

Q.1 Density of cotton fibre is approximately

- (A) 1.52 denier
- (B) 1.52 g/tex
- (C) 1.52 kg/m<sup>3</sup>
- (D) 1.52 g/cm<sup>3</sup>

Q.2 The byproduct obtained from polycondensation of diethylene glycol terephthalate (DGT) is

- (A) Glycolic acid
- (B) Water
- (C) Diethylene glycol
- (D) Ethylene glycol

Q.3 Ziegler Natta catalyst is used in the polymerization of

- (A) PET
- (B) Nylon
- (C) Acetate
- (D) Polypropylene

Q.4 The cross-section of spinneret used for producing hollow fibres is

- (A) C-shaped
- (B) Rectangular
- (C) Annular concentric
- (D) Triangular

Q.5 For a given yarn count made from the same fibre, rotor spun yarn is bulkier than ring spun yarn, because

- (A) Rotor spun yarn is more even than ring spun yarn
- (B) Navel tube peels off the fibres from rotor spun yarn surface
- (C) Rotor spun yarn has large number of wrapper fibres
- (D) Yarn tension in rotor spinning is lower as compared to that in ring spinning

Q.6 Consider the statement, 'off-setting the front top drafting roller towards the front is beneficial in a ring spinning machine'. Which one of the following CANNOT be the reason for the same?

- (A) It reduces the hairiness of yarn
- (B) It results in smooth running of top drafting roller
- (C) It reduces end breaks
- (D) It results in shorter spinning triangle

Q.7 20s, 30s, 40s and 50s Ne cotton yarns have the same twist per cm. The yarn having maximum fibre obliquity is

- (A) 20s Ne
- (B) 30s Ne
- (C) 40s Ne
- (D) 50s Ne

Q.8 During roller drafting, better fibre control is achieved by flexing the fibre strand over the bottom roller. The reason for this is

- (A) Enhanced fibre to fibre coefficient of friction
- (B) Enhanced fiber to fibre friction
- (C) Reduced slippage of top roller
- (D) Reduced fibre to metal friction

Q.9 For 2/2 twill weave, the heald shaft movement over one complete repeat will be the least in

- (A) Bottom closed shed
- (B) Semi open shed
- (C) Centre closed shed
- (D) Open shed

Q.10 In a flat bed knitting machine, the loop length is controlled by

- (A) Raising cam
- (B) Stitch cam
- (C) Clearing cam
- (D) Guard cam

Q.11 In a drum driven winder

- (A) Traverse ratio is constant
- (B) Traverse ratio reduces with the increase in package diameter
- (C) Angle of wind increases with the increase in package diameter
- (D) Angle of wind reduces with the increase in package diameter

Q.12 The power required for picking in a shuttle loom depends on

- (A) Weave of the fabric
- (B) Number of heald shafts
- (C) Reed width
- (D) Number of picking cams

Q.13 Out of the following, the one which is NOT a surfactant is

- (A) Reducing agent
- (B) Wetting agent
- (C) Detergent
- (D) Dispersing agent

Q.14 The machine used for continuous processing of fabric is

- (A) Winch
- (B) Kier
- (C) J-Box
- (D) Jigger

Q.15 An example of a coagulant used in textile effluent treatment is

- (A) Activated carbon
- (B) Ferrous sulphate
- (C) Hydrogen peroxide
- (D) Sodium chloride

Q.16 Microbes growing on clothing derive nutrition from

- (A) Atmospheric oxygen
- (B) Digestion of polymer
- (C) Sweat and contaminants
- (D) Moisture in the air

Q.17 If the 50 % span length of a cotton fibre is 13.5 mm and the uniformity ratio is 45 %, then 2.5 % span length of this fibre in mm would be

- (A) 10
- (B) 15
- (C) 30
- (D) 35

Q.18 The nep setting on an evenness tester which will give the highest nep count is

- (A) +400 %
- (B) +280 %
- (C) +200 %
- (D) +140 %

Q.19 Fabrics with the same sett but different weaves are woven on a loom. The tear strength will be minimum in a fabric having

- (A) Plain weave
- (B) 3/1 twill weave
- (C) 5-end satin weave
- (D) 2/2 matt weave

Q.20 The property of fabric which influences drape the most is

- (A) Tensile
- (B) Compressional
- (C) Shear
- (D) Surface

Q.21 Probability of occurrence of two events E1 and E2 is 0.25 and 0.5, respectively. The probability of their simultaneous occurrence is 0.14. The probability that neither E1 nor E2 occurs is

