COMBINED TECHNICAL SERVICES EXAMINATION (NON-INTERVIEW POSTS)

COMPUTER BASED TEST

PAPER – II – TEXTILE TECHNOLOGY

(DEGREE STANDARD) (CODE: 406)

1. —————— represent the area in the cutting table where the fabric are overlapped during the run out of fabric rolls (or) elimination of fabric defects during spreading.

    (A) Beginning line   (B) End line
    (C) ✓ Splice mark   (D) Legend
    (E) Answer not known

2. List the objectives of the spreading process from the following

    (i)   Shade sorting of fabric rolls

    (ii) Ply direction and lay stability

    (iii) Correct ply tension and alignment of plies

    (iv) Elimination of static electricity and avoidance of distortion in the spread

    (A) (i), (ii) and (iv)   (B) (ii), (iii) and (iv)
    (C) (i), (ii) and (iii)   (D) ✓ (i), (ii), (iii), (iv)
    (E) Answer not known

3. High velocity with high temperature ionised gas is used in

    (A) Ultrasonic cutting   (B) ✓ Plasma cutting
    (C) Laser cutting   (D) Gas cutting
    (E) Answer not known

4. Identify the type of zipper, which have a box and pin type mechanism to inter connect the two sides of the zippers

    (A)✓ Open ended zippers

    (B)   Close ended zippers

    (C)   CFC coil type zipper

    (D)   CH coil without cord type zipper

    (E)   Answer not known

5. Identify the correct statements corresponding to pleats

    (i)   Knife pleats can be used as an alternative for gathers

    (ii) A box pleat is formed when two consecutive knife pleats are folded in opposite directions

    (iii) Inverted pleats are commonly used for uniforms and skirts

    (A) (ii) and (iii) only   (B) (i) and (ii) only

    (C) (i) and (iii) only   (D)✓(i), (ii) and (iii)

    (E) Answer not known

6. Recognize the name on type of collar from the following statement

The fall and stand of this collar are the identical height at the centre back.

    (A) Flat collar   (B)✓Full roll collar

    (C) Partial collar   (D) Shawl collar

    (E) Answer not known

7. Identify the wrong statement from the following about quality of merchandiser

   (i)   Merchandiser must supervise different departments.

   (ii) Merchandiser should have loyalty towards buyer alone.

   (iii) Merchandiser must be competent enough to plan the activities of production.

   (A) (i) only   (B)✓ (ii) only
   (C) (iii) only   (D) (ii) and (iii) only
   (E) Answer not known

8. Which one of the following creates the wedge shaped cut out in a pattern used as a means of controlling the fit of the Garment?

   (A)✓ Dart   (B) Pleat
   (C) Loop   (D) Placket
   (E) Answer not known

9. _____ seam is commonly used for rainwear and self fabric stitching to hide the raw edge, front facings on jackets.

   (A) Superimposed seam   (B) Piped seam
   (C)✓ French seam   (D) Band seam
   (E) Answer not known

10. Which of the following process is used to calculate the fabric consumption?

   (A) Pattern making   (B) Spreading
   (C)✓ Marker planning   (D) Cutting
   (E) Answer not known

11. Identify the removable defect from the following

(A) Reed Mark
(B) Temple Mark
(C) Short end
(D)✓ Patta
(E) Answer not known

12. A warpwise streak caused by the improper spacing of the ends across the fabric

(A) Min pick
(B) Kink
(C)✓ Misreed
(D) Reed mark
(E) Answer not known

13. Specify the Number of needles required for construction of garment using 406-Three thread covering stitch type

(A)✓ 2 Needles
(B) 3 Needles
(C) 4 Needles
(D) 1 Needle
(E) Answer not known

14. Which of the following stitch class is more complex to produce?

(A)✓ Class 600
(B) Class 500
(C) Class 400
(D) Class 300
(E) Answer not known

15. The size of the needle hole in the throat plate is ————————% larger than the size of the needle.

(A) 10
(B) 20
(C)✓ 30
(D) 40
(E) Answer not known

16. The process of fusing is influenced by the following factors that can be given quality of fusing on garments

    (i)   Time

    (ii)   Pressure

    (iii) Temperature

    (iv)   Cooling

    (A) (i), (ii) and (iv)   (B) (i), and (ii)

    (C) (i), (ii) and (iii)   (D) (i), (ii), (iii) and (iv)

    (E) Answer not known

17. The type of packing which is also termed as "shirt packing".

    (A) Flat packing   (B) Hanger packing

    (C) Dead man packing   (D) Stand-up packing

    (E) Answer not known

18. Seam Efficiency Index is the ratio between

    (A) Seam tensile strength and Fabric tensile strength

    (B) Seam tensile strength and thread tensile strength

    (C) Thread tensile strength and Fabric tensile strength

    (D) Thread tensile strength and seam slippage strength

    (E) Answer not known

19. Pick out the sewing thread requirement combinations from the following

   (A) High strength and hairiness
   (B) Low strength and hairiness
   (C)✓ High strength and low hairiness
   (D) Low strength and high hairiness
   (E) Answer not known

20. The numbering system used to denote sewing thread is

   (A) Direct system
   (B) Indirect system
   (C) Metric system
   (D)✓ Ticket number system
   (E) Answer not known

21. A fabric is to be produced with 254 ends per inch and width of 150 cm. Calculate the number of ends required in weavers beam.

   (A) 404
   (B)✓ 15,000
   (C) 25,000
   (D) 38,100
   (E) Answer not known

22. Ball warping is mainly used in manufacturing of

   (A)✓ Denim fabrics
   (B) Checked fabrics
   (C) Terry fabrics
   (D) Printed fabrics
   (E) Answer not known

23. Good performance of a splicer is indicated by

(A) Higher splice breaking ratio and higher splice factor

(B) Lower splice breaking ratio and higher splice factor

(C) Higher splice breaking ratio and lower splice factor

(D) ✓ Lower splice breaking ratio and lower splice factor

(E) Answer not known

24. The device that detects and remove yarn faults is called

(A) Balloon breaker

(B) ✓ Yarn clearer

(C) Variable speed

(D) Waxer

(E) Answer not known

25. The mostly used film former in sizing of polyester and polyester blend is

(A) ✓ Polyvinyl alcohol

(B) Polyvinyl acetate

(C) Carboxy methyl acetate

(D) Carboxy ethyl cellulose

(E) Answer not known

26. In single end sizing, —————— zone is eliminated when compare to conventional sizing machine.

(A) Creel

(B) Size box

(C) Drying

(D)✔ Splitting

(E) Answer not known

27. The cone package meant for wet processing (eg. dyeing) shall have the cone taper of

(A) 3° 30'   (B)✔ 4° 2'

(C) 5° 5'   (D) 9° 1'

(E) Answer not known

28. The number of wraps (or coils) of yarn wound within a traverse length is called

(A) Traverse ratio

(B)✔ Wind

(C) Winding length

(D) Angle of wind

(E) Answer not known

29. Casting-out is the term used in

(A) Multi-lever treadle shedding

(B) Negative tappet shedding

(C) Positive tappet shedding

(D)✔ Jacquard shedding

(E) Answer not known

30. At how many places dwell period will be created on the tappet profile to produce 3/2 twill weave?

(A)✓ Two   (B) Three

(C) Five   (D) Six

(E) Answer not known

31. Confusor guide is a device, which may be available in

(A)✓ Air-jet loom   (B) Water-jet loom

(C) Rapier loom   (D) Projectile loom

(E) Answer not known

32. Which of the following are suitable for airjet weaving?

(i) Textured yarn

(ii) Spun yarn

(iii) Monofilament yarns

(A)✓ (i) and (ii) only   (B) (i) and (iii) only

(C) (ii) and (iii) only   (D) (i), (ii) and (iii)

