246/2023

Maximum : 100 marks

Time : 1 hour and 30 minutes

1. Polymers are macromolecules built up by the linking up of large number of:

   (A) Isotopes
   (B) Monomers
   (C) Micro Polymers
   (D) None of the above

2. First device often used in a melt spinning line is:

   (A) Extruder
   (B) Manifold
   (C) Static Mixer
   (D) Spin Pack

3. Which one is not an essential property of textile fibre?

   (A) Fineness
   (B) Spinnability
   (C) Staple Length
   (D) Cohesion

4. POY stands for:

   (A) Partially oriented yarn
   (B) Partially open yarn
   (C) Primary oriented yarn
   (D) Post oriented yarn

5. Select the longest staple cotton from the given list:

   (A) Indian Cotton
   (B) Sea-island cotton
   (C) Chinese Cotton
   (D) American cotton

6. Process of converting cellulose into soda cellulose in Viscose rayon manufacturing:

   (A) Conditioning
   (B) Steeping
   (C) Shredding
   (D) Churning

7. Which is the major content of wool?

   (A) Pectin
   (B) Cellulose
   (C) Minerals
   (D) Protein

8. Adding weight to degummed silk is known as:

   (A) Stifling
   (B) Throwing
   (C) Weighting of silk
   (D) Reeling

9. Fibre used for manufacturing Bullet proof fabric:

    (A) Polyester   (B) Jute

    (C) Hemp   (D) Kevlar

10. The fibre used as a substitute for wool:

    (A) Acrylic   (B) Nylon

    (C) Flax   (D) Asbestos

11. Process to make yarn package in hank form:

    (A) Warping   (B) Winding

    (C) Yarn Reeling   (D) Beaming

12. Purpose of sectional warping:

    (A) Warping singlecolour warp   (B) Warping multicolour weft

    (C) Warping multicolour warp   (D) Warping singlecolour weft

13. Motion not present in Handlooms:

    (A) Auxillary warp stop motions   (B) Primary motion

    (C) Secondary motion   (D) None of the above

14. Loom not come under handloom category:

    (A) Pit loom   (B) Underpick loom

    (C) Frame loom   (D) Chitranjan loom

15. Fly shuttle is invented by:

    (A) John Kay   (B) John Mercer

    (C) Johann Jacob Rietr   (D) Von Zedlitz

16. Take upmotion used in chitranjan loom:

    (A) 7-wheel   (B) 5-wheel

    (C) Chain and ruffle   (D) None of the above

17. Number of cylinders used in DLSC Jaquard:

    (A) 4   (B) 2

    (C) 3   (D) 1

18. Lease rods are used to:

    (A) Support take-up motion   (B) Separate the warp ends

    (C) Hold the healds   (D) Hold the reed

19. A tool used to hold the woven goods out to reed width during weaving

(A) Tappet   (B) Front rest

(C) Temple   (D) Back rest

20. Which loom provides individual warp control?

(A) Power loom   (B) Jacquard loom

(C) Projectile loom   (D) Jet loom

21. The design is constructed on point paper by using cross (×) and blank, cross means:

(A) End is passing below the pick   (B) Pick is passing below the end

(C) End is passing over the pick   (D) Pick is passing over the end

22. Allocation of ends to healds:

(A) Drafting   (B) Design

(C) Lifting Plan   (D) Denting plan

23. Repeat size of a plain weave:

(A) 3×3 (B) 5×5

(C) 7×7 (D) 2×2

24. Not a derivative of plain weave:

(A) Warp rib   (B) Weft rib

(C) Matt   (D) Leno

25. Which weave has diagonal line in the fabric which is created by the floats of the ends or picks?

(A) Plain   (B) Twill

(C) Gauze   (D) Pile

26. 2/1, 3/1, 3/2 twills are:

(A) Warp faced   (B) Weft faced

(C) Balanced twill   (D) None of the above

27. Which weave produces diamond shapes on the fabrics?

(A) Huck a Back   (B) Honey comb

(C) Matt   (D) Rib

28. How many heald shafts are required for a 10×10 Huck-a-back design?

(A) 4   (B) 2

(C) 6   (D) 10

29. What is required for the construction of a Sateen weave?

  (A) Warp number   (B) Weft number

  (C) Move number   (D) Fabric width

30. The angle made by the twill line with the horizontal weft direction is known as:

  (A) Weft angle   (B) Warp angle

  (C) Design angle   (D) Twill angle

31. In 4 pick loose back pique the picks are arranged as:

  (A) 1 ground and 3 wadding   (B) 3 ground and 1 wadding

  (C) 4 ground only   (D) 2 ground and 2 wadding

32. Treble cloth are with how many series of warp and weft threads?

  (A) 3 series   (B) 2 series

  (C) 4 series   (D) 5 series

33. Minimum series of warp thread in a backed cloth with backed warp principle:

  (A) 5 series   (B) 2 series

  (C) 7 series   (D) 6 series

34. Double cloth contain only two series of thread in both direction and occasional droping and lifting of face and back ends is named as:

