

For website

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PPHD-EE-2013/Textile Engineering

C

10003

Sr. No. ....

Time : 1 1/4 Hours

Max. Marks : 100

Total Questions : 100

Candidate's Name ..... Date of Birth .....

Father's Name ..... Mother's Name .....

Roll No. ....(In Figure) .....(in words)

Date of Examination : ..... Group attempted (out of Group 'B'; 'C'; & 'D') : .....

(Signature of the Candidate)

(Signature of the Invigilator)

SE  
E

**CANDIDATES MUST READ THE FOLLOWING INFORMATION/INSTRUCTIONS BEFORE STARTING THE QUESTION PAPER.**

1. Group-"A" (Question Nos. 1 to 50) is compulsory, Group-"B"; Group-"C"; & Group-"D"; are Optional. The candidate are required to attempt 50 questions from any One Group only out of the Group-"B" OR Group-"C" OR Group-"D". All questions carry equal marks.
2. All the candidates must return the Question book-let as well as OMR answer-sheet to the Invigilator concerned before leaving the Examination Hall, failing which a case of use of unfair-means / misbehaviour will be registered against him/her, in addition to lodging of an FIR with the police. Further the answer-sheet of such a candidate will not be evaluated.
3. In case there is any discrepancy in any question(s) in the Question Booklet, the same may be brought to the notice of the Controller of Examinations in writing within two hours after the test is over. No such complaint(s) will be entertained thereafter.
4. The candidate **MUST NOT** do any rough work or writing in the OMR Answer-Sheet. Rough work, if any, may be done in the question book-let itself. Answers **MUST NOT** be ticked in the Question book-let.
5. Use only Black or Blue **BALL POINT PEN** is to be used in the OMR Answer-Sheet.
6. For each correct answer, the candidate will get full credit. Cutting, erasing, overwriting and more than one answer in OMR Answer-Sheet will be treated as incorrect answer. There will be no negative marking.
7. BEFORE ANSWERING THE QUESTIONS, THE CANDIDATES SHOULD ENSURE THAT THEY HAVE BEEN SUPPLIED CORRECT AND COMPLETE BOOKLET. COMPLAINTS, IF ANY, REGARDING MISPRINTING ETC. WILL NOT BE ENTERTAINED 30 MINUTES AFTER STARTING OF THE EXAMINATION.



1. With increase in bonding temperature and time the tensile strength of a thermally bonded nonwoven fabric
  - (1) Decreases
  - (2) Increases
  - (3) First increases and then decreases
  - (4) First decreases and then increases
2. Carcass is a component of
  - (1) Filters
  - (2) Belts
  - (3) Insulations
  - (4) Geotextiles
3. Technora is a type of.....fiber
  - (1) P-aramid      (2) Polyacrylate
  - (3) Polyester    (4) M-aramid
4. Which of the following provide maximum strain-wave propagation velocity in ballistic armors
  - (1) Kevlar              (2) Carbon
  - (3) Spectra            (4) Vectran
5. The maximum possible thickness of a weft knitted spacer fabric can be
  - (1) 4 mm              (2) 7 mm
  - (3) 10 mm            (4) 13 mm
6. The most widely used fabric for shoe linings is
  - (1) Weft knitted
  - (2) Warp knitted
  - (3) Needle punched nonwoven
  - (4) Spunlaced nonwoven
7. The earliest textile process used to manufacture a 3D fiber perform for a composite is
  - (1) Weaving      (2) Stitching
  - (3) Braiding      (4) Knitting
8. Artificial kidneys and livers are
  - (1) Extracorporeal devices
  - (2) Implantable devices
  - (3) Non-implantable devices
  - (4) Hygiene materials
9. California bearing ratio push through method is used to measure.....of a geotextile material
  - (1) Tearing strength
  - (2) Bursting strength
  - (3) Puncture strength
  - (4) Tensile strength
10. In an air filter the ratio of number of particles larger than a given size in the influent fluid to the number of particles larger than the same size in the effluent fluid during the testing process is known as
  - (1) Absolute rating
  - (2) Beta rating
  - (3) Microscopic rating
  - (4) Nominal rating
11. RKM of a yarn is numerically equal to
  - (1) Tenacity (N/tex)
  - (2) Breaking load (N)
  - (3) Tenacity (gf/tex)
  - (4) Breaking load (gf)
12. Twist factor is equal to
  - (1)  $\text{tpi} \times \text{count}$
  - (2)  $\text{tpi}/\sqrt{\text{count}}$
  - (3)  $\text{tpi} \times \sqrt{\text{count}}$
  - (4)  $\text{tpi}/\text{count}$