(E) Answer not known

33. Find the incorrect statement with respect to beat up force during weaving.

   (A)✓ Lower pick spacing (i.e higher pick per cm) require higher beat up force due to lower cloth fell displacement

   (B) Higher pick spacing (i.e lower pick per cm) require lower beat up force due to lower cloth fell displacement

   (C) Lower pick density (i.e higher pick per cm) and lower linear density require lowest beat up force

   (D) Higher pick density (i.e lower pick per cm) and higher linear density require highest beat up force

   (E) ·Answer not known

34. In pierce cloth geometry, the cover factor (K) for the warp of a woven fabric is

   e_d – Thread per cm

   C_y – Tex of thread

   (A)✓ $e_d \times \sqrt{C_y} \times 10^{-1}$

   (B) $\dfrac{e_d}{\sqrt{C_y} \times 10^{-1}}$

   (C) $e_d \times C_y \times 10^{-1}$

   (D) $\dfrac{e_d}{C_y \times 10^{-1}}$

   (E) Answer not known

35. How many repeats of the weave can be formed in a warp of 100 cm wide with 30 ends per cm and repeat size of weave is 6 ends and 6 picks?

   (A)✓ 500   (B) 550
   (C) 600   (D) 650
   (E) Answer not known

36. Satin weaves can be extended

   (A) Horizontal direction only

   (B) Vertical direction only

   (C)✓ Both in horizontal and vertical direction

   (D) Not both in horizontal and vertical direction

   (E) Answer not known

37. Comment on the statement :

   Assertion [A] : Regular sateens cannot be constructed on four and six threads

   Reason [R] : No number can be counted which has not a common factor with four and six

   (A)✓ Both [A] and [R] are true and [R] is the correct explanation of [A]

   (B) Both [A] and [R] are false

   (C) [A] is false but [R] is the correct explanation of [A]

   (D) [A] is true but [R] is false

   (E) Answer not known

38. Tension on the fabric is very less during the process of

   (A) Shedding   (B) Picking

   (C)✓ Beat-up   (D) Take-up

   (E) Answer not known

39. Cyclic tension variations in warp sheet are caused by

(i) Shedding

(ii) Picking

(iii) Beat-up

(A) (i) only

(B) (ii) only

(C) (i) and (ii) only

(D) ✓ (i) and (iii) only

(E) Answer not known

40. Warp protector mechanism is used to.

(A) Stop the loom when warp thread breaks

(B) Stop the loom when weft thread breaks

(C) ✓ Stop the loom when the shuttle fails to reach the shuttle box

(D) Stop the loom when the pirn gets empty in the shuttle

(E) Answer not known

41. Which of the following fibre can not be dyed in hank dyeing machine?

(A) Cotton

(B) Polyester

(C) Viscose

(D) ✓ Wool

(E) Answer not known

42. In jigger dyeing machine, the fabric is dyed in ——————— form(s).

(i) open

(ii) rope

(iii) beam

(A)✓ (i) only   (B) (ii) only

(C) (i) and (ii)   (D) (iii) only

(E) Answer not known

43. Turkey red oil is used in printing paste as

(A) Antifoaming agent   (B) Dispersing agent

(C)✓ Wetting agent   (D) Mild oxidizing agent

(E) Answer not known

44. Mass customization is possible in ——————— type of printing.

(A) Block   (B) Roller

(C) Screen   (D)✓ Digital

(E) Answer not known

45. Which of the following statements are true about Batch dyeing?

(i) It is known as Exhaust dyeing

(ii) It can be used in any stage of product development

(iii) It can be used for larger fabric lots

(iv) It is done with beck, pad or jig machines

(A) (i), (ii), (iii)   (B) (ii), (iii), (iv)

(C)✓ (i), (ii), (iv)   (D) (i), (iii), (iv)

(E) Answer not known

46. ——————— dye is non-ionic in nature.

   (A) Direct   (B) ✓ Disperse

   (C) Basic   (D) Reactive

   (E) Answer not known

47. Comment in the statement :

   Assertion [A] : Dyes are also used to enhance whiteness of textiles.

   Reason [R] : To counteract deficiency in bleaching, bleached textiles are often after-treated with whitening agents with a little of violet or red dye.

   (A) [A] is true but [R] is false

   (B) ✓ Both [A] and [R] are true; and [R] is the correct explanation of [A]

   (C) [A] is false, [R] is true

   (D) Both [A] and [R] are true; but [R] is not correct explanation of [A]

   (E) Answer not known

48. Consider the following assertion [A] and Reason [R] in the context of singeing :

   Assertion [A] : Singeing burns the protruding hair fibre on Fabric surface.

   Reason [R] : This Improves Printing Quality.

   (A) ✓ Both [A] and [R] are correct

   (B) Both [A] and [R] are wrong

   (C) [A] is correct [R] is wrong

   (D) [A] is wrong [R] is correct

   (E) Answer not known

49. In vapor lock scouring process, the dwell time is

(A) 120 milliseconds   (B) ✓ 120 seconds

(C) 120 minutes   (D) 240 minutes

(E) Answer not known

50. The addition of an electrolyte to the dye liquor of anionic dye increases the dye uptake by

(A) ✓ Increasing the repulsion force between dye molecule and water

(B) Increasing the attraction force between dye molecule and water

(C) Decreasing the repulsion force between dye molecule and water

(D) Decreasing the repulsion force between dye molecule and fibre

(E) Answer not known

51. In context of dyes and protein fibre interaction; The fixation of dyes on protein fibers occurs through

(A) ✓ Ionic bonding

(B) Covalent bonding

(C) Aggregation of dye molecules inside fibre

(D) Insolubilisation of dye

(E) Answer not known

52. The most suitable pH for printing of polyester with disperse dye is

(A) 3   (B) ✓ 6

(C) 9   (D) 12

(E) Answer not known

53. In Pigment printing ——————— produce a pigment with good covering power and produce a range of lustre.

(A) Binder   (B) Thickener

(C) Retarder   (D)✓ Opacifier

(E) Answer not known

54. Which one of the following dye is most suitable for polyester?

(A)✓ Disperse dye   (B) Reactive dye

(C) Direct dye   (D) Natural dye

(E) Answer not known

55. Assertion [A]   :   Acid dyes are preferred for bright shades with excellent fastness properties of Nylon.

Reason [R]   :   The salt linkages are formed between end amino group of polyamide molecule and sulfonic acid group in the dye molecule and they are strong enough to wilt stand aqueous treatments.