- (A) 0.11
- (B) 0.25
- (C) 0.39
- (D) 0.86

Q.22 X and Y are two matrices such that XY and X+Y are both defined. The CORRECT statement from amongst the following is

- (A) X and Y are square matrices of the same order
- (B) X is a square matrix whereas Y is a rectangular matrix
- (C) X and Y are diagonal matrices of different order
- (D) X and Y are rectangular matrices

Q.23 The fibre which has a mineral origin is

- (A) Asbestos
- (B) Silk
- (C) Flax
- (D) Acrylic

Q.24 The chemical that is used to convert soda cellulose to sodium cellulose xanthate in the manufacture of viscose rayon is

- (A) Carbon disulphide
- (B) Sodium xanthate
- (C) Sodium sulphide
- (D) Sodium hydroxide

Q.25 The fibre that will float on water is

- (A) Nylon
- (B) Polyester
- (C) Acrylic (D) Polypropylene

Q.26 The range of spinning speed (m/min) used in the manufacture of partially oriented polyester yarn is

- (A) 1000 – 1200
- (B) 2000 – 2500
- (C) 2800 – 3500
- (D) 4000 – 6000

Q.27 Drawing of synthetic filament does not lead to an increase in

- (A) Crystallinity
- (B) Tenacity
- (C) Tensile modulus
- (D) Elongation at break

Q.28 In a card, the wire point density is maximum on

- (A) Cylinder
- (B) Flat
- (C) Doffer
- (D) Licker-in

Q.29 The spinning system that does not generate false twist during spinning is

- (A) Ring spinning
- (B) DREF 3
- (C) Rotor
- (D) Air jet spinning

Q.30 Most of the seed coat particles are removed in

- (A) Blow room
- (B) Card
- (C) Comber
- (D) Draw frame

Q.31 An eccentric top roller in a drafting system leads to

- (A) Change in draft with oscillation of nip line
- (B) Change in draft without oscillation of nip line
- (C) Neither change in draft nor oscillation of nip line
- (D) Oscillation of nip line only

Q.32 The increase in traveller weight leads to an increase in

- (A) Yarn twist
- (B) Traveller lag
- (C) Balloon diameter
- (D) Yarn tension

Q.33 Dog knot is preferred to weaver's knot during creeling because it is

- (A) Easier to make
- (B) Stronger
- (C) Smaller in size
- (D) Less prone to slippage

Q.34 Size add-on does not depend on

- (A) Roller hardness
- (B) Drying cylinder temperature
- (C) Size paste concentration
- (D) Machine speed

Q.35 Ball warping is mainly used in the manufacture of

- (A) Terry towel
- (B) Narrow fabric
- (C) Denim
- (D) 3D fabric

Q.36 The factor that does not influence the propelling force for moving the weft yarn on air jet loom is

- (A) Coefficient of friction between air and yarn
- (B) Air velocity
- (C) Yarn strength
- (D) Yarn diameter

Q.37 In the context of thermal bonding of nonwoven web, the statement which is not true is

- (A) A thermoplastic component has to be present in the web
- (B) Heat is applied until the thermoplastic component melts
- (C) The polymer flows by surface tension and capillary action to fibre cross over points
- (D) Chemical reaction takes place

Q.38 A 51 mm long fibre has 6 % crimp. The crimped length of the fibre in mm is approximately

- (A) 44
- (B) 46
- (C) 48
- (D) 50

Q.39 On a mass based evenness tester, thin place in a yarn at -40 % setting is counted if mass per unit length is

- (A) 40 % of the mean mass per unit length
- (B) 60 % of the mean mass per unit length
- (C) 40 % of the mean mass per unit length or less
- (D) 60 % of the mean mass per unit length or less

Q.40 Ratio of grab strength to strip strength is the highest when fabric extension (%) is

- (A) 0
- (B) 5
- (C) 10
- (D) 15

Q.41 Bursting strength of a woven fabric with the same warp and weft yarns is the highest when the ratio of ends/cm and picks/cm is

- (A) 1.1
- (B) 1.0
- (C) 0.9
- (D) 0.8

Q.42 Fabric abrasion resistance cannot be assessed by the loss in

- (A) Strength
- (B) Thickness
- (C) Weight
- (D) Air permeability

Q.43 Bleached cotton fabric was sent to a laboratory for determination of Copper Number, which is an estimate of the presence of

- (A) Hydroxyl groups
- (B) Carboxyl groups
- (C) Reducing groups
- (D) Oxidizing groups

Q.44 Malachite Green is an important dyestuff. The typical green colour is obtained when the dye molecule is

- (A) Nonionic
- (B) Cationic
- (C) Anionic
- (D) Made up of phenyl groups

Q.45 A typical curve between equilibrium dye uptake and dyeing temperature goes through a maximum. After the maximum, the dye uptake decreases because

