
 - Sizing
 - On warp threads during weaving
 - Warping
22. Effective shed dwell in shuttle loom is reduced in case of
- Fixed heald staggering
 - Variable heald staggering
 - Troughing of shed
 - Cross shedding
23. In which loom, wastage of weft thread is small
- Air jet loom
 - Water jet loom
 - Rapier loom
 - Griper loom
24. Limitation in package size in Precision winding is mainly due to
- Coil angle approaches towards 90° with the build of the package
 - Tension level in the threads increases
 - Patterning in package
 - Energy consumption becomes greater
25. Trash content of cotton as fed to a beater is 3.6%. The waste extraction is 1.5% of which 80% is trash. The cleaning efficiency of beater,
- 24%
 - 33.3%
 - 48%
 - 66.6%
26. The limitation of dobbie shedding to increase the number of heald shaft is mainly due to,
- Warp strain increases
 - Size of the dobbie increases
 - Energy consumption increases
 - Open shedding not possible

27. During progression of bumping pick spacing changes as
- Increases
 - Decreases
 - First increase then decrease
 - Remains unaltered
28. During weft insertion in air jet machine, the timing for putting off the sub-nozzle air pressure in relation to main nozzle is,
- Before
 - After
 - At the same time
 - At the same time or after depending on the weft yarn linear density
29. The correlation coefficient in a linear regression 0.9 indicates that the equation can explain the data at the level of
- 70%
 - 81%
 - 90%
 - 98%
30. In a square cloth if fractional cover is 0.7, the distance between two threads in terms of diameter (d) will be
- 1.7 d
 - 2.0 d
 - 2.2 d
 - 2.5 d
31. The coarser fibres preferentially migrate
- to the surface of the yarn
 - to the core of the yarn
 - at random
 - surface to core and back
32. Condensers in speed frame are used
- To control spreading of fibres
 - To control short fibres
 - To control long fibres
 - None of the above
33. The weight per meter of cotton sliver normally lies between
- 500 mg and 1000 mg
 - 3 g and 4g
 - 10 g and 15 g
 - 40 g and 60g
34. Twist multiplier(TM) is a better indicator of twist characteristic of yarn than T.P.I because
- TM is directly proportional to the tangent of twist angle
 - TM describe level of twist in yarn irrespective of linear density
 - TM is related to both the above characters
 - None of the above
35. Murata Air-jet spinning
- First nozzles twist the fibre bundle and second nozzle wraps the fibre
 - First nozzles wrap the fibre bundle and second nozzle twist the fibre
 - Both the nozzles twist the fibre bundle in opposite direction
 - Both the nozzles twist the fibre bundle in same direction

36. The hooks which are preferentially removed in roller drafting are
- Trailing
 - leading
 - 'U' shaped
 - Double
37. In Elmendorf tear strength tester, the pointer indicates
- Energy loss
 - Length of the material torn
 - Tearing force
 - Work done
38. Inter-yarn friction will have very significant influence in one of the following;
- Fabric tensile strength
 - Tear strength
 - Bursting strength
 - Fabric elongation at break
39. Which of the following quality parameter is independent of fabric thickness
- Flexural rigidity
 - Compression
 - Compressibility
 - Air permeability
40. The RKM value of a yarn of 50 Nm and breaking load of 400 gf will be
- 50
 - 20
 - 40
 - none of the above

Answer key: -Ph.D. Entrance Examination of Textile Technology

1. d
2. d
3. c
4. b
5. c
6. c
7. c
8. b
9. b
10. d
11. a
12. b
13. b
14. c
15. d
16. c
17. d
18. b
19. b
20. b
21. a
22. b
23. d
24. a
25. d
26. a
27. b
28. b
29. b
30. c
31. a
32. a
33. c
34. b
35. a
36. a
37. c
38. b
39. c
40. b

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