(A) [A] is true but [R] is false

(B) [A] is false [R] is true

(C)✓ Both [A] and [R] are true, [R] is the correct explanation of [A]

(D) Both [A] and [R] are true but [R] is not the correct explanation of [A] is correct

(E) Answer not known

56. Which one of the following reaction mechanism carried out during Desizing process on textile materials?

(A)✓ Hydrolysis

(B) Pyrolysis

(C) Thermal reaction

(D) Abrasion action

(E) Answer not known

57. The other term for ageing is

(A) Dyeing

(B) Printing

(C)✓ Steaming

(D) Padding

(E) Answer not known

58. Chlorine fastness is a must for ——————— wear.

(A) Casual

(B) Party

(C)✓ Swim

(D) Sports

(E) Answer not known

59. Which of the following fastness properties are assessed by staining of adjacent white sample and fading of coloured specimen?

(i) Light fastness

(ii) Wash fastness

(iii) Sublimation fastness

(A) (i) only

(B)✓ (ii) and (iii)

(C) (iii) only

(D) (ii) only

(E) Answer not known

60. ——————— instruments are primarily for measuring a specific colour measurement scale in order to ascertain where the sample lies on the scale.

(A) ✓ Single scale   (B) Portable

(C) Visual   (D) Multi angle

(E) Answer not known

61. The number of twist imparted on the roving per meter is

(A) $\dfrac{\text{Bobbin rotational speed (Revolution per second)}}{\text{Front roller delivery speed (metres per min)}}$

(B) $\dfrac{\text{Flyer rotational speed (Revolution per second)}}{\text{Front roller delivery speed (metres per min)}}$

(C) ✓ $\dfrac{\text{Flyer rotational speed (Revolution per minute)}}{\text{Front roller delivery speed (metres per min)}}$

(D) $\dfrac{\text{Bobbin rotational speed (Revolution per minute)}}{\text{Front roller delivery speed (inches per min)}}$

(E) Answer not known

62. The Creel tension draft given at the roving frame is about

(A) ✓ 1.01 to 1.03   (B) 1.03 to 1.05

(C) 1.05 to 1.1   (D) 1.1 to 1.4

(E) Answer not known

63. In simple helix model, the yarn contraction is given by

(A) ✓ $\dfrac{\text{Mean untwisted length}}{\text{Twisted yarn length}}$

(B) $1 - \dfrac{\text{Untwisted yarn length}}{\text{Twisted yarn length}}$

(C) $1 - \dfrac{\text{Twisted yarn length}}{\text{Untwisted yarn length}}$

(D) $\dfrac{\text{Twisted yarn length}}{\text{Mean Untwisted yarn length}}$

(E) Answer not known

64. The higher the level of false twist in rotor spinning results in

(A) ✓ longer the tying-in zone, lower end breaks and increases number of wrapper fibres

(B) shorter the tying-in zone, lower end breaks and decreases number of wrapper fibres

(C) longer the tying-in zone, higher end breaks and decreases number of wrapper fibres

(D) shorter the tying-in zone, higher end breaks and increases number of wrapper fibres

(E) Answer not known

65. Assertion [A] : During ginning, the short fibre content of the lint is increased by about 1% for each percentage reduction in moisture content.

Reason [R] : This is partly correct because the increased fibre electrification in the ginning process makes fibre separation more difficult

(A) [A] is true but [R] is false

(B)✔ Both [A] and [R] are true; and [R] is the correct explanation of [A]

(C) [A] is false [R] is true

(D) Both [A] and [R] are true; but [R] is not the correct explanation of [A]

(E) Answer not known

66. Choose the incorrect relationship

where L_m — mean untwisted length

h — twisted yarn length

α — yarn twist angle

C_y — yarn contraction due to twist

R_y — yarn retraction (twist)

(A) $C_y = \dfrac{L_m}{h}$

(B)✔ $R_y = \dfrac{h - L_m}{h}$

(C) $L_m = \dfrac{1}{2} h [\sec \alpha + 1]$

(D) $R_y = \dfrac{\sec \alpha - 1}{\sec \alpha + 1}$

(E) Answer not known

67. Packing fraction of spun yarn made from circular fiber has the value of

(A) ✓ < 1　　　　　　　　　　　(B) > 1

(C) ≥ 1　　　　　　　　　　　　(D) ≤ 1

(E) Answer not known

68. Front top roller of a Ring frame drafting system would normally arranged on the Front bottom roller with

(A) ✓ front off-set　　　　　　(B) backward off-set

· (C) with no off-set　　　　·　(D) centre to centre alignment ·

(E) Answer not known

69. Which method helps to produce much longer length of twisted yarn without a knot (or) joint and with less burling during weaving? ·

(A) ✓ two for one twisting　　(B) up twisting

(C) down twisting　　　　　　(D) ring doubler

(E) Answer not known

70. While processing of synthetic fibers, a neutral or negative wire angle is preferred in

(A) doffer　　　　　　　　　　(B) ✓ licker-in

(C) flats　　　　　　　　　　　(D) cylinder

(E) Answer not known

71. The fibre transfer factor between cylinder and differ of carding machine is normally

   (A)   0.1 to 0.2   (B) 0.2 to 0.3
   (C)   0.4 to 0.6   (D) 0.6 to 0.8
   (E)   Answer not known

72. Determine the effective cleaning of a blow room machine : Waste % extracted – 3, Trash % in Feed – 3.5 % and Trash % in waste – 2.1%

   (A)   14.28%   (B) 30%
   (C)   40%   (D) 60%
   (E)   Answer not known

73. Choose the right answer among type

   The term "Opening out" in the technological operation of opening refers to

   (i)   Volume of the flock is increased

   (ii)   Number of fibers per flock is decreased

   (iii)   Two or more flocks are formed from one flock

   (iv)   Specific density of the flock will be reduced

   (A).   Option (i) only.   (B) Option (ii) and (iii) only
   (C)   Option (i), (ii) and (iv) only   (D) Option (i) and (iv) only
   (E)   Answer not known

74. "Sections of yarn with no apparent wrapper fibers, in which the core appears twisted or twistless". The above statement represents which class of yarn structure of Air-Jet spun yarn.

(A) Class I
(B) Class II
(C)✔ Class III
(D) Class IV
(E) Answer not known

75. Choose the correct statement from the following with respect to fiber migration in yarn spinning.

(i) Short fiber move out towards the sheath while long fiber move towards the core

(ii) Strongly crimped fibers are predominantly available in the sheath

(iii) Flexible fiber move out towards the sheath while stiff fiber move towards the core

(A) Option (i) only
(B)✔ Option (i) and (ii) only
(C) Option (ii) and (iii) only
(D) Option (iii) only
(E) Answer not known

76. Fasciated yarn spinning is referred to

(A) Compact spinning
(B) Open-end spinning
(C)✔ Tandem-jet spinning
(D) DREF-3 spinning
(E) Answer not known

77. Select the incorrect statement with respect to drafting force

   (A) Drafting force increases with closer roller setting
   (B)✓ Drafting force decreases with increase in crimp level
   (C) Drafting force decreases with parallel arrangement of fibers
   (D) Drafting force increases by small amount with through put speed
   (E) Answer not known

78. Comment on the statement:

   Assertion [A] : Extremely disruptive stick-slip effect of the fiber movements are observed in the critical drafting region, i.e. when the draft between 1 and 2

   Reason [R] : With a small amount of draft (i.e., between 1 and 2), the drafting forces are too high and thus causes fibers are sticking each other.