- (A) Kinetic energy increases rapidly
- (B) Pressure in the dye bath increases
- (C) Saturation value is reached
- (D) Dyeing is an exothermic process

Q.46 The efficacy of the wash-n-wear treatment can be estimated by measuring its

- (A) Bending length
- (B) Tensile strength
- (C) Dye uptake
- (D) Crease recovery

Q.47 Softener reduces the bending rigidity of fabrics by decreasing

- (A) Inter-fibre and inter-yarn friction
- (B) Modulus of the fibres
- (C) Glass transition temperature of the fibres
- (D) Packing coefficient of yarns

Q.48 The fibre that contains nitrogen and sulfur is

- (A) Polyester
- (B) Wool
- (C) Nylon 6
- (D) Kevlar

Q.49 Condensation polymerization is not used to produce

- (A) Polyester
- (B) Nylon 6
- (C) Nylon 66
- (D) Polypropylene

Q.50 Wet spinning technique is commercially used to produce filament yarn of

- (A) Polypropylene
- (B) Polyester
- (C) Nylon 66
- (D) Acrylic

Q.51 The fibre that dissolves in 59% (w/w) sulfuric acid solution is

- (A) Wool
- (B) Polypropylene
- (C) Cotton
- (D) Viscose

Q.52 Surface features of a fibre can be obtained by

- (A) Transmission electron microscope
- (B) Scanning electron microscope
- (C) Small angle X-ray diffractometer
- (D) Sonic modulus tester

Q.53 Birefringence of filament yarn is related to its

- (A) Crystallinity
- (B) Orientation
- (C) Individual filament denier
- (D) Density

Q.54 A machine that does not improve the mass evenness is

- (A) Drawframe
- (B) Ring doubler
- (C) Speedframe
- (D) Ribbon lap

Q.55 Fibre individualization in a card will increase by increasing

- (A) Licker-in to cylinder setting
- (B) Doffer speed
- (C) Licker-in speed
- (D) Cylinder speed

Q.56 Softer cots on drafting rollers result in

- (A) An increase in drafting wave
- (B) Less fibre slippage at roller nip
- (C) Change in draft
- (D) Reduced roller lapping

Q.57 Compared to the spinning of finer cotton yarns, the preferred rotor diameter for the production of very coarse cotton yarns would

- (A) Be higher
- (B) Be lower
- (C) Remain the same
- (D) Change depending on fibre strength

Q.58 Amongst the following, the suitable technology for producing core spun yarn is

- (A) Air vortex spinning
- (B) Rotor spinning
- (C) Friction spinning
- (D) Air-jet spinning

Q.59 Increase in taper angle on sectional warping drum will normally require

- (A) Higher warping speed
- (B) Lower warping speed
- (C) Increase in traverse speed
- (D) Decrease in traverse speed

Q.60 Increase in the ratio of the length of crank to the length of connecting rod leads to

- (A) Increase in sley eccentricity
- (B) Decrease in sley eccentricity
- (C) No change in sley eccentricity
- (D) Initial increase and then decrease in sley eccentricity

Q.61 Shuttle remains on the race board during its flight in the shed because of

- (A) Forward positive acceleration of the sley
- (B) Backward positive acceleration of the sley
- (C) Constant forward velocity
- (D) Constant backward velocity

Q.62 In weft knitted fabrics of the same mass per unit area produced from the same yarns, the structure which will give the highest thickness is

- (A) Plain
- (B) Rib
- (C) Purl
- (D) Interlock

Q.63 The nonwoven process which has the highest production rate is

- (A) Needle punching
- (B) Hydroentangling
- (C) Melt blowing
- (D) Spunbonding

Q.64 The highest washing fastness in a dyed cotton fabric would be obtained if the dye-fibre bond is

- (A) Ionic
- (B) Hydrogen
- (C) Covalent
- (D) Van der Waal's force

Q.65 Crease resist finishing of cotton fabric does not lead to

- (A) Reduction in tensile strength
- (B) Increase in dimensional stability
- (C) Increase in moisture regain
- (D) Increase in bending length

Q.66 Nep count in a cotton fibre sample is measured by

- (A) AFIS
- (B) HVI
- (C) Uster tester
- (D) Stelometer

Q.67 In a given woven fabric the extension at break in weft direction is higher than that in warp direction. During bursting strength test, the threads that will always break first are

- (A) Warp
- (B) Weft
- (C) Both warp and weft simultaneously
- (D) Those with lower strength