13. The relationship between CV% and U% for random and normal distribution of deviations from the mean is
- (1)  $CV \times 1.25 = U$
  - (2)  $CV = 1.25 \times U$
  - (3)  $CV \times U = 1.25$
  - (4)  $U = CV \times 12.5$
14. Fabric air permeability is defined as volume of air in milliliters which is passed in one second through.....of the fabric at a pressure difference of 10 mm head of water
- (1) 10 mm<sup>2</sup>
  - (2) 100 mm<sup>2</sup>
  - (3) 1 mm<sup>2</sup>
  - (4) 1000 mm<sup>2</sup>
15. In a Shirley stiffness tester the index lines are engraved at an angle of..... with the horizontal
- (1) 40.5°
  - (2) 41.5°
  - (3) 42.5°
  - (4) 43.5°
16. Fabric abrasion resistance cannot be assessed by the loss in
- (1) Strength
  - (2) Thickness
  - (3) Weight
  - (4) Air permeability
17. The property of fabric which influences drape the most is
- (1) Tensile
  - (2) Compressional
  - (3) Weight
  - (4) Air permeability
18. The thinnest classimat fault among the following is
- (1) D4
  - (2) E
  - (3) F
  - (4) 12
19. The shear characteristics of fabric are measured by
- (1) KES FB3
  - (2) FAST 3
  - (3) KES FB2
  - (4) FAST 2
20. Pilling propensity of fabric surface increases with
- (1) Increase in length of fiber used in yarn
  - (2) Increase in yarn twist
  - (3) Decrease in inter fiber friction
  - (4) Decrease in fiber strength
21. Coir is a
- (1) Bast fiber
  - (2) Fruit fiber
  - (3) Seed fiber
  - (4) Leaf fiber
22. Which of the following is not present in cotton fiber
- (1) Cellulose
  - (2) Protein
  - (3) Hemi cellulose
  - (4) Pectic substances
23. Lignin is present in
- (1) Cotton fiber
  - (2) Jute fiber
  - (3) Silk fiber
  - (4) Nylon fiber

24. Which of the following fibers have the highest heat of wetting
- (1) Cotton
  - (2) Polyester
  - (3) Wool
  - (4) Lycra
25. Which of the following fibers have maximum amount of Cellulose ?
- (1) Jute
  - (2) Cotton
  - (3) Flax
  - (4) Viscose
26. The microfibrillar angle of cellulose in jute is
- (1)  $30^\circ$
  - (2)  $8^\circ$
  - (3)  $90^\circ$
  - (4) 0
27. Grease and suint in raw wool fiber is a type of
- (1) Natural impurity
  - (2) Acquired impurity
  - (3) Applied impurity
  - (4) None of these
28. Which of the amino acid is not present in silk
- (1) Lysine
  - (2) Glutamic acid
  - (3) Arginine
  - (4) Cystine
29. Degree of polymerization of cellulose in modal is
- (1) 100-200
  - (2) 200-300
  - (3) 300-400
  - (4) 400-500
30. Which fiber have the highest melting temperature
- (1) Nylon 6
  - (2) PET
  - (3) PBT
  - (4) Polypropylene
31. Which of the following is a second order transition temperature
- (1) Melting
  - (2) Glass transition
  - (3) Crystallisation
  - (4) Softening
32. Which fiber shows negative birefringence
- (1) Polyester
  - (2) Cotton
  - (3) Acrylic
  - (4) Polypropylene
33. Which of the following is a method of producing stretch yarn
- (1) Air-jet texturing
  - (2) Stuffer-box crimping
  - (3) Twist texturing
  - (4) Knit-de-knit crimping



