Register Number [   ]

2019
HANDLOOM TECHNOLOGY/TEXTILE TECHNOLOGY/ TEXTILE MANUFACTURE
(Diploma Std.)

Time Allowed : 3 Hours]   [Maximum Marks : 300

Read the following instructions carefully before you begin to answer the questions.

IMPORTANT INSTRUCTIONS

1. The applicant will be supplied with Question Booklet 15 minutes before commencement of the examination.

2. This Question Booklet contains **200** questions. Prior to attempting to answer, the candidates are requested to check whether all the questions are there in series and ensure there are no blank pages in the question booklet. **In case any defect in the Question Paper is noticed, it shall be reported to the Invigilator within first 10 minutes and get it replaced with a complete Question Booklet. If any defect is noticed in the Question Booklet after the commencement of examination, it will not be replaced.**

3. Answer **all** questions. **All** questions carry equal marks.

4. You must write your Register Number in the space provided on the top right side of this page. Do not write anything else on the Question Booklet.

5. An answer sheet will be supplied to you, separately by the Room Invigilator to mark the answers.

6. You will also encode your Question Booklet Number <u>with Blue or Black ink Ball point pen</u> in the space provided on the side 2 of the Answer Sheet. If you do not encode properly or fail to encode the above information, action will be taken as per Commission's notification.

7. Each question comprises *four* responses (A), (B), (C) and (D). You are to select ONLY ONE correct response and mark in your Answer Sheet. In case you feel that there are more than one correct response, mark the response which you consider the best. In any case, choose ONLY ONE response for each question. Your total marks will depend on the number of correct responses marked by you in the Answer Sheet.

8. In the Answer Sheet there are **four** circles Ⓐ , Ⓑ, Ⓒ and Ⓓ against each question. To answer the questions you are to mark with Blue or Black ink Ball point pen ONLY ONE circle of your choice for each question. Select one response for each question in the Question Booklet and mark in the Answer Sheet. If you mark more than one answer for one question, the answer will be treated as wrong. *e.g.* If for any item, Ⓑ. is the correct answer, you have to mark as follows :

Ⓐ ● Ⓒ Ⓓ

9. You should not remove or tear off any sheet from this Question Booklet. You are not allowed to take this Question Booklet and the Answer Sheet out of the Examination Hall during the time of examination. <u>After the examination is concluded, you must hand over your Answer Sheet to the Invigilator. You are allowed to take the Question Booklet with you only after the Examination is over.</u>

10. **Do not make any marking in the question booklet except in the sheet before the last page of the question booklet, which can be used for rough work. This should be strictly adhered.**

11. Applicants have to write and shade the total number of answer fields left blank on the boxes provided at side 2 of OMR Answer Sheet. An extra time of 5 minutes will be given to specify the number of answer fields left blank.

12. Failure to comply with any of the above instructions will render you liable to such action or penalty as the Commission may decide at their discretion.

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1. Single blister structure can be termed as

   (A) Two-miss blister   (B) Three-miss blister

   (C) Four-miss blister   (D) Single -miss blister

2. The knitted fabric which have horizontal cords at regular intervals, produced by knitting excessing courses only on the cylinder needles is called as

   (A) Gabardine fabric   (B) Cost Brava fabric

   (C) Jersey card fabric   (D) Bourrelet fabric

3. PPC stands for

   (A) Perfect Production Company

   (B) Production Planning and Control

   (C) Print Production and Costings

   (D) Production performance and Charting

4. What is Flat pattern technique?

   (A) It is known as tailoring (or) modelling

   (B) It is modify the basic pattern

   (C) Method of manipulating the pattern which is laid on table

   (D) Basic Flat pattern is located at dart point

5. Which type of sewing machine used for stitch a tubular seam of narrow width?

   (A) Feed of Arm sewing machine

   (B) Blind stitch machine

   (C) single needle lock stitch machine

   (D) Embroidery machine

6. Body Anatomy divided in to ————— heads

   (A) 8 heads   (B) 7 heads

   (C) 6 heads   (D) 10 heads

7. The total number of needle loops in a given area of knitted structure is

    (A)   Loop length

    (B)   Gauge

    (C)   Stitch density

    (D)   Pattern row

8. Find out the main parts of the spring beard needle are

    (A)   Head, beard, eye, stem, butt

    (B)   Head, beard, latch, butt

    (C)   Hook, rivit, latch, shank, butt

    (D)   Head, hook, tongue, stem, butt

9. What is the technique used for homogeneous fibre sampling?

    (A)   Squaring technique

    (B)   Cut squaring technique

    (C)   Zoning technique

    (D)   Tong sampling

10. Grab test is related to

    (A)   Abrasion test

    (B)   Tensile test

    (C)   Tearing test

    (D)   Bursting test

11. In carding web, Nep count is expressed in terms of

    (A)   Neps / 10 inch^2

    (B)   Neps / 100 inch^2

    (C)   Neps / 1000 inch^2

    (D)   Neps / 1 inch^2

12. Which test is not related to basic T-shirt
   (A) Seam strength
   (B) Compressive shrinkage
   (C) Tearing strength
   (D) Bursting strength

13. Yarn of 10^s count and 4 micrograms/inch cotton is used. Calculate the number of fibres in the cross section.
   (A) 575
   (B) 475
   (C) 375
   (D) 275

