PART 10 — TEXTILE TECHNOLOGY

(Answer ALL questions)

76. The tensile strength of polynosic fibre is around

1. 3 to 3.5 gmsldenier
2. 8 to 10 gms/denier
3. 12 to 14 gmsldenier
4. 0.5 to 1 gm/denier

77. In viscose solution preparation xanthation process takes normally from

1. 10 minutes
2. 60 to 180 minutes
3. 5 hours
4. 24 hours

78. The temperature of molten polymer in nylon 66 manufacture is around

1. 280 to 300°C
2. 100°C
3. 27°C
4. 120°C

79. In acrylic fibre manufacture, the polymer concentration ranges from

1. 2 to 5 %
2. 15 to 40 %
3. 80 to 90 %
4. 70 to 80 %

80. The work factor of viscose staple fibre is around

1. 0.62
2. 0.2
3. 0.1
4. 0.4

81. The tenacity range of acrylic fibre in gmsldenier is

1. 1.0 to 1.2
2. 5.0 to 5.2
3. 2.2 to 3.5
4. 10 to 10.2

82. The modern false twist texturizing machines can impart false twist in to moving yarn at the rate of

1. upto six million RPM
2. 12 million RPM
3. only upto 30,000 RPM
4. upto 1 lakh RPM only

83. High bulk yarns are produced from

1. relaxed fibres
2. unrelaxed fibres
3. a blend of relaxed and unrelaxed fibres
4. filaments

84. The cord fabrics used in conveying belt applications approximately weigh

1. 1 kg / sq.metre
2. 100 gms / sq.metre
3. 25 kg / sq.metre
4. 25 kg / sq.cm

85. The cotton cloth construction normally applied in V-belts in ends/inch. and picks/inch is

1. 23 × 4
2. 30 × 10
3. 50 × 50
4. 12 × 12

86. The standard breaking strength of nylon parachute cloth in kgs/cm width is

1. 2 to 3
2. 7 to 10
3. 25 to 30
4. 50 to 100

87. The number of twistslmetre involved in high stretch yarns is around

1. 100
2. 2500
3. 500
4. 250

88. An unbalanced structure in weft knitting process is

1. Polka rib
2. Royal rib
3. Eight lock
4. Derby rib

89. In Jacquard knitting the maximum design width of intermediate Jacquard is

1. 48 wales
2. 24 wales
3. 144 wales
4. 182 wales

90. The normal cut of the non-Jacquard knitting machine is around

1. 24
2. 48
3. 72
4. 88

91. Knitted fabric width is expressed as

1. Total number of needles x wales per inch
2. Total number of needles / wales per inch
3. Total number of needles – wales per inch
4. Wales per inch / Total no. of needles

92. According to Tompkin's law which of the following relations is correct in weft knitting?

1. $K_S = l^2/S$
2. $S = \frac{K_S}{l^2}$
3. $K_S = l^2 + S$
4. $l^2 + K_S = S$

where S = Stitch density

K_S is constant

l = Stitch length

93. In purl knitting machine the two needle beds are set at

1. 60°
2. 120°
3. 180°
4. 90°

94. From tricot knitting machine the fabric comes off the machine at an angle of

1. 90°
2. 120°
3. 180°
4. 240°

95. The width of Raschel machines varies from

1. 480 to 600 cm
2. 200 to 350 cm
3. 1000 to 1500 cm
4. 150 to 200 cm

96. In the dielectric phenomenon of fibres water is considered to be

1. Induced dipole
2. Permanent dipole
3. Temporary dipole
4. An ordinary molecule

97. The percentage amorphous region in wool fibre is around

1. 44
2. 20
3. 65
4. 25

98. Higher the bi-refringence of a fibre

1. higher will be the orientation
2. lower will be the orientation
3. higher will be the amorphous portions
4. higher will be the crystallinity

99. The optical orientation factor of an isotropic fibre is

1. 0.8
2. 0.21
3. 0
4. 1

100. With increase in relative humidity, the strength of wool fibre

1. increases
2. decreases
3. first increases and then decreases
4. does not change

101. The best synthetic fibre for good elastic recovery is

1. Polyester
2. Nylon
3. Acrylic
4. Polypropylene

102. The % absorption moisture regain of nylon 6.6 at 65% R.H. and 20°C is

1. 4.1
2. 2.1
3. 8.0
4. 0.4

103. The chemical potential of a solute in an ideal solution may be expressed as

1. $A = \mu + RT \ln C$
2. $C = A + RT \ln \mu$
3. $\mu = A + RT \ln C$
4. $R = A + T \ln C$

104. The reactive dyeing process for 100 % cotton garment involves duration of dyeing as

1. 1 to 2 hours
2. 2 to $2\frac{1}{2}$ hours
3. 3 to 4 hours
4. 5 to 6 hours

105. The interfibrillary swelling takes place in

1. water solution
2. acid and strong alkali solution
3. water and weak alkali solution
4. alkali solution

106. The heat of combustion for cotton fibre is

1. 17.9 kJg^{-1}
2. 18.2 kJg^{-1}
3. 16.3 kJg^{-1}
4. 27.8 kJg^{-1}

107. The simple test for mercerization of cotton is

1. Examining under sunlight
2. Examining under U.V. light
3. Examining through microscope
4. Examining through infra-red light

108. The cross-section of cotton fibre changes due to mercerization from

1. Flat shape to oval shape
2. Bean shape to round shape
3. Round shape to elliptical shape
4. Elliptical shape to bean shape

109. The removal of sericine results in a weight loss of silk by

1. 40 to 75 %
2. 70 to 90 %
3. 20 to 25 %
4. 12 to 17 %

110. The california bearing ratio resistance in geo-textiles is expressed as

1. CBR resistance = failure load / cross-sectional area
2. CBR resistance = cross-sectional area / failure load
3. CBR resistance = failure load x cross-sectional area
4. CBR resistance = cross-sectional area – failure load

111. The top roller of two bowl calender used for calendering process is made of

1. hard plastic
2. hard steel
3. soft paper
4. wood

112. Which one of the following fibres is not used for the production of tyre cord?

1. Viscose rayon
2. Glass
3. Polyester
4. Silk

113. The stelometer is made of CRL system by

1. step synchronous motor
2. dashpot damping device
3. cam drive
4. beam design

114. For 3 % trash in mixing the cleaning efficiency expected in blowroom is

1. 65 %
2. 35 %
3. 80 %
4. 25 %

115. In single yarn tensile strength test, higher the strain rate ———— will result

1. lower the strength
2. no change in strength
3. higher the strength
4. no change in extension