(Answer ALL questions)

56. The glass transition temperature of PP is
1. Higher than polyester
2. Higher than nylon
3. Lower than nylon but higher than polyester
4. Lower than nylon and polyester

57. The wet tenacity of viscose is
1. Higher than cotton dry tenacity
2. Higher than viscose dry tenacity
3. Lower than viscose dry tenacity
4. Lower than cotton wet tenacity

58. Which one of the following properties has more influence on flexural rigidity of fibres?
1. Density
2. Linear density
3. Shape factor
4. Moisture regain

59. The most preferred fibre for tooth brush is
1. Nylon 6
2. Nylon 6,6
3. Nylon 6,10
4. Nylon 6,12

60. Which one of the following fibres behaves more or less as thermoset?
1. Cotton
2. Cellulose di-acetate
3. Cellulose tri-acetate
4. Lyocell

61. Gas phase polymerization process is used to produce
1. Polypropylene Polymer
2. Acrylic Polymer
3. Nylon 6 Polymer
4. Nylon 66 Polymer

62. Which one of the following Polyester variants has highest resilience?
1. PET
2. PTT
3. PBT
4. PGA

63. The solid content in spinning dope in case of wet spinning of acrylic is
1. 10-30%
2. 60-80%
3. 0-5%
4. 50-90%

64. Infra red spectroscopy cannot be used for
1. Orientation in polymers
2. Conformational studies
3. Crystallinity of polymers
4. Crystal Size determination

65. The crystalline percentage of silk fibre is
1. Lower than cotton
2. Higher than wool
3. Lower than wool
4. Higher than cotton but lower than wool

66. The structure of α – keratin in wool fibre is

1. Helical
2. Elliptical
3. Circular
4. Triangular

67. Silk fibroin is believed to be a

1. Random co polymer
2. Alternating co polymer
3. Block co polymer
4. Graft co polymer

68. The amount of belt shift on the cone drum of speed frame builder motion per roving layer formation on bobbin is

1. Higher for coarser roving
2. Lower for coarser roving
3. Higher for finer roving
4. Independent of fineness of roving

69. The linear density of sliver lap is about

1. 5.5 tex
2. 55 tex
3. 55 ktex
4. 5500 ktex

70. Which of the following traveller is finer?

1. 12/O
2. 8/O
3. 8
4. 12

71. The noil % removal at the comber increases with

1. Increase in feed/nip in forward feed
2. Decrease in detaching distance
3. Increase in feed/nip in backward feed
4. Lower short fibre content

72. The size of the spinning triangle of ring frame increases while

1. Increasing twist of the roving
2. Increasing forward off-set length of front top roller
3. Increasing twist of the yarn
4. Decreasing twist of the yarn

73. In two for one twister (TFO)

1. One rotation of assembly wound package insert two twists
2. Assembly wound package rotates equal to spindle
3. Assembly wound package rotates higher than to spindle
4. Assembly wound package does not rotate

74. In rotor spinning, if diameter of rotor is 'd'

1. Winding rate =

   (yarn arm speed – rotor speed) $\times\pi\times d$
2. Winding rate =

   (yarn arm speed / rotor speed) $\times\pi\times d$
3. Winding rate =

   (rotor speed – yarn arm speed) $\times\pi\times d$
4. Winding rate =

   (rotor speed / yarn arm speed) $\times\pi\times d$

75. Which one of the spinning system will produce lowest spinning tension?

1. Ring
2. Rotor
3. Friction
4. SIRO

76. Which one of the spinning system is not an open-end spinning system?

1. Rotor
2. Air-Jet
3. Friction
4. Electrostatic

77. The back doubling process in rotor spinning

1. Reduces long term mass variation
2. Reduces short term mass variation
3. Reduces medium term mass variation
4. Does not affect mass variation

78. Class III fibres of rotor spun yarn is

1. Aligned core fibres
2. Hooked fibres
3. Wrapper fibres
4. Both core and hooked fibres

79. In wrap spinning system, the raw materials used is

1. Staple fibres in surface and filament in core
2. Synthetic filaments in core as well as surface
3. Staple fibres in core as well as surface
4. Staple fibres in core and filament in surface

80. In a cross wound packages the relationship between λ and φ is

1. $\lambda = \frac{\pi D - \varphi}{m}$
2. $\lambda = \frac{\pi D - m}{\varphi}$
3. $\lambda = (\pi D - \varphi)m$
4. $\lambda = \frac{m - \varphi}{\pi D}$

81. The surface velocity of cylindrical package having 5 cm diameter rotating at 700 m per minute is

1. 11000 m/min
2. 110 m/min
3. 1100 m/min
4. 1110 m/min

82. What is the traverse ratio of a drum in a winding machine having a wind value of 2.5?

1. 2.5
2. 7.5
3. 5
4. 10

83. The primary purpose of adding adhesive agent in the size paste is to

1. bind the fibres in the yarn
2. increase the strength of the yarn
3. increase the abrasion resistance of the yarn
4. reduce the friction between the yarn

84. A 100 m yarn undergoes stretch 3 %, 5% and 2% in three different zones of sizing machine. What is the final length of the yarn?