14. Match the following :

   (1) Buoyancy Separation   (i)   Fibre length
   (2) Air flow   (ii) Trash
   (3) Comb sorter   (iii) Fibre fineness
   (4) Lumen thickness   (iv) Fibre maturity

   (A) 1–(iv); 2–(iii), 3–(i), 4–(ii)
   (B) 1–(ii); 2–(iii); 3–(i), 4–(iv)
   (C) 1–(ii), 2–(iv), 3–(i), 4–(iii)
   (D) 1–(i), 2–(ii), 3–(iii), 4–(iv)

15. What is sample adoption%?

   (A) Sample adoption% = $\dfrac{\text{Samples rejected by buyer}}{\text{Samples accepted by buyer}} \times 100$

   (B) Sample adoption% = $\dfrac{\text{Samples accepted by buyer}}{\text{Samples rejected by buyer}} \times 100$

   (C) Sample adoption% = $\dfrac{\text{Samples presented to the buyer}}{\text{Samples accepted by buyer}} \times 100$

   (D) Sample adoption% = $\dfrac{\text{Samples accepted by buyer}}{\text{Samples presented to the buyer}} \times 100$

16. What are the parameters used to measure flexural rigidity?
   (A) GSM
   (B) Blending length
   (C) GSM and Blending length
   (D) Cover factor

17. The single Yarn strength values are given in grams 150, 152, 160, 170, 172, 175, 180 and 181. Calculate the median value.
   (A) 172 grams
   (B) 170 grams
   (C) 169 grams
   (D) 171 grams

18. What is FQI?
   (A) LSM/f
   (B) LUSM/f
   (C) f/LUSM
   (D) f/LSM

19. The derivatives of plain weave are

    (A) matt, hopsack and basket

    (B) sateen, matt, hopsack

    (C) satin, sateen, basket

    (D) twill, satin, sateen

20. The type of weave which has similiar appearance to the garze is

    (A) Crepe weave

    (B) Mock leno weave

    (C) Welts and Piques weave

    (D) Bedford cords

21. Drop box with modified take up mechanisms are required for producing ——————— weave

    (A) Crepe

    (B) Plain

    (C) Extra Weft figuring

    (D) Extra Warp Figuring

22. Which one of the fabric is made up of Two threads S-twist and two threads Z-twist in warp or weft or both

    (A) Voile

    (B) Crepe

    (C) Satin

    (D) Twill

23. Which is incorrect statement with respect to weft backed fabrics?

    (A) Requires one warp beam and drop box (2×1)

    (B) Greater strength warp way

    (C) Drafts are simpler

    (D) Drawing in is cheaper due to less number of ends

24. Point out the wrong statement in the following:

The basic characteristic of satin/sateen weaves are

(A) Have no prominent weave structure

(B) No continuous twill lines

(C) Have more binding points and less float lengths

(D) More mass/unit area is possible

25. Which of the following weaves are used to produced highly irregular surface?

(A) Crepe

(B) Honey comb

(C) Huck-a-back

(D) Mock-Leno

26. Among the following weaves, which is weft faced rearranged Twill.

(A) Crepe

(B) Irregular satin

(C) Regular satin

(D) Sateen

27. Which is the incorrect statement with respect to basic characteristics of twill weave?

(A) Better cover than plain weave

(B) Less cloth thickness and mass per unit area

(C) Less binding points than plain cloth

(D) They form diagonal lines from one selvedge to another

28. Among the following draft plans, which is used to produce the stripe and check designs

(A) Broken

(B) Divided

(C) Grouped

(D) Straight

29. Construction of a woven fabric depends on

(A) The design, the draft and the lighting plan

(B) Warp, weft and pirn

(C) End, picks and design

(D) Heald, wire and draft

30. The material used in the production of mechanical lung is

    (A) Hollow polyester

    (B) Hollow silicone

    (C) Hollow viscose

    (D) Hollow cotton

31. The material used in the production of artificial liver is

    (A) Hollow viscose

    (B) Cotton

    (C) Hollow polyester

    (D) Hollow nylon

32. The large variety of conveyor belts that include

    (A) PVC and polyurethane covered monofilament style belting

    (B) Medical textiles

    (C) Geotextiles

    (D) Smart textiles

33. Which fibre is mostly used for manufacturing baby diapers by using thermal bonding non woven technique?

    (A) Polyester

    (B) Polypropylene

    (C) Nylon

    (D) Acrylic

34. Which of the following is reductive bleaching agent

    (A) Hydrogen peroxide

    (B) Sodium perborate

    (C) Sodium hydrosulphite

    (D) Sodium chlorite

35. The thermal bonding with high pressure can be processed at a high speed of

(A) 200 m/min (B) 300 m/min

(C) 380 m/min (D) 400 m/min

36. Which type of binder is used for manufacturing chemical bonding non woven fabric?

(A) Pantex (B) Latex

(C) Spantex (D) Tantex

37. The cross section of the needle generally used in needle punched nonwoven technique is

(A) Rectangle (B) Circular

(C) Triangle (D) Helical

38. The two most common fibre polymers used for the manufacture of geotextiles are

(A) Silk and Jute

(B) Acrylic and Cotton

(C) Polyethylene and Polypropylene

(D) Jute and Linen

39. The material used to balance out temperature to a predetermined ideal level in production of bandages is

(A) Activated carbon

(B) Phase change material

(C) Silicone laminated

(D) Calcium alginated fibre

40. Print –bonded fabrics are used in

(A) Geo textiles

(B) Automotive textiles

(C) Protective clothing

(D) Structural fabrics

41. The hygroscopic agent used along with vat dye in printing cotton fabric is

(A) Glycerine
(B) British gum
(C) Sodium alginate
(D) Sodium phosphate

42. Which of the following is not a mechanical bonded nonwoven?

(A) needle-punch nonwoven
(B) spun-lace nonwoven
(C) stitch-bond nonwoven
(D) melt-blowm nonwoven