34. The range of spinning speed that is used to manufacture partially oriented polyester yarn is
- (1) 1000–1200 m/min
  - (2) 2000–2500 m/min
  - (3) 2800–3500 m/min
  - (4) 4000–6000 m/min
35. Drawing of synthetic filament does not lead to an increase in
- (1) Crystallinity
  - (2) Tenacity
  - (3) Tensile modulus
  - (4) Elongation at break
36. Ziegler Natta catalyst is used in the polymerization of
- (1) PET
  - (2) Nylon
  - (3) Acetate
  - (4) Polypropylene
37. The acrylonitrile content in the modacrylic fiber forming polymer is
- (1) 85–95%
  - (2) 40–80%
  - (3) 10–30%
  - (4) 25–85%
38. The density of polyester fiber is
- (1) More than that of cotton
  - (2) More than that of nylon but less than that of cotton
  - (3) Same as that of nylon
  - (4) More than that of polypropylene but less than that of nylon
39. Choose the correct combinations from a, b, c and d
- |                                      |  |
|--------------------------------------|--|
| P. Thermogravimetry(TGA)             | 1. Birefringence                           |
| Q. Differential scanning calorimetry | 2. Crystallinity                           |
| R. X-Ray diffraction                 | 3. Degradation temperature                 |
| S. Polarizing optical microscopy     | 4. Melting and crystallization temperature |
- (1) P-4, Q-3, R-2, S-1
  - (2) P-3, Q-2, R-1, S-4
  - (3) P-3, Q-4, R-2, S-1
  - (4) P-3, Q-4, R-1, S-2
40. Polypropylene is unstable to both heat and light because of
- (1) Low melting point
  - (2) Very low Tg
  - (3) Presence of Tertiary carbon
  - (4) Helicul configuration of polymer
41. A terry towel fabric is a
- (1) Warp pile structure with two series of warp and one series of weft
  - (2) Weft pile structure with two series of warp and one series of weft
  - (3) Warp pile structure with two series of weft and one series of warp
  - (4) Weft pile structure with two series of weft and one series of warp

42. The strength utilization of yarn in a woven fabric is
- (1) Always more than 1.0
  - (2) Always less than 1.0
  - (3) Always equal to 1.0
  - (4) Either more or less than 1.0
43. Which of the following yarns is the finest
- (1) 10s Ne
  - (2) 10 Tex
  - (3) 100s Ne
  - (4) 100 Tex
44. Assume Peirce's geometry and circular yarn of 0.5 mm diameter. A square plain woven fabric with maximum sett would have thread spacing (mm) in the fabric as
- (1) 0.433
  - (2) 0.500
  - (3) 0.866
  - (4) 1.000
45. As compared to equivalent plain fabric, theoretically a  $1 \times 1$  rib fabric is
- (1) Four times as thick and twice as wide
  - (2) Half as thick and twice as wide
  - (3) Twice as thick and half as wide
  - (4) Twice as thick and twice as wide
46. What will be the approximate crimp percentage for a square fabric if thread spacing is equal to sum of the diameters of warp and weft threads
- (1) 4.3
  - (2) 10.3
  - (3) 14.3
  - (4) 18.3
47. 36 Ne cotton yarn is used to produce a square fabric of  $101 \text{ g/m}^2$ , having 10% yarn crimp. The number of threads per cm in the fabric is approximately
- (1) 14
  - (2) 28
  - (3) 42
  - (4) 56
48. If fabric weight is increased for a given yarn size and density the air permeability will
- (1) Increase
  - (2) Decrease
  - (3) First increase then decrease
  - (4) First decrease then increase
49. Given that a 30 tex yarn requires a gap setting of 0.3 mm, determine the setting of a 20 tex yarn
- (1) 0.3 mm
  - (2) 0.25 mm
  - (3) 0.50 mm
  - (4) 0.82 mm
50. What is the fractional cover for the warp in a fabric with 35 ends/cm, woven from yarn of 30 tex (the fiber density is  $1.5 \text{ gm/cm}^3$ )
- (1) 0.87
  - (2) 0.69
  - (3) 0.54
  - (4) 0.43