   (A)✓ [A] is true but [R] is false
   (B) Both [A] and [R] are true
   (C) [A] is false, [R] is true
   (D) Both [A] and [R] are true but [R] is not the correct explanation for [A]
   (E) Answer not known

79. Choose the correct matches type :

Which of the following is/are correctly paired with respect to degrees of combing of cotton?

(1) Scratch combing   – up to 5% noil is removed

(2) Ordinary combing – between 10 to 18% noil is removed

(3) Half combing   – Around 15% noil is removed

(4) Full combing   – Greater than 25% noil is removed

(A) (1) and (3) are correct   (B) (1) and (2) are correct

(C) (2) and (3) are correct   (D) (3) and (4) are correct

(E) Answer not known

80. In combing process which of the following type of fibers highly removed as noil

(A) Leading hook   (B) Double hook

(C) Reverse hook   (D) Trailing hook

(E) Answer not known

81. Identify the formula to calculate the tightness factor of a plain weft knitted fabric

where,

K –tightness factor

l –loop length (mm)

Ne –English count

Tex – $Text$ system of yarn count

Ks – Stitch density

(A) $K = \sqrt{\dfrac{l}{Ne}}$

(B) $K = \dfrac{l}{\sqrt{Ne}}$

(C) ✓ $K = \dfrac{\sqrt{Tex}}{l}$

(D) $K = \dfrac{\sqrt{tex}}{Ks}$

(E) Answer not known

82. Which condition is used for deriving the fully relaxed state constants of plain worsted fabrics?

(A) ✓ Wetting-out of fabrics for 24 hrs, at 40°C , hydro extraction and tumble drying for 1 hr at 70°C

(B) Wetting-out of fabrics for 12 hrs at 20°C and tumble drying for 1 hr at 60°C

(C) Wetting-out of fabrics for 12 hrs at 30°C, hydro extraction and tumble drying for 1 hr at 60°C

(D) Wetting-out of fabrics for 24 hrs at 40°C, tumble drying for 1 hr at 70°C

(E) Answer not known

83. The number feeder that can be accommodated depends on the following machine parameters

(i) Gauge

(ii) Diameter

(iii) Speed

(A) (i) only

(B) (ii) only

(C)✓ (i) and (ii)

(D) (ii) and (iii)

(E) Answer not known

84. The optimum loop shape factor in weft knitting is

(A) 1.0

(B)✓ 1.3

(C) 1.7

(D) 0.7

(E) Answer not known

85. Identify the method of producing vertically orientated patterning with warp threads on a single Jersey weft knitted base structure.

(A) Warping

(B) Stripping

(C)✓ Wrapping

(D) Stitching

(E) Answer not known

86. Among the following knit fabric, the least extensible fabric is

(A) Single Jersey

(B) RIB

(C)✓ Interlock

(D) Purl

(E) Answer not known

87. Identify the correct statement based on constant values (Ks) of plain knitted fabric in the different stable state.

(A) Wet relaxed > Dry relaxed > Finish relaxed

(B) Wet relaxed > Finish relaxed > Dry relaxed

(C)✓ Finish relaxed > Wet relaxed > Dry relaxed

(D) Finish relaxed > Dry relaxed > Wet relaxed

(E) Answer not known

88. Choose the incorrect statement(s) in respect of purl knitting machine.

(i) It has both face and reverse loop stitch in the same wale

(ii) Two needle beds are set at 90° angle to each other

(iii) Double ended latch needle is required for purl knitting machine

(A) Option (i) and (ii) only (B)✓ Option (ii) only

(C) Option (ii) and (iii) only (D) Option (iii) only

(E) Answer not known

89. _____ structure has a great yarn content that a tricot or a Queen's cord structure.

(A)✓ Sharkskin (B) Satin

(C) Locknit (D) Blindlap

(E) Answer not known

90. The basic weft knit structures

    (i)   Plain single Jersey

    (ii) Sharkskin

    (iii) Locknit

    (iv) Rib

    (v)   Interlock

    (vi) Purl

    (A)   (i), (ii), (iii) and (iv)

    (B)✓ (i), (iv), (v) and (vi)

    (C)   (i), (iii), (iv) and (v)

    (D)   (ii), (iv), (v) and (vi)

    (E)   Answer not known

91. Isotropic web properties get from _____ method.

    (A)   Dry laid   (B) Wet laid

    (C)✓ Air laid   (D) Dry and Air laid

    (E)   Answer not known

92. Which among the following is true with respect to the characteristics of fine fibre network of melt blown fabrics?

(i) Reduced filtration efficiency

(ii) Good barrier properties

(iii) Good wicking action

(A) (i) only (B) (i) and (ii) only

(C)✓ (ii) and (iii) only (D) (i) and (iii) only

(E) Answer not known

93. ——————— structure is formed by double hooked latch needle.

(A) Plain (B) Rib

(C) Interlock (D)✓ Purl

(E) Answer not known

94. Which of the following statement is correct regarding the properties of knitted fabrics?

(A) Moisture absorption is less

(B) Dimensional stability is good

(C)✓ Crease resistance is high

(D) Stretchability is low

(E) Answer not known

95. A knitting element assists in knitting by holding down the formed stitches is called —————.

    (A) Cam   (B) Sinker ✓

    (C) Cylinder   (D) Needle

    (E) Answer not known

96. In Raschel machine, the fabric is drawn from the needles at an angle of

    (A) 40° to 70°   (B) 80° to 110°

    (C) 120° to 160° ✓   (D) 170° to 210°

    (E) Answer not known

97. ————— are used for structuring and patterning pre-needled fabrics.

    (A) Crown needles   (B) Star blade needles

    (C) Fork needles ✓   (D) Triangular blade needles

    (E) Answer not known

98. In a dry lay web preparation process, web drafting is carried out to

    (A) Increase the thickness of the web

    (B) Blend the fibres in the web

    (C) Reorient the fibres in the web ✓

    (D) Decrease the longitudinal strength of the web

    (E) Answer not known

99. Calculate the number of single layers laid in the cross-laid technology with the following particulars, (value of tan 37° = 0.75)

Web feed rate = 110 m/min

Web delivery rate = 5.5 m/min

(A) 15 (B) 16

(C)✓ 20 (D) 22

(E) Answer not known

100. The purpose of applying lubricants on certain nonwoven fabric is to

(A) Impart stiffness

(B)✓ Reduce fibre to fibre friction

(C) Increase fibre to metal friction

(D) Increase wettability

(E) Answer not known

101. Marginal Cost is

(A) Cost without profit

(B)✓ The additional cost to produce one extra unit of output

(C) Cost with minimum profit

(D) The money that has already been spent

(E) Answer not known

102. A garment industry had its total overhead of Rs. 10,000/-. It used direct material worth Rs. 10,000/- and paid Rs. 15,000/- as direct labour charges. The Prime Cost percentage rate should be

(A)✓ 40% (B) 66.7%

(C) 100% (D) 150%

(E) Answer not known

103. A textile sector was sold a product with a cost of rupees 1,60,000/- and earn profit of rupees 16,000/- with an capital investment of rupees 85,000/-. The capital turnover should be

(A) ✓ 1.88 times
(B) 2 times
(C) 18.8 times
(D) 20 times
(E) Answer not known

104. Estimate the Prime Cost :

	Rs.
Direct Material =	5,000
Direct Labour =	3,500
Factory Expense =	1,500
Administration Expense =	800
Selling Expense =	700

(A) Rs. 10,000
(B) Rs. 10,800
(C) Rs. 11,500
(D) ✓ Rs. 8,500
(E) Answer not known

105. _____ is the gradual increment and constant improvement.