43. What is function of levelling agent in disperse dyeing?

(A) It is promote the uniform distribution of dye into fibre
(B) It is removes the surface colour
(C) It increase the foaming into the fibre
(D) It increase the dye uptake

44. The size of a disperse dye particles is in the region of approximately —————.

(A) $0.3 - 1\,\mu m$
(B) $0.4 - 1\,\mu m$
(C) $0.5 - 1\,\mu m$
(D) $10.6 - 1\,\mu m$

45. Acide dyes are also known as

(A) Anionic Dyes
(B) Non – ionic Dyes
(C) Cationic Dyes
(D) Re-ionic Dyes

46. Choose the water – insoluble dye.

(A) Direct
(B) Disperse
(C) Basic
(D) Acid

47. What enzyme is required for enzymatic desizing?

    (A)   Catalase   (B)   Amylase

    (C)   Pectase   (D)   Lipase

48. The protrude fibres from the fabric are burned away to give the fabric a smoother surface is

    (A)   Desizing   (B)   Scouring

    (C)   Bleaching   (D)   Singeing

49. The optimum concentration required for the bacterial type of desizing enzymes is

    (A) $0.5 - 1$ (g/l)   (B) $0.6 - 2$ (g/l)

    (C) $0.7 - 2.5$ (g/l)   (D) $10.0 - 12$ (g/l)

50. A cotton fabric is woven 3 threads in a dent, 42 inches wide and 2520 ends. What will be the reed count in stock port system?

    (A) 20^s (B) 30^s

    (C) 40^s (D) 50^s

51. Calculate the time required to wind 400 lbs of 12^s cotton yarn on 10 drums. The actual production per drum per minute is 560 yds.

    (A)   10 hours   (B)   11 hours

    (C)   12 hours   (D)   20 hours

52. The winding drum of a high speed cone winder having a diameter of 3" makes 2870 rpm. The actual amount of yarn wound in 9 hrs was found to be 332, 838 yards. What is the efficiency?

    (A)   80%   (B)   81%

    (C)   82%   (D)   89%

53. Calculate the actual production of a loom per shift of 7.5 hours running at a speed of 650 picks per minute at an efficiency of 92% if the picks per dm is 300

    (A)   88.4 metres   (B)   89.7 metres

    (C)   89.8 metres   (D)   96.2 metres

54. The formula for converting English cotton count to denier is

(A) $\dfrac{5315}{Ne}$ (B) $\dfrac{5314}{Ne}$

(C) $\dfrac{5312}{Ne}$ (D) $\dfrac{5311}{Ne}$

55. Amount of twist per unit length of textile strand is

(A) Delivered length per minute ÷ Spindle speed

(B) Spindle speed ÷ Delivered length per minute

(C) (Spindle speed ÷ Delivered length per minute)²

(D) $\sqrt{(\text{Spindle speed} \div \text{Delivered length per minute})}$

56. In Tex system, Twist factor (multiplier) is equal to

(A) (turns / meter) × count (B) (turns / meter) ÷ count

(C) (turns / meter) × $\sqrt{\text{count}}$ (D) (turns / meter) ÷ $\sqrt{\text{count}}$

57. Calculate the twist/meter of a ring frame, if the spindle speed = 12,000 rpm and the delivery rate = 18 m/mint.

(A) 333.7 (B) 444.7

(C) 555.7 (D) 666.7

58. Two polyester filament yarns of 40 and 76 Denier are plied together. Find the Resultant count

(A) 96 Denier (B) 116 Denier

(C) 180 Denier (D) 196 Denier

59. Calculate comber production in meter per hour, when nips/min is A, running efficiency (%) is B, number of heads C and feed per nip in (m) is D.

(A) A × B × C × D ÷ 60

(B) A × 60 × B × C × D

(C) [A × B × 60] ÷ [C × D]

(D) [A × C × D × 60] ÷ B

60. The number of wraps (coils) as yarn wound within a traverse length is

    (A)   Traverse ratio

    (B)   Wind

    (C)   Winding length

    (D)   Double traverse

61. Identify the wrong pair

    (A)   200 Hooks Jacquard – 208

    (B)   400 Hooks Jacquard – 416

    (C)   600 Hooks Jacquard – 612

    (D)   800 Hooks Jacquard – 812

62. Loom timing means

    (A)   The sequence in which the loom mechanisms operate

    (B)   The sequence in which the looming process takes place

    (C)   The sequence in which the sizing machine operate

    (D)   The sequence in which the winding machine operate

63. The types of warping are

    (A)   high speed beaming and section warping

    (B)   winding and sizing

    (C)   sizing and weaving

    (D)   warping and sizing

64. Match the following :

    (i)   Shedding   – (a) Once every pick   – (x)   Bottom Shaft

    (ii)   Picking   – (b) Once every two picks – (y)   Bottom Shaft

    (iii) Beat up   – (c) Once every pick   – (z)   Crank Shaft

    (A)   (i)-(b)(z) (ii)-(c)(z) (iii)-(a)(x)