  (A) Centre stitched double cloth

  (B) Double cloth stitched by thread interchange

  (C) Self stitched double cloth

  (D) Double cloth stitched by cloth interchange

35. A weft wadded double cloth consists of:

  (A) 3 series of warp and 2 series of weft

  (B) 2 series of weft and 2 series of warp

  (C) 4 series of warp and 2 series of weft

  (D) 3 series of weft and 2 series of warp

36. Which weave is known as limitation leno weave?

  (A) Rib weave   (B) Mock leno weave

  (C) Matt weave   (D) Honey comb weave

37. Weave produces longitudinal warp lines in the cloth with fine sunken lines between:

    (A) Heringbone weave   (B) Pointed twill weave

    (C) Bedford cord weave   (D) Sateen weave

38. The fabric in which a proportion of the threads either warp or weft are made to project at right angles from a foundation texture:

    (A) Pile Fabric   (B) Gauze Fabric

    (C) Poplin Fabri   (D) Denim Fabric

39. Weft pile structures are also termed as:

    (A) Velvet   (B) Satin

    (C) Velveteens   (D) Sateen

40. Variable beat-up motions are an essential part of which weaving technique:

    (A) Plain weaving   (B) Twill weaving

    (C) Leno weaving   (D) Terry pile weaving

41. Which one is the universal bleaching agent?

    (A) Calcium hypochlorite   (B) Sodium hypochlorite

    (C) Hydrogen peroxide   (D) Bromite

42. Mercerisation of cotton improves:

    (A) Fineness   (B) Lusture

    (C) Elasticity   (D) Crimp

43. Chemical used for scouring cotton:

    (A) Calcium hydroxide   (B) Sodium chloride

    (C) Sulphuric acid   (D) Sodium hydroxide

44. Levelling Agent used for dyeing Cotton with direct dye:

    (A) Sodium Carbonate   (B) Calcium Carbonate

    (C) Sodium Chloride   (D) Copper Sulphate

45. Molecular bond formed while dyeing cotton with reactive dye:

    (A) Ionic bond   (B) Covalent bond

    (C) Metallic bond   (D) Hydrogen bond

46. Conversion of insoluble vat dye to soluble leuco compound is called:

    (A) Diazotisation   (B) Dilution

    (C) Vatting   (D) Naphtholation

47. Azoic dyes comes under which category of dyes:

    (A) Ingrain dye   (B) Metallic Dye

    (C) Readymade Dye   (D) Oxidised Dye

48. Defect of sulphur dyeing:

    (A) Tendering of Fabric   (B) Staining

    (C) Unevenness   (D) None of the above

49. Process of removing sericin from silk:

    (A) Scouring   (B) Carbonizing

    (C) Milling   (D) Degumming

50. Boiled-off liquor is used as a dyeing assistant in the dyeing of:

    (A) Nylon   (B) Cotton

    (C) Silk   (D) Polyester

51. Which chemical is commonly used for anti-chlorination after polyester with sodium chlorites?

    (A) Sodium chloride   (B) Sodium chlorite

    (C) Formic acid   (D) Thiosulphate

52. What temperature is the fabric exposed to during the Thermosol dyeing process?

    (A) $205^{\circ}C$ (B) $130^{\circ}C$

    (C) $150^{\circ}C$ (D) $260^{\circ}C$

53. At what approximate temperature, is the bleaching of polyester with sodium chlorites typically carried out?

    (A) $60^{\circ}C$ (B) $50^{\circ}C$

    (C) $120^{\circ}C$ (D) $95^{\circ}C$

54. What is the purpose of heat-setting the fabric before dyeing using Thermosol method?

    (A) To stabilize fabric dimensions   (B) To increase fabric softness

    (C) To enhance color vibrancy   (D) To improve moisture absorption

55. Which drying method is considered most suitable in Thermosol dyeing to prevent dye migration?

    (A) Conventional drying   (B) Steam drying

    (C) Infra-red drying   (D) Hot air drying

56. What can be added to the bleaching as a pH adjuster during polyester bleaching with sodium chlorites?

    (A)   Thiosulphate   (B)   Sodium chlorite

    (C)   Formic acid   (D)   Sodium chloride

57. In resist style printing, what happens to the resisted areas during the dyeing process?

    (A)   They accept the dye   (B)   They repel the dye

    (C)   They change colour   (D)   They dissolve in the dye

58. What differentiates discharge printing from the other styles of printing?

    (A)   It involves printing with a reducing agent

    (B)   It uses multiple mordants

    (C)   It requires a resisting substance

    (D)   It only works on undyed fabrics

59. What causes imperfections on silk fabrics printed with acid dyes?

    (A)   Guar endogenous insoluble proteins

    (B)   Subtilisin protease

    (C)   Synthetic thickeners

    (D)   Acidic dye residues