51. Optical birefringence of glass fibre is  
 (1) Zero (2) Negative  
 (3) Positive (4) 2.0
52. Herman's orientation factor for an ideally oriented fibre is equal to  
 (1) Zero (2) Unity  
 (3) 100 (4) Infinite
53. Thermal expansion coefficient of a fibre is generally  
 (1) Zero  
 (2) Positive  
 (3) Negative  
 (4) None of the above
54. Glass transition temperature is called  
 (1) First order transition temperature  
 (2) Second order transition temperature  
 (3) Third order transition temperature  
 (4) Fourth order transition temperature
55. If frequency of current increases the permittivity of a fibre  
 (1) Increases  
 (2) Decreases  
 (3) Remains same  
 (4) None
56. The work factor of a fibre having stress strain curve inclined towards stress axis is  
 (1) More than 0.5  
 (2) Less than 0.5  
 (3) Equal to 0.5  
 (4) Equal to 1
57. Creep of a fibre is examined at  
 (1) Constant load  
 (2) Constant stretch  
 (3) Constant load and stretch  
 (4) None
58. Yield point of a fibre after mechanical conditioning is  
 (1) Raised  
 (2) Lowered  
 (3) Unchanged  
 (4) None
59. Maxwell model used to explain visco elastic property of a fibre can explain  
 (1) Creep  
 (2) Stress relaxation  
 (3) Creep and stress relaxation  
 (4) Neither creep nor stress relaxation
60. Swelling anisotropy of nylon is  
 (1) Less than unity  
 (2) Greater than unity  
 (3) Equal to unity  
 (4) Infinity

61. The accumulator speed in shuttleless weaving machines is usually set
- (1) Equal to the average unwinding speed of the insertion element
  - (2) Slightly less than the average unwinding speed of the insertion element
  - (3) Slightly greater than the average unwinding speed of the insertion element
  - (4) Equal to the velocity of the insertion element
62. Torsion bar is a component used in the picking mechanism of
- (1) Projectile weaving machines
  - (2) Rapier weaving machines
  - (3) Air jet weaving machines
  - (4) Shuttle looms
63. The weaving machine considered to be the most versatile with regard to weft colour mixing is
- (1) Projectile weaving machine
  - (2) Rapier weaving machine
  - (3) Air jet weaving machine
  - (4) Shuttle loom
64. Stretch nozzle is a component used in the weft path of
- (1) Projectile weaving machines
  - (2) Rapier weaving machines
  - (3) Air jet weaving machines
  - (4) Water jet weaving machines
65. Weft Insertion Rate of a weaving machine gives the
- (1) Average weft velocity over a loom cycle
  - (2) Actual weft velocity during insertion
  - (3) Weight of weft inserted per unit time
  - (4) Number of picks inserted per minute
66. Increasing the barb angle in felting needles for production of non-woven fabrics usually leads to
- (1) Increased fibre transport and a denser and stronger fabric
  - (2) Decreased fibre transport and a bulkier and weak fabric
  - (3) Decreased fibre transport and a denser and stronger fabric
  - (4) No effect on fibre transport
67. Polymer melt is extruded through a row of die heads into a current of high velocity hot air for production of a category of non-woven fabric called
- (1) Spun-bonded fabric
  - (2) Melt-blown fabric
  - (3) Extruded fabric
  - (4) None of the above