    (B)   (i)-(c)(y) (ii)-(b)(x) (iii)-(a)(y)

    (C)   (i)-(c)(x) (ii)-(b)(y) (iii)-(a)(z)

    (D)   (i)-(b)(y) (ii)-(c)(z) (iii)-(a)(z)

65. Which one of the following is not related to drop box mechanism?

(A) 2 × 1

(B) 3 × 1

(C) 4 × 1

(D) 6 × 1

66. The fabric defect which is formed as a bar due to the difference in material, count, twist, lustre, colour of the adjacent groups of weft yarns is called

(A) pick bar

(B) starting mark

(C) tension bar

(D) weft bar

67. EYC is

(A) Electrical Yarn Clearer

(B) Electronic Yarn Clearer

(C) Electromech Yarn Clearer

(D) English Yarn Count

68. Which one of the following is not related to thread protection mechanism?

(A) Fast reed

(B) Side-Weft fork

(C) Side lever pick

(D) Centre-Weft fork

69. Which of the following is the fastest loom?

(A) Water Jet 100 m

(B) Air Jet 100 m

(C) Projectile 100 m

(D) Rapier 100 m

70. The disadvantages of rigid rapier system is

(A) requires air conditioned room

(B) requires large floor space

(C) requires more lighting

(D) requires more power

71. The polyester fibre melts at

    (A)   220 – 240° C

    (B)   255 – 265° C

    (C)   280 – 290° C

    (D)   300 – 310° C

72. The modulus of cotton fibre is about

    (A)   400 – 425 g. wt/tex

    (B)   450 – 475 g. wt/tex

    (C)   500 - 525 g. wt/tex

    (D)   550 – 575 g. wt/tex

73. Choose the flame resistant fibre

    (A)   Acrylic   (B)   Aramid

    (C)   Nylon   (D)   Polyester

74. Choose the non-thermoplastic fibre

    (A)   Polyester   (B)   Nylon

    (C)   Polypropylene   (D)   Jute

75. Best conductor of heat

    (A)   Silk   (B)   Wool

    (C)   Cotton   (D)   Flax

76. Expand FOY

    (A)   Fully Organic Yarn

    (B)   Fully Oriented Yarn

    (C)   Fixed Organic Yarn

    (D)   Fixed Oriented Yarn

77. The raw materials required for manufacturing polyester fibers are ——————.

   (A)   Acrylonitrile and Ethylene glycol

   (B)   Ethylene glycol and Terephthalic acid

   (C)   Ethylene glycol and Adipic acid

   (D)   Terephthalic acid and Adipic acid

78. Nylon 6 is made from

   (A)   Ethylene glycol

   (B)   Terephthalic acid

   (C)   Caprolactam

   (D)   Hexamethylene diamine and adipic acid

79. The fibre dissolves in cupramonium hydroxide solution is

   (A)   cotton

   (B)   polyester

   (C)   viscose rayon

   (D)   nylon

80. For High Tenacity viscose rayon, the % of elongation at break is

   (A)   15-30%   (B)   40-45%

   (C)   50-60%   (D)   9-17%

81. Among the following, which is the noncellulosic polymers?

   (A)   Triacetate   (B)   Rayon

   (C)   Asbestos   (D)   Nylon

82. Removal of sericin results a weight loss of —————— to the silk material.

   (A)   8-10%   (B)   10-12%

   (C)   14-15%   (D)   22-25%

83. BIS stands for

(A) British International Standards   (B) Bureau of International Standards

(C) Bureau of Indian Standards   (D) British - Indian Standards

84. The textile research organisation in India for spinning is

(A) AEPC   (B) HEPC

(C) NID   (D) SITRA

85. Which statement/statements is/are correct with respect to depreciation?

I.   Decline in the value of assets due to wear and tear

II.   Decline in the value of assets due to passage of time

III.   Treated as a business expense and debited to profit and loss account

(A) II only

(B) I and III only

(C) II and III only

(D) I, II and III

86. Assertion (A) :   The work in progress inventory cost is considered during setting the production line in a Garment Unit.

Reason (R) :   Sequencing is carried out to priorities the jobs waiting in the queue.

(A) Both (A) and (R) are individually true and (R) is the correct explanation of (A)

(B) Both (A) and (R) are individually true but (R) is not a correct explanation of (A)

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

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

87. Which process is the most advanced effluent treatment process which generate free radicals and avoid residual sludge?

(A) Advanced Oxidation Process (AOP)

(B) Reverse Osmosis (RO)

(C) Activated Carbon Filter

(D) Ion Exchange

88. Name the textile research related to wool
(A) NITRA
(B) The WIRA
(C) WTO
(D) SITRA

89. What is cleaning index in blow room?

(A) $C_T = \dfrac{D_D - D_F}{D_D} \times 100\%$

(B) $C_T = \dfrac{D_F - D_D}{D_F} \times 100\%$

(C) $C_T = D_D \times D_F / 100\%$

(D) $C_T = D_F - D_T / 100\%$

where, D_F = the dirt content of the feed material

D_D = the dirt content of the delivery material

T = total.