60. How do waterproof fabrics differ from water-repellent fabrics in terms of permeability to air and water vapour?

    (A)   Water proof fabrics are more permeable

    (B)   Water-repellent fabrics are more permeable

    (C)   Both have similar permeability

    (D)   Both fabrics are not permeable

61. How does moisture absorption affect the dimensions of fibres in fabrics?

    (A)   Causes shrinking   (B)   Causes stretching

    (C)   Causes discolouration   (D)   Causes stiffiness

62. The Relative humidity in standard testing atmospheric condition is

    (A)   55%   (B)   45%

    (C)   65%   (D)   70%

63. What principle does the Beesley Balance operate on?

    (A)   Variable weight and variable length

    (B)   Fixed weight and variable length

    (C)   Variable weight and fixed length

    (D)   Fixed weight and fixed length

64. Which type of fibres show an increase in strength with the absorption of moisture?

    (A)   Cotton fibres   (B)   Wool fibres

    (C)   Silk fibres   (D)   Glass fibres

65. What is the effect of temperature on the regain of textile material?

    (A)   Temperature significantly increases regain

    (B)   Temperature significantly decreases regain

    (C)   Temperature has a negligible effect on regain

    (D)   Temperature causes erratic changes in regain

66. How does relative humidity affect the regain of textile material?

    (A)   Regain is higher at lower relative humidity

    (B)   Regain is unaffected by relative humidity

    (C)   Relative humidity has no impact on regain

    (D)   Regain is higher at higher relative humidity

67. How does the torsional rigidity of yarn change with increasing fibre fineness?

    (A)   Torsional rigidity increases

    (B)   Torsional rigidity decreases

    (C)   No effect on torsional rigidity

    (D)   Torsional rigidity becomes unpredictable

68. How does the initial extension behaviour differ between CRE and CRL in the determination of yarn strength?

    (A)   CRE has a low initial extension

    (B)   CRL has a low initial extension

    (C)   Both CRE and CRL have high initial extension

    (D)   CRL have a high initial extension

69. The formula for finding the uniformity index of fibers is

    (A) Uniformity index = (50% span length × 2.5% span length)/100

    (B) Uniformity index = (50% span length × 2.5% span length) × 100

    (C) Uniformity index = (2.5% span length × 100)/ 50% span length

    (D) Uniformity index = (50% span length × 100)/ 2.5% span length

70. To find the maturity of cotton fiber, it is swelled in which substance and examined under a microscope?

    (A) Sodium hydroxide   (B) Ethanol

    (C) Acetone   (D) Chloroform

71. How does an increase in picks per inch affect the drape coefficient of a fabric?

    (A) Chance of both increase or decrease

    (B) It decreases

    (C) It remains constant

    (D) It increases

72. Which among the fabric testing instrument works on the Cantilever principle?

    (A) Lea Strength Tester   (B) Elmendorf Tearing Tester

    (C) Shirley Stiffness Tester   (D) Shirley Crimp Tester

73. Which among the following fibres is generally regarded as having the best abrasion resistance?

    (A) Silk   (B) Nylon

    (C) Cotton   (D) Wool

74. How does the fabric structure impact the abrasion of warp and weft yarns?

    (A) Even crimp distribution improves wear

    (B) Uneven crimp distribution improves wear

    (C) Crimp has no effect on wear

    (D) Floats protect warp yarns

75. Elmendorf Tear Tester operates on _____.

    (A) the principle of a Cantilever

    (B) the principle of hydraulic pressure

    (C) the principle of a swinging pendulum

    (D) the principle of compression

76. Which among the following fabric parameter is determined from the Bundesmann test?
    (A) Fabric elasticity
    (B) Water absorption
    (C) Fabric thickness
    (D) To measure abrasion resistance of fabric

77. What is crocking fastness in the context of dyed textile materials?
    (A) The resistance to washing
    (B) The resistance of transfer of colour from one surface to another by rubbing
    (C) The ability to retain colour over time
    (D) The intensity of colour in wet conditions

78. What chemical components are present in human perspiration that can affect colour fastness?
    (A) Alkaline salts
    (B) Acidic substances
    (C) Both Alkaline salts and acidic substances
    (D) No chemical components