68. Fusion bonding is a technique of non-woven reinforcement that
- (1) Employs hot calender rollers to melt the binder fibres
  - (2) Is preferred for lighter webs
  - (3) Employs resins to bind the fibres
  - (4) Employs hot air to melt the binder polymer
69. Pattern wheel employed in weft knitting machines exhibits
- (1) Direct needle control for pattern formation
  - (2) Indirect needle control for pattern formation
  - (3) Rotary motion for feeding of yarn to the needles
  - (4) None of the above
70. Plush fabric
- (1) May be produced through weft knitting technique
  - (2) Is a type of single or double sided pile fabric
  - (3) May be produced through warp knitting technique
  - (4) All of the above
71. The break draft in the 1st passage drawframe is approximately
- |         |         |
|---------|---------|
| (1) 1.5 | (2) 1.7 |
| (3) 1.8 | (4) 2.0 |
72. The trash lint ratio in licker-in waste in a modern card is usually
- |           |           |
|-----------|-----------|
| (1) 40:60 | (2) 50:50 |
| (3) 65:35 | (4) 80:20 |
73. As compared to cotton blowroom line the ratio of beater speed and fan speed of a synthetic blowroom line is
- |            |           |
|------------|-----------|
| (1) Same   | (2) Lower |
| (3) Higher | (4) None  |
74. A comber is said to be running in backward feed if
- (1) Feeding takes place in backward swing of detaching roller
  - (2) Feeding takes place in forward swing of detaching roller
  - (3) Feeding takes place in backward swing of nipper
  - (4) Feeding takes place in forward swing of nipper
75. Taper of roving bobbin ensures that
- (1) The layers don't slip
  - (2) More material is accompanied in the package
  - (3) Unwinding tension is uniform
  - (4) Spacing between the coils is uniform
76. In ISO standard the traveler number is defined as the mass in grams of
- (1) 10 travellers
  - (2) 100 travellers
  - (3) 1000 travellers
  - (4) 10000 travellers

77. The life of a traveller used to spin polyester as compared to cotton is  
 (1) Higher  
 (2) Lower  
 (3) Same  
 (4) None
78. Twist density is maximum in between  
 (1) Front roller nip and lappet guide  
 (2) Balloon zone  
 (3) Traveller and ring bobbin  
 (4) None
79. If the specific volume and twist factor of a yarn are  $1.0 \text{ cm}^3/\text{gm}$  and  $60 \text{ tex}^{1/2} \text{ turns/cm}$  respectively, what will be its twist angle ?  
 (1)  $30^\circ$  (2)  $34^\circ$   
 (3)  $32^\circ$  (4)  $40^\circ$
80. The contraction of a yarn upon twisting is 1.07. The twisted yarn count is 30 tex. If 2 dtex fibres are used to produce the yarn, the number of fibres present in yarn cross-section is  
 (1) 140 (2) 145  
 (3) 150 (4) 160
81. The value of retraction factor ranges between  
 (1) 1 to  $\infty$   
 (2) 0 to 1  
 (3) -1 to 1  
 (4) Has no range
82. The FQI value of fibre used for a 30s Ne sewing thread should be approximately  
 (1) 55 (2) 65  
 (3) 45 (4) 35
83. Which of the following statement in relation to packing density of ring yarn is correct ?  
 (1) Packing density is low at yarn surface and more at yarn core  
 (2) Packing density is more at yarn surface and low at yarn core  
 (3) Packing density is uniform from yarn surface to core  
 (4) None
84. If  $d$  is diameter of yarn its flexural rigidity is proportional to  
 (1)  $d$  (2)  $d^2$   
 (3)  $d^3$  (4)  $d^4$
85. In a P/C yarn, cotton fibres tend to migrate at the  
 (1) Core  
 (2) Surface  
 (3) Random position  
 (4) None



86. A plot of output versus input yarn tension from a tensioner gave a non-zero positive intercept and a positive slope of greater than one. The tensioner type used is

- (1) Additive type
- (2) Capstan type
- (3) Additive cum multiplicative type
- (4) None of the above

87. Cradle pressure is automatically reduced at specific times during package formation in modern autoconer winding machines in order to

- (1) Avoid yarn coils in successive repeats being laid on top of each other
- (2) Control yarn tension
- (3) Avoid damage to the yarn
- (4) All of the above

88. Intermingling of filament yarns is a process carried out to

- (1) Prevent filamentation of the yarns during weaving
- (2) Improve the strength of the yarn
- (3) Improve the lustre of the yarn
- (4) None of the above

89. High density warp sheets should preferably be sized with

- (1) Smaller depth of immersion and higher size concentration
- (2) Smaller depth of immersion and lower size concentration
- (3) Larger depth of immersion and higher size concentration
- (4) None of the above

90. Position of the back rest roller away from the heald shafts is

- (1) Preferred for spun yarns as it enables closer pick spacing
- (2) Preferred for heavy fabrics
- (3) Preferred for filament yarns as it leads to less strain on warp
- (4) Used to obtain asymmetric shed