90. Yarn delivery speed in open-end spinning machine is
(A) 25 m/m
(B) 50 m/m
(C) 100 m/m
(D) 200 m/m

91. Which is incorrect statement with respect to OE spinning?
(A) Rotor spinning technique is used
(B) Type of yarn structure produced is Z+ wrapped
(C) The trade name of OE yarn is Dref II
(D) Type of twisting adopted is false twisting

92. Which is incorrect statement with respect to self-twist spinning?
(A) False twisting of two fibrous strands positioned to self-ply
(B) Type of twisting adopted is real
(C) Type of yarn structure produced is S and Z twisted
(D) The trade name of self-twisted yarn is Pepco

93. ASTM stands for
(A) American System for Textile Materials
(B) American Society for Testing and Materials
(C) American Society for Textile Materials
(D) Asian System for Textile Materials

94. Which one of the following drafting system is not used in drawframe commercial production?

(A) 3 over 4

(B) 4 over 3

(C) 5 over 4

(D) 4 over 5

95. The distance between the nips of the back rollers and the Front rollers is termed as

(A) Roller slip

(B) Ratch

(C) Floating fibre

(D) Beard fibres

96. The majority of fibres hook in the leading position in

(A) carding

(B) combing

(C) drafting

(D) twisting

97. In modern high production card, semi-rigid clothing wire is used in

(A) Licker-in

(B) Cylinder

(C) Flat

(D) Doffer

98. Removal of short fibres during combing are termed as

(A) Trash

(B) Waste

(C) Neps

(D) Noils

99. Warp knitting is a

(A) Method of producing a fabric by using needles similar to those used in weft knitting

(B) Method of producing a fabric by using needles different to those used in weft knitting

(C) Method of producing a fabric by using stitching needles

(D) Method of producing a fabric by using sewing needles

100. In weft knitting

(A) The loops are formed across the width of the fabric

(B) The loops are formed randomly

(C) The loops are formed at left side

(D) The loops are formed at right side

101. Lock knit is a kind of

(A) Single jersey structure   (B) Rib structure

(C) Purl structure   (D) Warp knit structure

102. A loop in which the same thread enters and leaves the loop at opposite sides without crossing over itself is called a

(A) Closed loop   (B) Sinker loop

(C) Open loop   (D) Tuck loop

103. The most popular structure, having a repeat of two Wales and four courses deep is called as

(A) Two-course fish net structure   (B) Welt stitch structure

(C) Press-off stitch structure   (D) Purl knit structure

104. The special method of producing designs in knitted loops which form self-contained areas of pure colours are called as

(A) Plating   (B) Horizontal striping

(C) Intarsia   (D) Individual stitch selection

105. The type of non-jacquard double-Jersey structure which is wider and bulkier and shows the same pique effect on both sides is called as

(A) Single pique   (B) Texi pique

(C) Cross miss   (D) Piquette

106. The hose which are usually in two leg-length ranges of 7-9 inches and 11-15 inches is called as

  (A) Three-quarter hose   (B) Stockings

  (C) Tights   (D) Men's half-hose

107. The type of structure which have warp fed at a faster rate to the back guide bar than is required for the conventional structure is called as

  (A) Overfed pile structure

  (B) Satin structure

  (C) Double atlas structure

  (D) Queenscord structure

108. The stroke of straight knife vary from

  (A) 1 cm to 2 cm

  (B) 2.5 cm to 4.5 cm

  (C) 5 cm to 7.5 cm

  (D) 8 cm to 9 cm

109. Class 1 seam is also called as

  (A) Bound seam   (B) Superimposed seam

  (C) Lapped seam   (D) Flat seam

110. Class 6 seam is also called as

  (A) Decorative stitching   (B) Edge neatening

  (C) Flat seams   (D) Bound seam

111. Among the following machine, which is used to produce single jersey structure

  (A) 3D weaving machine

  (B) Warp knitting machine

  (C) Weft knitting machine

  (D) Braiding machine

112. Uniformity ratio is equal to
   (A) $[S\,50\% \div S\,2.5\%] \times 100$
   (B) $[S\,2.5\% \div S\,50\%] \times 100$
   (C) $[S\,50\% \div S\,25\%] \times 100$
   (D) $[S\,25\% \div S\,50\%] \times 100$

113. Calculate moisture content "M", when weight of water "W" and oven dry weight "D"
   (A) $M = \dfrac{W}{D} \times 100$
   (B) $M = \dfrac{W}{(W+D)} \times 100$
   (C) $M = \dfrac{D}{W} \times 100$
   (D) $M = \dfrac{D}{(W+D)} \times 100$

114. In whiteness test, what CIE stands for
   (A) Colour Illumination Evaluation
   (B) Colourist Illumination Evaluation
   (C) International Commission on Illumination
   (D) Commission for International Illumination

115. —————— is used to determine the single yarn strength.
   (A) CSP
   (B) RKM
   (C) TM
   (D) TPM

116. Which of the following machine is working under the air flow principle?
   (A) Fibre length tester
   (B) Fibre fineness tester
   (C) Fibre maturity tester
   (D) Fibre strength tester

117. Standard atmosphere is
   (A) RH 50% and temperature 27°C
   (B) RH 27% and temperature 50°C
   (C) RH 20% and temperature 65°C
   (D) RH 65% and temperature 20°C

118. What is sample Rejection Percentage?

    (A)   Proto Sample/Fit Sample

    (B)   Fit Sample/Proto Sample

    (C) $\dfrac{\text{Number of garments rejected}}{\text{Number of garments dispatched}} \times 100$

    (D) $\dfrac{\text{Number of garments dispatched}}{\text{Number of garments rejected}} \times 100$