(A) TQM
(B) ✓ Kaizen
(C) 5' S
(D) MIS
(E) Answer not known

106. Based on accounting point of view, depreciation is an

(A) Monthly charge
(B) Bimonthly charge
(C) Half yearly charge
(D) ✓ Yearly charge
(E) Answer not known

107. The coordination and monitoring tool used by companies to plan product development process is called

(A)✓ Merchandising Calendar   (B) BOM

(C) POM   (D) Tech-Pack

(E) Answer not known

108. Which of the following is correctly paired?

(1) TPM   –   Total Preventive Maintenance

(2) TQM   –   Total Quality Management

(3) QFD   –   Quality Function Development

(4) FMEA   –   Failure Mode and Effect Analysis

(A) (1) and (2) are correct   (B) (2) and (3) are correct

(C)✓ (2) and (4) are correct   (D) (1) and (4) are correct

(E) Answer not known

109. Arrange the following five key steps of six sigma :

(1) Measure

(2) Define

(3) Improve

(4) Analyse

(5) Control

(A) (1), (2), (4), (3), (5)   (B) (2), (1), (5), (3), (4)

(C) (3), (2), (1), (4), (5)   (D)✓ (2), (1), (4), (3), (5)

(E) Answer not known

110. Industrial dispute act law is related to

(A) Specific matters

(B) Working conditions in factory

(C)✓ Worker association

(D) Social insurance

(E) Answer not known

111. OSHA refers to

(A) Occupational Supervision and Health Administration

(B)✓ Occupational Safety and Health Administration

(C) Occupational Standard and Hygiene Administration

(D) Occupational Safety and Hygiene Administration

(E) Answer not known

112. As per Industrial safety policy, a person shall work on a dangerous machine only when he

(i) Has got sufficient training

(ii) Is under adequate supervision

(iii) Got permission from supervisor

(A)✓ (i) and (ii)   (B) (i) and (iii)

(C) (ii) and (iii)   (D) (i), (ii) and (iii)

(E) Answer not known

113. A worker having more than one year of service shall get compensation during laid-off is equal to

(A) 40%   (B)✓ 50%

(C) 60%   (D) 65%

(E) Answer not known

114. Which belongs to Industrial relations legislation?

(A) Apprentices Act 1961

(B) The Banded Labour System (Abolition) Act, 1976

(C) Working Journalists Act 1958

(D)✓ Trade Unions Act 1926

(E) Answer not known

115. Which of the following is a renewable energy source?

(A)✓ Solar energy
(B) Coal

(C) Natural gas
(D) Nuclear power

(E) Answer not known

116. HVAC refers to

(A) Heating, Ventilation, Air Cooling

(B)✓ Heating, Ventilation, Air Conditioning

(C) Heating, Ventilation, Air Conditioning, Controller

(D) Heating, Ventilation, Air Cooler, Controller

(E) Answer not known

117. ―――――― techniques are used in textile processing to save energy.

(i) Microwave

(ii) Ultrasonic wave

(iii) Electro chemical

(A)✓ (i) only
(B) (i) and (ii)

(C) (iii) only
(D) (i) and (iii)

(E) Answer not known

118. Standard time =

   (A) Observed time + Allowances

   (B)✔ Basic time + Allowances

   (C) Machine time + Allowance

   (D) Observed time + Basic time + Allowances

   (E) Answer not known

119. Choose the correct matches among the following

   (1) Flow process chart   – Sequence of all activity

   (2) Multiple activity chart – Two hands of operator

   (3) Flow diagram   – Movement recording for many path

   (4) String diagram   – Movement recording for many path

   (A) (1) and (3) are correct   (B) (2) and (4) are correct

   (C)✔ (1) and (4) are correct   (D) (2) and (3) are correct

   (E) Answer not known

120. What are the advantages of method study?

   (i) Better workplace layout

   (ii) Less fatigue to operators

   (iii) Decides equipment requirements

   (iv) Better product quality

   (A) (i), (ii), (iii)   (B) (ii), (iii), (iv)

   (C)✔ (i), (ii), (iv)   (D) (i), (iii), (iv)

   (E) Answer not known

121. If an eccentric front drafting roller delivers the yarn in a ring frame, then the peak would appear in the spectrogram at a wavelength equal to _____ (Diameter of front roller is 2.54 cm)

    (A) 2.54 cm

    (B) 4 cm

    (C)✓ 8 cm

    (D) 10 cm

    (E) Answer not known

122. Find the following property.is not measured in Kawabata system (KESF)?

    (A) Bending rigidity

    (B) Shear rigidity

    (C)✓ Hygral expansion

    (D) Tensile energy

    (E) Answer not known

123. The formula of hygral expansion is

Where

L_2 = wet relaxed length

L_3 = Length of the redried fabric sample

(A)✔ $\dfrac{L_2 - L_3}{L_3} \times 100$

(B) $\dfrac{L_2 + L_3}{L_3} \times 100$

(C) $\dfrac{L_3}{L_2 - L_3} \times 100$

(D) $\dfrac{L_3}{L_2 + L_3} \times 100$

(E) Answer not known

124. KESF - 1 can measures

(A)✔ Shear characteristics of fabric
(B) Bending characteristics of fabric
(C) Frictional characteristics of fabric
(D) Compression characteristics of fabric
(E) Answer not known

125. Steaming and pressing factor is assessed using _____ method.

(A) FAST 1
(B) FAST 2
(C) FAST 3
(D)✔ FAST 4
(E) Answer not known

126. With reference to cotton testing by HVI and AFIS the correct statement(s) amongst the following is/are:

(i)   Trash in raw cotton is measured in HVI by a video scanner.

(ii) AFIS can measure the degree of thickening (θ) of cotton fiber.

(iii) Nep count is measured in HVI by a video scanner

(A)   (i) Only

(B)✔ (i) and (ii) only

(C)   (i) and (iii) only

(D)   (ii) and (iii) only

(E)   Answer not known

127. Assertion [A] :   It is not possible to represent hairiness with a single parameter

Reason [R] :   The number of hairs and the length of hairs both do not vary independently

(A)   Both [A] and [R] are true

(B)   Both [A] and [R] are false

(C)   [A] is false but [R] is true

(D)✔ [A] is true but [R] is false

(E)   Answer not known

128. In yarn numbering,

Statement [A]: Direct system measures "Length per unit mass"

Statement [B]: Indirect system measures "Mass per unit length"

(A) Statement [A] is right and Statement [B] is wrong

(B) Statement [A] is wrong and Statement [B] is right

(C) Statement [A] and Statement [B] are right

(D) Statement [A] and Statement [B] are wrong

(E) Answer not known

129. Conversion of cotton count to tex count is determined by

(A) Tex = (590.5 + cotton count)

(B) Tex = (590.5 − cotton count)

(C) Tex = (590.5 / cotton count)

(D) Tex = (590.5 × cotton count)