Q.68 CSP of yarn is equal to the product of

- (A) Yarn tex and lea strength (N)
- (B) Yarn count (Ne) and lea strength (lbf)
- (C) Yarn tex and lea strength (lbf)
- (D) Yarn count (Ne) and lea strength (kgf)

Q.69 Medulla is associated with

- (A) Cotton
- (B) Silk
- (C) Wool
- (D) Nylon

Q.70 A good fibre forming polymer should NOT have

- (A) Linear polymeric chain
- (B) Branched polymeric chain
- (C) High DP
- (D) High inter-molecular interaction

Q.71 The DP of viscose fibre is approximately

- (A) 25000
- (B) 2500
- (C) 250
- (D) 25

Q.72 A synthetic yarn is stretched by 5% and kept in the extended condition. With time, the registered stress will

- (A) Increase linearly
- (B) Decrease linearly
- (C) Increase exponentially
- (D) Decrease exponentially

Q.73 In a cotton card, the wire point density on

- (A) Cylinder is lesser than that on flat
- (B) Doffer is greater than that on cylinder
- (C) Cylinder is greater than that on flat
- (D) Flat is greater than that on doffer

Q.74 In a drawframe with 3 over 3 drafting system, the roller most prone to slip is

- (A) Middle top roller
- (B) Front top roller
- (C) Back top roller
- (D) Front bottom roller

Q.75 Fibre parallelization in drawn sliver improves with

- (A) Increase in draft
- (B) Increase in doubling
- (C) Decrease in roller setting
- (D) Increase in roller pressure

Q.76 The combing force increases with

- (A) Decrease in mass/unit length of lap
- (B) Decrease in pre-combing draft
- (C) Decrease in needles/cm on half lap
- (D) Decrease in nips per minute

Q.77 Pirn winding is an essential preparatory process for weaving on

- (A) Air-jet loom
- (B) Water-jet loom
- (C) Rapier loom
- (D) Drop-box loom

Q.78 Double acting dobby is driven from

- (A) Bottom shaft
- (B) Crank shaft
- (C) Tappet shaft
- (D) Rocking shaft

Q.79 In air-jet loom

- (A) All the relay nozzles start jetting at the same time
- (B) Each relay nozzle has separate jetting time
- (C) Relay nozzles of a group start jetting at the same time
- (D) Main and relay nozzles have same jetting time

Q.80 If the diameter of a torsion rod used in projectile loom is doubled then the torque required to twist it would increase by

- (A) 2 times
- (B) 4 times
- (C) 8 times
- (D) 16 times

Q.81 In a sizing process, if add-on is 12.8% and paste concentration is 16%, the value of wet pick-up (%) would be

- (A) 16
- (B) 50
- (C) 80
- (D) 200

Q.82 The fibre parameter that CANNOT be obtained from Baer sorter diagram is

- (A) Mean length
- (B) Effective length
- (C) Span length
- (D) Modal length

Q.83 A 25 tex cotton yarn has a twist factor of 30. The yarn twist, in turns per cm, is

- (A) 4
- (B) 5
- (C) 6
- (D) 7

Q.84 With an increase in gauge length, the tenacity of a spun yarn would

- (A) Increase
- (B) Decrease
- (C) Remain the same
- (D) First increase and then decrease

Q.85 A print paste CANNOT be prepared without

- (A) Colourant
- (B) Thickener
- (C) Dispersing agent
- (D) Carrier

Q.86 A fabric was dyed in acidic medium. If the dye could be stripped out in strong aqueous alkaline solution at room temperature, the dye-fibre combination is

(A) Direct dye – Cotton

(B) Acid dye - Wool

(C) Vat dye - Cotton

(D) Disperse dye - Polyester

Q.87 Higher value of stitch cam setting in a weft knitting machine would

(A) Increase the loop length and decrease the fabric areal density

(B) Increase the loop length and increase the fabric areal density

(C) Decrease the loop length and decrease the fabric areal density

(D) Decrease the loop length and increase the fabric areal density

Q.88 During beat-up, possibility of bumping increases if

(A) Warp tension is low and cloth fell displacement is low

(B) Warp tension is low and cloth fell displacement is high

(C) Warp tension is high and cloth fell displacement is low

(D) Warp tension is high and cloth fell displacement is high

Q.89 The vibroscope method for determination of fibre fineness does NOT take into account

(A) Length of specimen

(B) Natural frequency of specimen

(C) Tension in specimen

(D) Tensile strength of specimen

Q.90 During burning, a flame retardant does NOT

(A) Increase heat absorption

(B) Reduce supply of oxygen

(C) Increase char content

(D) Lower glass transition temperature ( $T_g$ )