79. When is the Heart Loop Test option recommended for fabric stiffness testing?
    (A) For stiff fabrics
    (B) For fabrics with low tensile strength
    (C) For fabrics with a high degree of elasticity
    (D) For fabrics that tend to curl or twist

80. What is the primary purpose of the Martindale apparatus in fabric testing?
    (A) To measure the intensity of fabric colour
    (B) To evaluate fabric thickness
    (C) To measure abrasion resistance of fabric
    (D) To determine fabric elasticity

81. If 210 yards of cotton yarn weigh 70 grains, what is the count of the yarn in English cotton system?
    (A) 25^s (B) 35^s
    (C) 53^s (D) 40^s

82. What is the count of 1800 metres of silk yarn in the metric denier system, if it weighs 10 grams?
    (A) 53^s (B) 35^s
    (C) 25^s (D) 50^s

83. A three fold cotton yarn composed of 20^s, 30^s and a thread of unknown count was found to be 8^s. Calculate the count of unknown thread.

    (A) 10^s (B) 24^s

    (C) 20^s (D) 40^s

84. Calculate the average count of 50^s, 40^s, and 20^s cotton yarn.

    (A) 22.5^s (B) 15.5^s

    (C) 25.5^s (D) 31.5^s

85. How many drums would be required to wind 800 pounds of 18^s cotton yarn in 8 hours, if the actual production per drum per minute in cone winding is 420 yards. Ignore waste.

    (A) 60   (B) 50

    (C) 54   (D) 40

86. Determine the efficiency of a Cone winding machine, if its' calculated winding rate is 700 yards per minute and the actual rate of production per 8 hours in 360 hanks.

    (A) 80%   (B) 90%

    (C) 60%   (D) 75%

87. What will be the number of ends per inch in a reed of $3/72^s$ Stockport?

    (A) 120   (B) 72

    (C) 108   (D) 24

88. If a plain cloth currently has 72 ends of 64^s cotton yarn per inch. Determine the number of ends per inch needed to maintain the same firmness, if a 36^s cotton yarn is used.

    (A) 32   (B) 44

    (C) 54   (D) 42

89. What is the diameter of the cotton yarn, according to Peirce's formula, if its count is designated as "N" in the English system?

    (A) $1/28 \sqrt{N}$ inches   (B) $28 \sqrt{N}$ inches

    (C) $3.14 \sqrt{N}$ inches   (D) $1/3.14 \sqrt{N}$ inches

90. If the ends per inch of a fabric is 72 and the count of the warp yarn is 64^s, What will be the warp cover factor?

    (A) 8   (B) 9

    (C) 68   (D) 56

91. When did the handlooms (Reservation of Articles for production) Act, 1985 come into force?

    (A) 29th March 1985   (B) 31st March 1986

    (C) 1st April 1985   (D) 10th March 1986

92. In which state of India, the Itchalkaranchi loom developed?

    (A) Tamil Nadu   (B) Uttar Pradesh

    (C) Rajasthan   (D) Maharashtra

93. Which category of loom is Chittaranjan loom an example of?

    (A) Ordinary handloom   (B) Ordinary power loom

    (C) Semi-automatic handloom   (D) Pit loom

94. What is one of the primary objectives of Silk Mark?

    (A) Maximizing profits for silk traders

    (B) Protecting the interests of the consumer

    (C) Encouraging the use of synthetic fibres

    (D) Enhancing competition among silk manufacturers

95. When was the Global Organic Textile Standard (GOTS) officially established?

    (A) 2002   (B) 2006

    (C) 2008   (D) 2010

96. What type of take-up motion is provided in a Chittaranjan loom?

    (A) Negative take up motion   (B) 7-wheel take-up motion

    (C) 5-wheel take-up motion   (D) 6-wheel take-up motion

97. What is one of the primary purposes of using drop box in handlooms?

    (A) To reduce the breakage of warp yarns

    (B) To assist the take up motion

    (C) To automate the shuttle-loading mechanism

    (D) To facilitate the use of multiple coloured shuttles

98. The Vertical Handloom dobby generally produce

    (A) Bottom closed shedding   (B) Centre closed shedding

    (C) Open shedding   (D) Semi open shedding

99. How does the sley receive swinging motion in a semi-automatic handloom?

    (A) Through a pulley system   (B) By manual operation

    (C) Driven by an electric motor   (D) Utilizing a crankshaft mechanism

100. How much does the cylinder move in each pick in a vertical handloom dobby?

    (A) Half of a revolution   (B) One full revolution

    (C) Quarter of a revolution   (D) Two full revolution

SPACE FOR ROUGH WORK