(E) Answer not known

130. Stelometer is a

   (i) Bundle testing instrument which is capable of measuring strength

   (ii) Bundle testing instrument which measures both elongation and strength

   (iii) Single fibre testing instrument which measures strength

   (iv) Single fibre testing instrument which measures both elongation and strength

   (A) (i) is correct

   (B)✓ (ii) is correct

   (C) (iii) is correct

   (D) (iv) is correct

   (E) Answer not known

131. Core sampling technique is used to draw the samples from

   (A)✓ Wool bale   (B) Cotton bale

   (C) Polyester bale   (D) Linen bale

   (E) Answer not known

132. Maturity Ratio of the fibre can determine by using the formula is

(A) $M = \dfrac{(N-D)}{100} + 0.7$

(B) $M = \dfrac{(N-D)}{100} - 0.7$

(C) ✓ $M = \dfrac{(N-D)}{200} + 0.7$

(D) $M = \dfrac{(N-D)}{200} - 0.7$

(E) Answer not known

133. The specimen size for crease recovery test is

(A) 2 cm long by 1 cm wide

(B) ✓ 4 cm long by 1 cm wide

(C) 6 cm long by 2 cm wide

(D) 8 cm long by 4 cm wide

(E) Answer not known

134. The diameter of the sample that is used in Martindale abrasion tester is

(A) 38 cm

(B) 3.8 mm

(C) ✓ 3.8 cm

(D) 380 mm

(E) Answer not known

135. In crease recovery testing, the fabric specimens are placed under a condition on

(A) 5 N load for 2 min

(B) 10 N load for 2 min

(C) 5 N load for 5 min

(D) ✓ 10 N load for 5 min

(E) Answer not known

136. Which of the following statement is incorrect?

(A) ✓ The cross section of many types of natural fibres is circular

(B) Silk has a triangular cross section

(C) Cotton is like a flattened tube in cross section

(D) Man made fibres are often made with trilobal, star or hollow cross sections

(E) Answer not known

137. Comb sorter is used to analyse the

(A) Fibre maturity

(B) Yarn length

(C) Yarn count

(D) ✓ Fibre length

(E) Answer not known

138. The parameter which has influence in calculating the specific work of rupture in

(A) ✓ Linear density of a fibre

(B) Uniformity ratio of a fibre

(C) 2.5% span length of a fibre

(D) 50% span length of a fibre

(E) Answer not known

139. 2.5% span length of the cotton sample is 28 mm and 50% span length is 14 mm, calculate the uniformity ratio (%)

(A) ✓ 50

(B) 70

(C) 200

(D) 25

(E) Answer not known

140. The uniformity index of normal cotton fibre in the range of

    (A)   40 – 50%   (B) 50 – 60%

    (C)✓ 75 – 85%   (D) 85 – 90%

    (E)   Answer not known

141. Which of the following is not a coating process?

    (i)   A viscous material is spread onto the fabric surface which is then passed under a closely at metal edge

    (ii) Many layers of fabric and other substrates combined together

    (iii) A composite textile material where the certain properties are improved by applying a suitable polymer composition

    (A)   Option (i) only

    (B) . Option (i) and (ii) only

    (C)✓ Option (i) and (iii) only

    (D)   Option (iii) only

    (E)   Answer not known

142. Choose the right matches among the following :

    1.   Deep sea work system cables – Kevlar

    2.   Fishing nets   – Cotton

    3.   V – belts   – Polyester

    4.   Balloon feathers   – Rayon

    (A)   1 and 2 are correct

    (B)✓ 1 and 3 are correct

    (C)   2 and 3 are correct

    (D)   3 and 4 are correct

    (E)   Answer not known

143. Which are the requirements of fibre used for V-belts?

(i) high strength and dimensional stability

(ii) less resistance to periodic bending stresses

(iii) high resistance to chemicals

(A)✔ (i) only

(B) (ii) and (iii) only

(C) (i) and (ii) only

(D) (i) and (iii) only

(E) . Answer not known

144. Comment on the statements :

Statement (A) : High tenacity polyester (or) nylon continuous filament yarns are used in warp and weft direction of seat belt.

Statement (B) : Seat belt requires light weight and rigid structure.

(A)✔ (A) is true but (B) is false

(B) Both (A) and (B) are true

(C) (A) is false, (B) is true

(D) · Both (A) and (B) are false

(E) Answer not known

145. The essential properties required for Air Bag material are

    (i)   High tear strength

    (ii) Excellent UV resistance

    (iii) High anti slippage

    (iv) Low anti slippage

    (v)   Controlled air permeability

    (A)   (i), (ii) and (iii)

    (B)   (ii), (iii) and (iv)

    (C)   (iii), (iv) and (v)

    (D)✓ (i), (iii) and (v)

    (E)   Answer not known

146. The material required for Filtration applications, ——————— with diameters in the range of 0.15 − 0.35 mm, yielding fabric weight between 180 and 450 g/m².

    (A)✓ monofilament   (B) multifilament

    (C) staple yarn   (D) micro fibre

    (E) Answer not known

147. Identify the true statement with respect to the general requirements of healthcare textiles

    (i)   Surgical gowns   —   static safety

    (ii) Surgical masks   —   low air permeability

    (iii) Surgical drapes   —   Stiffness for conformability to patient

    (A)   (i) only

    (B)   (ii) and (iii) only

    (C)   (i) and (ii) only

    (D)✔ (i) and (iii) only

    (E)   Answer not known

148. Identify the 'true' statement with respect to the application of different layers of wound care products.

    (i)   Wound contact layer   —   dressing should not adhere to the wound

    (ii) Middle layer   —   to hold the dressing in place

    (iii) Base layer   —   provides cushioning effect to protect the wound

    (A)✔ (i) only

    (B)   (i) and (ii) only

    (C)   (i) and (iii) only

    (D)   (ii) and (iii) only

    (E)   Answer not known

149. Choose the incorrect statement(s), with respect to protective clothing used in Agriculture.

(i) Penetration of pesticide through the clothing is influenced by capillary forces.

(ii) Protective clothing should not cause heat stress.

(iii) Non-fluorocarbon-finished fabric provides better protection against pesticide penetration than fluorocarbon finished fabric

(A) Option (i) and (ii) only

(B) Option (ii) only

(C) ✓ Option (iii) only

(D) Option (ii) and (iii) only

(E) Answer not known

150. Identify the 'True' statement(s) about the protective clothing

(i) It should not cause heat stress.

(ii) It can be made up of cotton (or) polyester, textiles treated with repellent finishes.

(iii) The effectiveness of protective clothing is not influenced by fabric geometry

(A) (i) only

(B) ✓ (i) and (ii) only

(C) (i) and (iii) only

(D) (ii) and (iii) only

(E) Answer not known

151. The use of protective clothing is recommended if the risk factor is

(A) Less than 1

(B)✓ Greater than 1

(C) Equal to 1

(D) Equal to 0

(E) Answer not known

152. Match the following for the sports wear with suitable fabric requirements :

(a) Gymnastic uniforms   1. Brushed inside of the fabric

(b) Track suits   2. Camouflage fabrics

(c) Hunting   3. Flame and abrasion resistant textiles

(d) Race car drivers   4. Stretching and non-restrictive. properly

	(a)	(b)	(c)	(d)
(A)	3	2	1	4
(B)	3	1	2	4
(C)✓	4	1	2	3
(D)	4	2	1	3

(E) Answer not known

153. The textile marine product having the characteristics of waterproof, dual colour combination, good cleanability and good dimensional stability is

(A) Acrylic

(B)✔ Vinyl laminated polyester

(C) Teflon thread

(D) Cotton

(E) Answer not known

154. Assertion [A] : For very active sports, cotton fibres are preferred over synthetic fibres

Reason [R] : Synthetic fibres do not retain moisture and do not get heavy upon sweating

(A) [A] is true but [R] is false

(B) Both [A] are [R] are true and [R] is the correct explanation of [A]

(C)✔ [A] is false, [R] is true

(D) Both [A] and [R] are true, but [R] is not the correct explanation of [A].