1. 110 m
2. 110.3 m
3. 103 m
4. 103.3 m

85. In a shuttle loom, the increase in the ratio between crank radius and crank length

1. Increases the warp tension
2. Increases the shed depth
3. Increases the picking force
4. Increases the time for shuttle passage

86. Three try motion is a device used along with

1. Warp stop mechanism
2. Weft stop mechanism
3. Let off mechanism
4. Take up mechanism

87. A positive dobby shedding mechanism can control

1. 18 harnesses
2. 30 harnesses
3. 24 harnesses
4. 36 harnesses

88. The presence of disulphide bond is prominent in

1. Cotton fibre
2. Viscose fibre
3. Silk fibre
4. Wool fibre

89. Enzymes for chemical processing is preferred as they are

1. Cheaper
2. Multi-functional
3. Uni-functional
4. Cross-functional

90. The temperature that is used in hot mercerization process is to

1. Induce swelling
2. Increase swelling
3. Improve diffusion
4. Discourage diffusion.

91. Termination of increase in adsorption of reactive dyes at equilibrium despite increasing dye concentration in the bath indicates that the system follows

1. Nernst isotherm
2. C-isotherm
3. Langmuir isotherm
4. Freundlich isotherm

92. The wrong choice of selection of dye molecules for the production of bifunctional reactive dye is

1. Cold and cold brand dye molecules
2. Hot and hot brand dye molecules
3. Hot and remazolbrand dye molecules
4. Remazol and remazol brand dye molecules.

93. Diazotization of fast bases are carried out to achieve

1. Its dissolution in water
2. Improvement of its adsorption on the fibre surface.
3. Occurrence of coupling reaction
4. Prevention of surface deposition of dye molecules formed

94. Migration inhibitor is an agent used in dyeing of polyester in

1. Carrier dyeing
2. Conventional HT dyeing
3. Rapid dyeing
4. Thermosol dyeing.

95. The colour parameters that does not find a place in colour matching of textiles is

1. Δx and MI
2. X, Y and Z
3. L, a, and b
4. r, g and b

96. The combination of printing styles that are possible with reactive dyes is

1. Direct and discharge
2. Direct and resist
3. Discharge and resist
4. Direct, discharge and resist.

97. Cross-linking agents in pigment printing is used to achieve

1. Film formation by the binder
2. Fixation of binder with substrate
3. Interaction among pigment molecules
4. Interaction between pigment molecules and substrate.

98. The amount of extension of belts used in anti-shrinking finish imparted to fabrics depends on

1. Its thickness
2. Its roller diameter
3. Its thickness and roller diameter
4. Its length, thickness and roller diameter.

99. Non-felting of wool fibre fabrics is achieved by

1. Anti-shrinking finishing
2. Crease Proofing
3. Interlocking of scales
4. Prevention of locking up of scales

100. The Analysis of Variance uses the _____ to measure the significance of experimental means in a statistical design

1. Standard error
2. Chi Square statistic
3. F statistic
4. t statistic

101. The Uster High Volume fiber tester is designed to test samples from

1. Each and every bale of cotton
2. Five out of every two hundred bales
3. Fifty out of every two hundred bales
4. Eighty out of every two hundred bales

102. The Uster Tensorapid yarn strength tester works on the _____ principle

1. Constant rate of loading
2. Accelerated rate of loading
3. Constant rate of traverse
4. Constant rate of extension

103. The tester that can measure both the fineness and maturity of fibers by itself is the

1. Arelometer
2. A.T.R.A. fineness tester
3. Sheffield Micronaire
4. W.I.R.A. fineness tester

104. The stellometer for testing fiber strength is an _____ type of tester.

1. ART
2. Approximately CRE
3. Approximately CRL
4. Approximately CRT

105. The Shirley crease recovery tester measures the crease recovery of apparel fabrics after

1. Creasing for 1 min. with a 2 kg. load
2. Creasing for 2 min. with a 2 kg. load
3. Creasing for 1 min. with a 4 kg. load
4. Creasing for 2 min. with a 4 kg. load

106. In analyzing a Baer sorter diagram by Clegg's construction, the short fibers are defined as

1. fibers less than half the effective length
2. the lower 10% of the fibers sorted by length
3. fibers less than half an inch in length
4. fibers less than three quarters the maximum length

107. The Uster Classimat system is used to

1. Classify yarn faults in yarns based on length and diameter of fault
2. Classify yarns faults according to their U%
3. Classify yarns faults according to their VL / BL curves
4. Classify yarns faults according to their Spectrograms

108. The estimation of trash by the Shirley type analyzers is considered inadequate for material being processed in rotor machines because

1. The time required makes it impossible to test the slivers at each head
2. The multiple passages necessary confuses the readings
3. These types of machines cannot estimate micro dust content
4. The readings are exaggerated because some fibers are also removed

109. In the New English system yarn count is defined as the

1. Weight in pounds of 840 yards of yarn.
2. Number of 840 yard lengths in one pound of yarn.
3. Weight in grains of 840 yards of yarn.
4. Number of 840 yard lengths in one grain of yarn

110. Air Permeability of a fabric is expressed as

1. cm^3/cm^2 /sec of air flow through fabric at a differential pressure of $1gm/cm^2$
2. cm/sec of air flow through fabric at a differential pressure of $1gm / cm^2$
3. cm^3/cm^2 /sec of air flow through fabric at a differential pressure of $1 Kg / cm^2$
4. cm/sec of air flow through fabric at a differential pressure of $1Kg/ cm^2$

111. The loop test is a test that measures

1. Twist
2. Extension
3. Bending length
4. Resistance to flex abrasion

112. The angular position of the pattern wheel with respect to the cylinder is

1. 30 degree
2. 45 degree
3. 35 degree
4. 50 degree

113. Racking is the process carried out in which of the following knitting machine

1. Plain knitting machine
2. Inter lock knitting machine
3. Warp knitting machine
4. Flat bed knitting machine

114. The knot in the yarn affects the function of

1. Needle
2. Sinker
3. Cam
4. Feeder

115. Which of the following structure has the lapping movements for front guide bar 3-4/ 1-0 and back guide bar 1-0/ 1-2

1. Atlas lap
2. Lock knit
3. Satin
4. Queens cord