91. Air-jet texturing is a.....texturing process

- (1) Thermo-mechanical
- (2) Mechanical
- (3) Chemo-mechanical
- (4) Chemical

92. False Twist textured yarn is a.....bundle of.....filaments

- (1) Twistlively, twisted
- (2) Twisted, Twistlively
- (3) Twistfree, Twistlively
- (4) Untwisted, Twistfree



93. The primary heater in a twist texturing process preferably is a
- (1) Contact type heater
  - (2) Convection type heater
  - (3) Radiant heater
  - (4) Any of the above
94. The number of broken filaments generated in twist texturing process mainly depend on
- (1) Output tension
  - (2) Input tension
  - (3) Overall tension
  - (4) Angle of wrap
95. TASLAN is the registered trademark of DuPont given for
- (1) Twist textured yarn
  - (2) Stuffer box textured yarn
  - (3) Air-jet textured yarn
  - (4) Acrylic hi-bulk yarn
96. The two major properties affected by solvent texturing as compared to the thermomechanically textured yarns are
- (1) Dye-uptake and tenacity
  - (2) Dye-uptake and physical bulk
  - (3) Tenacity and physical bulk
  - (4) Physical bulk and residual shrinkage
97. The following property is found to be best in air-jet textured continuous filament yarn fabric as compared to ring-spun yarn fabric
- (1) Strength
  - (2) Crease recovery
  - (3) Pill resistance
  - (4) Elongation to break
98. Which one of the following is a periodic fault observed in twist texturing process
- (1) Tight spot
  - (2) Snow generation
  - (3) Surging
  - (4) Broken filaments
99. Which one of the following is not a method for reducing slippage in stacked disc type of twisting device
- (1) Increase in wrap angle
  - (2) Decrease in wrap angle
  - (3) Application of twister angle
  - (4) Increase tension in the process
100. The heavy load used for measurement of instability by Heberlien's method is
- (1) 0.5 cN/tex
  - (2) 0.5 gf/denier
  - (3) 0.5 cN/dtex
  - (4) 0.33 gf/denier



51. Pectinase-cellulase combination is proven to be effective on cotton fabric for
- (1) Desizing
  - (2) Scouring
  - (3) Bleaching
  - (4) Dyeing
52. Use of enzyme based peroxide killer is preferred over the conventional
- (1) Oxidants
  - (2) Reducing agents
  - (3) Acids
  - (4) Alkalies
53. E-control in continuous reactive dyeing reduces
- (1) Time
  - (2) Energy
  - (3) Time and energy
  - (4) None of these
54. Polyfunctional dyes are found to have higher.....than hot brand reactives
- (1) Colour value
  - (2) Fixation
  - (3) Shade range
  - (4) Fastness
55. What is the speed in digital printing ?
- (1) High
  - (2) Slow
  - (3) Medium
  - (4) Very High
56. What type of printing machines are Zimmer machines ?
- (1) Roller
  - (2) Flatbed
  - (3) Rotary
  - (4) Flock
57. The share of natural dyes in textile dyes is
- (1) 10%
  - (2) 5%
  - (3) Less than 1%
  - (4) More than 15%
58. Penta BDE is no more preferred for.....finish
- (1) Anti-crease
  - (2) Flame retardancy
  - (3) Anti-static
  - (4) Soil-release
59. Which of the following is the most useful polycarboxylic acid for anticreasing ?
- (1) Citric acid
  - (2) Aconitic acid
  - (3) BTCA
  - (4) Oleic acid
60. ....Used earlier, is now discouraged for antimicrobial finish
- (1) Borax
  - (2) Phenol
  - (3) Chitosan
  - (4) Triclosan
61. Sodium alginate is most recommended for printing with
- (1) Solvents
  - (2) Cationic dyes
  - (3) Reactives
  - (4) Vat dyes
62. What is the purpose steaming in printing ?
- (1) Exhaustion
  - (2) Fixation
  - (3) Transportation
  - (4) None of these