119. Among the following, which factor has negative influence in Abrasion Resistance.

    (A)   High fibre elongation and work of Rubture

    (B)   Increasing Linear Density with constant GSM

    (C)   Uneven crimp distribution between warp and weft

    (D)   High fibre length and strength

120. Write the formulae to find out yarn diameter in inch.

    (A) $d = \dfrac{\sqrt{N}}{28}$ (B) $d = \dfrac{1}{28\sqrt{N}}$

    (C) $d = N/28$ (D) $d = \dfrac{1}{28 \times N}$

121. Calculate the C.V% of the given sample Standard Deviation 2.137 and mean of the sample is 80

    (A)   267%   (B)   2.67%

    (C)   26.7%   (D)   0.267%

122. Calculate the Standard Error from the given Data. S.D. of population is 18, number of samples tested is 100

    (A)   0.18   (B)   18

    (C)   1.8   (D)   180

123. Among the following weaves, which is variously known as 'Calico' Weave

    (A)   Crepe   (B)   Honey comb

    (C)   Plain   (D)   Twill

124. Which is the incorrect statement with respect to characteristics of ordinary honey comb weave?

    (A)   Less warp and weft floats

    (B)   Moisture absorbent due to floats

    (C)   constructed with pointed drafts

    (D)   A reversible fabric having similar effect on both sides

125. Among the following fabrics, which is produced by using two series of weft threads and one series of warp threads

    (A)   Pique fabric   (B)   Weft backed fabric

    (C)   Warp backed fabric   (D)   Welt fabric

126. Among the following draft, which is used to development of terry weave cloth

    (A)   Pointed draft   (B)   Broken draft

    (C)   Divided draft   (D)   Skip draft

127. Which type of draft is suitable for Herringbone Twills?

    (A)   Broken   (B)   Divided

    (C)   Pointed   (D)   Straight

128. Which type of velveteen is also known as all over velveteen

    (A)   Figured velveteen   (B)   Weft plushes

    (C)   Corded velveteen   (D)   Plain velveteen

129. Which is the incorrect statement with respect to various types of draft plans.

    (A)   Straight   (B)   Divided and subtracted

    (C)   Grouped   (D)   Divided

130. Which one of the following weaves will form 2 large and 2 small cells in each repeat of the design

   (A)   Ordinary honey comb

   (B)   Brighten honey comb

   (C)   Honeycomb Huck–a–back

   (D)   Grecian Huck–a–back

131. Which one of the following fabric will have highest firmness?

   (A)   Plain fabric

   (B)   Twill fabric

   (C)   Diamond weave fabric

   (D)   Mock leno fabric

132. In a Peg plan vertical spaces indicates ————————

   (A)   Ends

   (B)   Ends & Picks

   (C)   Healds

   (D)   Picks

133. Extra–Corporeal materials in medical textiles is

   (A)   Protective eye pad

   (B)   Vascular Graft

   (C)   Mechanical Lung

   (D)   Bedding

134. The Less used polymers in geotextiles are

   (A)   Polyamide (nylon) and polyethylene

   (B)   Cotton and silk

   (C)   Wool and rayon

   (D)   Mineral and glass

135. Match the following :

(a) Wet laid   1. Oil absorption
(b) Melt blown   2. Transportation cloth
(c) Needle punched   3. Medical wound dressing
(d) Stitch bond   4. Tea bag paper

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

136. Which of the following is not a thermal bonding nonwoven manufacturing process

(A) Foam bonding

(B) Infra-red radiation

(C) Ultrasonic bonding

(D) Through-air bonding

137. The Nonwoven fabric used as artificial skin for medical textile is produced from

(A) Cellulose   (B) Nylon

(C) Calcium Alginate   (D) Chitin

138. The material used in the production of artificial skin is

(A) Cotton   (B) Chitin

(C) Silk   (D) Polyester

139. The tyre cord is placed below the

(A) Cables

(B) Tyre tread

(C) Vehicle

(D) Tyre

140. Which type of chemical is used for laminating process?

(A) polyvinylacetate (B) polyvinylalcohol

(C) gum (D) poly propylene

141. The mostly preferred interlining material in collars, plackets and embroidary is

(A) Cotton Poplin (B) Non-woven Fabrics

(C) Knitted Fabrics (D) Leather

142. Felting is possible in —————— fibre.

(A) Cotton (B) Jute

(C) Wool (D) Silk

143. The thickness of the blanket used in Palmer finishing machine for the textile material having a shrinkage of 10-13 cm/m is

(A) 0.25 cm

(B) 0.5 cm

(C) 1.0 cm

(D) 10 cm

144. Among the following calendering process, which is used to produce the raised figures on the fabric surface

(A) Chasing (B) Embossing

(C) Friction (D) Schreinerizing

145. The printing speed of Fritz Buser Rotary Screen printing machine is

(A) 5 to 100 Ypm (B) 6 to 125 Ypm

(C) 7 to 150 Ypm (D) 20 to 300 Ypm

146. The thickness of the Doctor Blade in the Roller printing machine is

(A) $\frac{1}{29}$" to $\frac{1}{13}$" (B) $\frac{1}{30}$" to $\frac{1}{14}$"

(C) $\frac{1}{31}$" to $\frac{1}{15}$" (D) $\frac{1}{32}$" to $\frac{1}{16}$"

147. In which of the following dyeing process, the formation of the covalent bond between the dye and fibre occurs under alkaline conditions?