(E) Answer not known

155. Choose the right matches among type:

    1.   Calendering   –   Strong, stable and low loft fabrics

    2.   Webbings   –   Coarse and open non woven fabrics

    3.   Mats   –   Coarse woven fabrics of strip like fibres

    4.   Nets   –   Two sets of coarse, parallel extruded strands intersecting with a constant angle.

    (A)   (1) and (3) are correct

    (B)   (1) and (2) are correct

    (C)   (2) and (3) are correct

    (D)✔   (1) and (4) are correct

    (E)   Answer not known

156. Which of the following statements are true about awning and canopies?

    (i)   Cotton duck (or) canvas fabric used for traditional look

    (ii) Canvas fabric have better resistance to milden and colour fading

    (iii) Synthetic textile are dominant in awning application

    (A)   (i) only true

    (B)   (ii) only true

    (C)   (i) and (ii) are true

    (D)✔   (i) and (iii) are true

    (E)   Answer not known

157. Identify the 'true' statement with respect to shear strength of geotextiles is/are,

   (i) Shear strength is governed by the angle of internal friction developed between soil and geotextile

   (ii) Low contact shear strength is required when geotextile is used to reinforce soil

   (iii) High contact shear strength is required when geotextile are designed to more against each other

   (A) ✓ (i) only

   (B) (i) and (ii) only

   (C) (ii) and (iii) only

   (D) (i) and (iii) only

   (E) Answer not known

158. Select the limiting oxygen Index of Nomex fibre.

   (A) 38 %

   (B) 21 %

   (C) 25 %

   (D) ✓ 29 %

   (E) Answer not known

159. The ultra high strength of ultra–high molecular weight polyethylene produced using a gel spinning process used in ballistic applications is due to

   (A) Parallel orientation of molecules and low crystallinity

   (B) ✓ Parallel orientation of molecules and high crystallinity

   (C) Random orientation of molecules and low crystallinity

   (D) Random orientation of molecules and high crystallinity

   (E) Answer not known

160. The fabric bonded recommendations for clean room applications of Integrated circuit industry is

(A) Spunbonded fabric

(B) High density and herringbone woven fabric

(C)✓ High density and hand woven fabric

(D) High density and tafetta woven fabric

(E) Answer not known

161. In post spinning operations,

Statement [A]   Drawing is done to fibres to enhance its properties

Statement [B]   Drawing is followed by heat – setting to stabilize the fibre and make it dimensionally stable

(A) Statement [A] is right, statement [B] is wrong

(B) Statement [A] is wrong, statement [B] is right

(C)✓ Statement [A] and statement [B] is right

(D) Statement [A] and statement [B] is wrong

(E) Answer not known

162. No appreciable difference in densities between dry and wet heat setting is found in —————— fibre.

(A) Nylon 6

(B) Nylon 66

(C)✓ Polyester

(D) Acrylic

(E) Answer not known

163. The nylon 6 continuous filaments was made by melt spinning Technique, choose the correct process flow from the following

(A) ✓ Dry polymer chips → Hopper →melting Region at 260° C →Spinning pump → gauge filter → Spinneret → Solidified → takeup region

(B) Dry polymer chips →Hopper → melting Region at 260° C → Spinneret → Spinning pump → gauge filter → takeup region → solidified

(C) Dry polymer chips → Hopper → melting Region at 260° C →gauge filter → spinning pump → spinneret → solidified → takeup region

(D) Dry polymer chips → Hopper → melting Region at 260° C → spinneret → gauge filter → spinning pump →takeup region → solidified

(E) Answer not known

164. Assertion [A]: In melt spinning process, crystallinity decreases with an increase in heat transfer coefficient

Reason [R]: In melt spinning process, slow cooling gives more time that restricts the molecules to form crystallites

(A) ✓ [A] is true but [R] is false

(B) Both [A] and [R] are true; and [R] is the correct explanation of [A]

(C) [A] is false, [R] is true

(D) Both [A] and [R] are true, but [R] is not the correct explanation of [A] is correct

(E) Answer not known

165. The suitable solvent required to dissolve cotton component in polyester/cotton blends is

(A) 80 % acetone

(B) 90 % formic acid

(C)✓ 70 % sulphuric acid

(D) 59.5 % sulphuric acid

(E) Answer not known

166. Identify from the following fibre, it forms a hard black bead as Ash at the end.of burning test. .

(A) Cotton

(B) Silk

(C) Linen

(D)✓ Acrylic

(E) Answer not known

167. The properties of amorphous fibres is/are,

(i) less absorbent

(ii) more pliable, softer handling

(iii) plastic, more easily distorted

(A) (i) only

(B) (i) and (ii) only

(C)✓ (ii) and (iii) only

(D) (i) and (iii) only

(E) Answer not known

168. ———————— method deployed to estimate molecular height is

(A) ✓ End group analysis

(B) Density measurement

(C) Birefringence

(D) X–ray diffraction

(E) Answer not known

169. Identify the bast fibres from the following.

(i) Jute

(ii) Cotton

(iii) Hemp

(iv) Flax

(A) (i), (ii), (iii)

(B) (ii), (iii), (iv)

(C) ✓ (i), (iii), (iv)

(D) (i), (ii), (iv)

(E) Answer not known

170. The formula to calculate moisture content (M) from moisture region (R) is

(A) $M = \dfrac{R(HR)}{100}$

(B)✓ $M = \dfrac{R}{1 + \dfrac{R}{100}}$

(C) $M = \dfrac{R}{100}$

(D) $M = \dfrac{1 + \dfrac{R}{100}}{R}$

(E) Answer not known

171. Assertion [A] :   Wool fibre possess considerably greater extensibility than flax fibres.

Reason [R]   :   Fibres that possess lower crystallinity, lower chain orientation and stronger inter chain bonding exhibit lower values of elongation to break.

(A)✓ [A] is true but [R] is false

(B) Both [A] and [R] are true ; and [R] is the correct explanation of [A]

(C) [A] is false, [R] is true

(D) Both [A] and [R] are true, but [R] is not the correct explanation of [A]

(E) Answer not known

172. The moisture regain value of wool fibre is

    (A)✔ 15 %

    (B)   22 %

    (C)   24 %

    (D)   27 %

    (E)   Answer not known

173. Assertion [A] : Wool fibre pulled out from root end lies in same direction becomes positive charge and fibre pulled out from tip end becomes negative charges.

    Reason [R] : Due to symmetry in surface, rubbing process creates surface charges in between identical fibres.