(A) Acid with wool
(B) Basic with silk
(C) Reactive with cotton
(D) Sulphur with cotton

148. Which dyes have outstanding wash fastness and Light fastness?

(A) Direct dyes
(B) Sulfur dyes
(C) Reactive dyes
(D) Vat dyes

149. What is scouring?

(A) Removal of natural impurities present on cotton
(B) Removal of size
(C) Treating with alkali
(D) Treating with acid

150. Acid treatment of wool to remove vegetable impurities is called as

(A) Acidifying
(B) Alkalising
(C) Sulphurising
(D) Carbonising

151. DM DHEU stands for

(A) Di methyol Duo Hydo Ether Unit
(B) Duo menthol D_1 Hydro Elastic urea
(C) D_1 methylol D_1 Hydroxy Ethylene urea
(D) Duo mercuri Duo Hydro Elastic unit

152. Which of the following reactions regarding scouring are correct?

(A) Vegetable oil + NaOH $\xrightarrow{Heat}$ Glycerine + Fatty acid
(B) Vegetable oil + Glycerine $\xrightarrow{Heat}$ NaOH + Fatty acid
(C) Vegetable oil + Fatty acid $\xrightarrow{Heat}$ Glycerine + NaOH
(D) Waxes + NaOH $\xrightarrow{Heat}$ Glycerine + Soap

153. What will be the count of healds for weaving a 4 shaft plain fabric using 64ˢ stock port reed drawn 4 in a dent?

   (A)   125ˢ plain set

   (B)   126ˢ plain set

   (C)   127ˢ plain set

   (D)   128ˢ plain set

154. A modern high speed beam warping machine produces 8 beams each containing 222,720 yards of warp per day of 8 hours. If the calculated warping speed of warper is 580 yards per min. Calculate the efficiency.

   (A)   78%

   (B)   80%

   (C)   82%

   (D)   89%

155. Calculate the length of warp that can be produced per day of 8 hours on an improved modern high speed beam warper, if the warping speed is 610 rpm. The overall efficiency is 75%

   (A)   219, 520 yards

   (B)   219, 600 yards

   (C)   219, 620 yards

   (D)   219, 650 yards

156. The number of units of weights per unit length of yarn is called as

   (A)   Indirect system

   (B)   Direct system

   (C)   French system

   (D)   Metric system

157. Direct system is used for

   (A)   Silk   (B)   Cotton

   (C)   Wool   (D)   Flax

158. Packing fraction is equal to

a. $\dfrac{\text{Fibre volume in yarn}}{\text{Yarn volume}}$

b. $\dfrac{\text{Yarn density}}{\text{Fiber density}}$

c. $\dfrac{\text{Yarn volume}}{\text{Fibre volume in yarn}}$

d. $\dfrac{\text{Specific volume of fibre}}{\text{Specific volume of yarn}}$

(A) a, c, d   (B) a, b, d

(C) b, d   (D) a, b

159. When number of doubling in draw frame is 8 and CV % of Card Slivers is 1.5 %, calculate CV % of draw frame silver?

(A) $1.5 \div 8$ (B) $1.5 \div \sqrt{8}$

(C) $8 \div 1.5$ (D) $8 \div \sqrt{1.5}$

160. Calculate the draft at draw frame card sliver hank = 0.14. Draw frame sliver hank = 0.14 No. of doubling = 8

(A) 8   (B) 4

(C) 12   (D) 1

161. In ring spinning the front bottom roller diameter is 1 inch and front roller speed is 345 rpm. Calculate surface speed of the roller

(A) 1078 IPM   (B) 1083 IPM

(C) 1086 IPM   (D) 1092 IPM

162. A roving of 1 hank is converted to a 24^s yarn. If twist contraction is ignored, what is the actual draft?

(A) 12   (B) 24

(C) 48   (D) 1

163. Convert 40^s Ne into Tex.

(A) 13.76   (B) 14.76

(C) 15.76   (D) 16.76

164. In pirn winding, the traverse length is generally variable upto

(A)   2 cm   (B)   4 cm

(C)   6 cm   (D)   10 cm

165. Identify the mean temperature of drying cylinder of sizing machine for the following filament yarns in ascending order. (1) polyester   (2) viscose (3) acetate (4) nylon.

(A)   3, 4, 1, 2

(B)   4, 3, 2, 1

(C)   1, 2, 3, 4

(D)   2, 3, 1, 2

166. The line of termination of woven cloth formed by the last pick

(A)   temple of the cloth   (B)   fell of the cloth

(C)   emery of the cloth   (D)   range of the cloth

167. Brocade type of fabric made by ——————— weaving.

(A)   jacquard   (B)   dobby

(C)   shuffle less weaving   (D)   circular weaving

168. Choose the incorrect statement on winding

(A)   no, anti-patterning device is required for precision winding

(B)   package density is constant from near empty package to full package in precision winding

(C)   package density is more at nose than base in random wound package

(D)   anti patterning device is required for random winding

169. The preparatory process next to sizing is

(A)   warping

(B)   winding

(C)   looming

(D)   threading

170. In weaving, the ratio of the gear teeth connecting the crank shaft to the bottom shaft is 2 : 1, the bottom shaft will make one revolution.

(A) every pick

(B) every two picks

(C) every four picks

(D) every eight picks

171. Reveling of fabric is prevented by

(A) Temples

(B) Shuttles

(C) Selvedges

(D) Lease rods

172. The heald frames more continuously from the top position to bottom position, unless some ends, as per design, require to remain up or down for two or more consecutive picks

(A) Open shed

(B) Semi-open shed

(C) Centre closed shed

(D) Bottom closed shed

173. The effective cross sectional diameter of polymer should be less than

(A) 30 Å

(B) 28 Å

(C) 20 Å

(D) 15 Å

174. The average Molecular mass of a polymer in its Molecular chain is in the order of

(A) 1000 Å

(B) 500 Å

(C) 900 Å

(D) 700 Å

32

175. Best fibre for heat Insulation

(A) Cotton

(B) Wool

(C) Flax

(D) Glass

176. Choose the correct one, with respect to moisture regain at standard atmosphere

(A) Cotton > Wool > Silk > Viscose

(B) Cotton > Silk > Viscose > Wool

(C) Viscose > Wool > Silk > Cotton

(D) Wool > Viscose > Silk > Cotton

177. Which is the natural mineral fibre?

(A) Viscose rayon

(B) Cupramonium rayon

(C) Glass

(D) Acetate rayon

178. The moisture content of viscose rayon is

(A) 13%

(B) 8.5%

(C) 0.4%

(D) 0.2%

179. Which type of solvent is used to dissolve viscose fibre?

(A) Sodium zincate

(B) Meta cresol

(C) DMF

(D) Cold acetone

180. Protein present in dry cotton

    (A)   1-1.5%

    (B)   1.8-2.5%

    (C)   1-2%

    (D)   8%

181. Which type of polymerisation technique eliminate water?

    (A)   gas phase polymerisation

    (B)   bulk polymerisation

    (C)   condensation polymerisation

    (D)   addition polymerisation

182. Determination of schedule date for sub assemblies component in an assembly type industry is done by the process famously known as ———.

    (A)   sequencing

    (B)   assembling

    (C)   backward scheduling

    (D)   loading

183. Name the function which belongs to production control

    (A)   Estimating

    (B)   Evaluating

    (C)   Scheduling

    (D)   Routing

184. Identify the organisation that performs India Handloom Brand registration work

    (A)   IIHT

    (B)   HEPC

    (C)   AEPC

    (D)   WSC

185. Vertibule training means

(A) Duplicate on the job situations in a company classroom

(B) JIT

(C) OJT

(D) Simulation

186. Classroom off the job methods means

(A) Location may be in the company classrooms

(B) Apprenticeship

(C) OJT

(D) JIT

187. The objective of plant layout is to

(A) Maximize the use of machine tools

(B) Minimize the use of machine tools

(C) Maximize the labour requirements

(D) Maximize accidents and health hazards

188. Sewing thread wastage while constructing a garment

(A) 1 - 5% (B) 10 - 15%

(C) 50 - 60% (D) 0%

189. Selection of fabric according to acceptable quality level (AQL)

(A) 0.5 (B) 1.5

(C) 15 (D) 50

190. Plant layout helps to improve

(A) maintenance

(B) the effort to complete the task

(C) supervision

(D) inspection

191. The most popular reason for blending is

    (A)   that of combining the properties of different fibres

    (B)   that of combining the properties of same fibre

    (C)   mixing of same variety of fibres

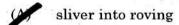   (D)   that of combining the physical and chemical properties of fibres

192. Carding action is taking place in between

    (A)   cylinder and flats

    (B)   cylinder and doffer

    (C)   cylinder and licker-in

    (D)   Doffer and calender roller

193. The bobbin speed is more than the flyer speed is known as

    (A)   Flyer lead

    (B)   Bobbin lead

    (C)   Fine yarn can be produced

    (D)   Speed frame lead

194. The roving frame makes

    (A)   sliver into roving

    (B)   lap into sliver

    (C)   fibre into lap

    (D)   roving into garn

195. ABC ring is known as

    (A)   Average Ballon Control Rings

    (B)   Automatic Ballon Control Rings

    (C)   Approximate Ballon Control Rings

    (D)   Anti Ballon Control Rings

196. In ordinary combing, the level of noil percentage removed is

(A) 10 to 15%

(B) 10 to 18%

(C) 10 to 20%

(D) 10 to 22%

197. Find the incorrect statement

(A) Opening is the breaking up of the fibre mass into tufts

(B) Cleaning is the removal of unwanted trash by mechanical means

(C) Staple length is a measured estimate of the principal length of a tuft of fibres

(D) Tuft blending is the mixing of fibrous tufts from opened bales to produce heterogenous mass for consistent yarn properties

198. Find the incorrect statement

(A) Comber influences the yarn characteristics such as evenners and strength

(B) Combed yarn requires less twist than carded yarn

(C) Comber does not remove neps

(D) Comber eliminates predetermined quantity of short fibres

199. Find the incorrect statement

(A) Ultra-short term irregularity has a wavelength less than the order of a fibre length

(B) Short-term irregularity has a wavelength greater than fibre length but less than 0.5 metre

(C) Medium-term irregularity has greater than 1 metre upto 100 metre

(D) Long-term irregularity has lesser than 50 metre

200. Carding angles normally fall into the following ranges :

1. Licker-in   (a)   12°–27°

2. Cylinder   (b)   20°–40°

3. Doffer   (c)   5°

(A) 1-c, 2-a, 3-b

(B) 1-a, 2-b, 3-c

(C) 1-b, 2-a, 3-c

(D) 1-b, 2-c, 3-a

SPACE FOR ROUGH WORK

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