    (A)✔ [A] is true and [R] is false

    (B) [A] is true and [R] is the correct explanation for [A]

    (C) [A] is false and [R] is true

    (D) [A] is true and [R] is not the correct explanation for [A]

    (E) Answer not known

174. Arrange the descending order of density for cotton, wool, polyester and polypropylene is

    (A) Cotton > Wool > Polyester > Polypropylene

    (B)✔ Cotton > Polyester > Wool > Polypropylene

    (C) Cotton > Wool > Polypropylene > Polyester

    (D) Cotton > Polypropylene > Wool > Polyester

    (E) Answer not known

175. Lusture of the fiber can be affected by

   (A)   Length of the fiber
   (B)   Linear density of the fiber
   (C)   Diameter of the fiber
   (D)✓ Cross section of the fiber
   (E)   Answer not known

176. Assertion [A]   :   Irregularities on the surface of the fibre and its cross sectional shape reduces the lustre.

    Reason [R]   :   Irregularities on the surface and its cross-sectional shape causes light to be reflected in various directions.

   (A)   [A] is true but [R] is false
   (B)✓ Both [A] and [R] are true ; [R] is the correct explanation of [A]
   (C)   [A] is false, [R] is true
   (D)   Both [A] and [R] are true but [R] is not the correct explanation of [A]
   (E)   Answer not known

177. ————— is mostly identified by thermo mechanical analysis?

   (A)   Melting point
   (B)✓ Glass transition temperature
   (C)   Weight by thermal treatment
   (D)   Tensile strength
   (E)   Answer not known

178. Identify the following fibres has the lowest strength?

(A) Silk

(B)✔ Wool

(C) Cotton

(D) Jute

(E) Answer not known

179. Choose correct statement from the following.

(A)✔ The unit for thermal conductivity is [mw/(mk)]

(B) The thermal expansion co-efficient value of polyester and nylon is positive

(C) The silk fibres has higher thermal conductivity than the cotton fibres

(D) The thermal conductivity of polyethylene is lower than polyester

(E) Answer not known

180. The most preferred yarn for draw texturising is

(A) Low Oriented Yarn (LOY)

(B)✔ Partially Oriented Yarn (POY)

(C) Highly Oriented Yarn (HOY)

(D) Fully Drawn Yarn (FDY)

(E) Answer not known

181. Which of the following statements are true about washing process of denim and jeans?

(i)   Reduce the hand feel

(ii) Increase the functional properties

(iii) Increase the hand feel

(A) (i) only

(B) (i) and (ii) only

(C) (i) and (iii) only

(D)✓ (ii) and (iii) only

(E) Answer not known

182. —————— factors does not determine the selection of enzymes in denim washing process.

(A) Abrasion level

(B) Colour shade

(C) Back staining

(D)✓ Crease level

(E) Answer not known

183. In calendaring process, differential bowl speed determines

(A) Feel of the fabric

(B) Appearance of the fabric

(C)✓ Lustre of the fabric

(D) Air permeability of the fabric

(E) Answer not known

184. The process of cutting protruding fibres to even height from fabric surface is

(A) Cropping
(B) Raising
(C) ✓ Shearing
(D) Shreading
(E) Answer not known

185. The fabric achieves a lustrous paper like finish by ——————— calendaring process.

(A) ✓ Swissing finish
(B) Chasing finish
(C) Friction finish
(D) Embosing
(E) Answer not known

186. ——————— hydrophilic plasma (treatment) coating an PET fabric was found to increase in surface roughness.

(A) ✓ Silicone tetrachloride
(B) Silicone hexachloride
(C) Poly silaxane
(D) Poly Dimethyl silaxane
(E) Answer not known

187. In Bio-desizing, a regular amylase may be applied at a pH and temperature of

(A) 4.5 – 6 pH and 25 – 55°C
(B) ✓ 5.5 – 7 pH and 25 – 55°C
(C) 7.5 – 9 pH and 50 – 70°C
(D) 4.5 – 6 pH and 80 – 95°C
(E) Answer not known

188. In Nylon 6,6 fiber, increase in annealing temp

(A)✓ Increase Shrinkage (%) of fiber

(B) Decrease Shrinkage (%) of fiber

(C) Increase and then decrease Shrinkage (%) of the fiber

(D) Remain same

(E) Answer not known

189. The process that imparts Stabilization for synthetic fibres is

(A) Calendering

(B)✓ Heatsetting

(C) Raising

(D) Cropping

(E) Answer not known

190. Identify the type of enzyme that is used for bio-polishing, softness, lustre improvement and stone-washed effects on denim.

(A)✓ Cellulases

(B) Amylases

(C) Lipases

(D) Catalases

(E) Answer not known

191. Enzymes that hydrolyse cellulose are found in nature in ———————— fungi.

(A)✓ Trichoderma

(B) Aspergillus oryzae

(C) Rhizopus spp.

(D) Anaerobic

(E) Answer not known

192. The recommended biological treatment of waste water based on biodegradability is

   (A)   Biodegradability ratio less than 0.3

   (B)✔   Biodegradability ratio greater than 0.6

   (C)   Biodegradability ratio greater than 0.9

   (D)   Biodegradability ratio between 0.3 and 0.6

   (E)   Answer not known

193. Degress of contamination in effluent treatment can be measured by

   (A)   Whiteness scale·

   (B)✔   Yellowness scale

   (C)   Blue scale

   (D)   Green scale

   (E)   Answer not known

194. The tolerance limit prescribed for the effluents at the discharge point is

   (A)   The pH value should be less than 7.0

   (B)   The pH value should be in between 5.0 and 7.0

   (C)✔   The pH value should be in between 5.5 and 9.0

   (D)   The pH value should be in between 7 and 9

   (E)   Answer not known

195. In British usage, the water hardness is represent as soft in range of

   (A)✔ $0° - 4°$ (B) $4° - 7°$

   (C) $7° - 20°$ (D) $> 20°$

   (E)   Answer not known

196. Which process house consumes more water in textile wet processing sequence?

(A) ✓ Bleaching

(B) Dyeing

(C) Printing

(D) Boiler house

(E) Answer not known

197. Assertion [A] : Dip coaters are used when complete saturation impregnation of the base fabric is required

Reason [R] : The advantage of this technique is used to coat both face and back of the fabric in one pass

(A) [A] is true but [R] is false

(B) ✓ Both [A] and [R] are true ; and [R] is the correct explanation of [A]

(C) [A] is false, [R] is true

(D) Both [A] and [R] are true, but [R] is not the correct explanation of [A] is correct

(E) Answer not known

198. The flame retardants that work by condensed phase mechanism is

(A) ✓ Phosphorous based flame retardants

(B) Halogen based flame retardants

(C) Borates

(D) Alumina trihydrate

(E) Answer not known

199. Consider the correct statement in the context of reactive dyes on silk :

Statement [A] : Dyeing on tussah silk are much duller and the dyed silk shows a lower colour yield.

Statement [B] : Because of Inferior Exhaustion.

(A)✓ Both [A] and [B] are correct

(B) Both [A] and [B] are wrong

(C) [A] is correct [B] is wrong

(D) [A] is wrong [B] is correct

(E) Answer not known

200. The role of Diammonium hydrogen phosphate in crease resistant finishing of cotton fabric using urea formaldehyde precondensate is

(A) Exhaustion

(B) Migration

(C) Dispersion

(D)✓ Catalyst

(E) Answer not known