63. For coloured discharge printing, illuminant should be
- (1) Resistable
  - (2) Transferable
  - (3) Volatile
  - (4) Dischargeable
64. Printing with which of the following, can pose problem in crocking ?
- (1) Pigment
  - (2) Vats
  - (3) Reactive dyes
  - (4) Acid colours
65. With which style of printing is Leucotrope W associated ?
- (1) Coloured resist
  - (2) White resist
  - (3) Coloured discharge
  - (4) White discharge
66. On which machine are saris with cross borders normally printed ?
- (1) Flat-bed printing
  - (2) Rotary printing
  - (3) Block
  - (4) Flock
67. Maximum number of colours that can be printed in inkjet printing are
- (1) 6
  - (2) 8
  - (3) 12
  - (4) Unlimited
68. What should be used to discharge reactive ground colours ?
- (1) Reducing agents
  - (2) Alkalies
  - (3) Alginates
  - (4) Hardeners
69. Why are cold brand reactives not suitable for printing ?
- (1) Slow exhaustion
  - (2) Fast exhaustion
  - (3) Fast hydrolysis
  - (4) Unevenness
70. Pigment printing involves the use of
- (1) Binder
  - (2) Starch
  - (3) Alkali
  - (4) Oxidizing agent
71. Which enzyme is used for desizing ?
- (1) Cellulase
  - (2) Amylase
  - (3) Pectinase
  - (4) Protease
72. What should be the absorbency of a properly scoured cotton fabric ?
- |           |            |
|-----------|------------|
| (1) 5 sec | (2) <10sec |
| (3) <3sec | (4) 1min   |
73. Which of the following is referred as universal bleaching agent ?
- (1) NaOCl
  - (2) Bleaching powder
  - (3)  $\text{NaClO}_2$
  - (4)  $\text{H}_2\text{O}_2$



74. Is sodium hypochlorite suitable for treatment on wool ?

- (1) Yes
- (2) No
- (3) Probably yes
- (4) None of these

75. What happens to strength of cotton on mercerization ?

- (1) Increases
- (2) Decreases marginally
- (3) Remains same
- (4) Reduces drastically

76. Recommended strength for caustic soda in mercerization is

- |           |           |
|-----------|-----------|
| (1) 45°Tw | (2) 52°Tw |
| (3) 15%   | (4) 20%   |

77. Bioscouring involves use of

- (1) Acids
- (2) Bases
- (3) Enzymes
- (4) Alcohols

78. In which form is Hydrogen peroxide available ?

- |           |            |
|-----------|------------|
| (1) Solid | (2) Liquid |
| (3) Gas   | (4) Plasma |

79. Compared to mercerization, NaOH used in causticization is

- (1) Less
- (2) More
- (3) Same
- (4) None of these

80. Sequestering agents are

- (1) Antiseptics
- (2) Chelating agents
- (3) Bleaching agents
- (4) Solvents

81. In direct dyes, what is the major linkage between dye and cellulosic fibre ?

- (1) Ionic bond
- (2) Covalent bond
- (3) Hydrogen bond
- (4) None of these

82. Reactive dyes of HE class are usually

- (1) Mono functional
- (2) Bi functional
- (3) Tri functional
- (4) Tetrafunctional

83. 2, 3-dichloroquinoxaline containing dye belongs to a particular class of

- (1) Direct dyes
- (2) Acid dyes
- (3) Basic colours
- (4) Reactive dyes

84. Which dye has Indigoids and Anthraquinonoids as the two subclasses ?

- (1) Vats
- (2) Azoics
- (3) Disperse dyes
- (4) Pigments

85. Which of the following groups is an auxochrome ?

- |           |             |
|-----------|-------------|
| (1) Nitro | (2) Nitroso |
| (3) Azo   | (4) Amino   |

86. What are the indigosol colours ?

- (1) Vats
- (2) Solubilized vats
- (3) Acid dyes
- (4) Metal complex dyes

87. Pad-batch process is followed an application of

- (1) Direct dye
- (2) Acid dye
- (3) Reactive dye
- (4) Disperse dye

88. Out of the following which dye best suits wool ?

- (1) Vats
- (2) Direct colours
- (3) Azoics
- (4) Metal-complex dyes

89. Pigmentation process is associated with

- (1) Reactives
- (2) Vat dyes
- (3) Disperse colours
- (4) Cationic dyes

90. Polyester as well as nylon can be dyed with

- (1) Acid dyes
- (2) Disperse dyes
- (3) Direct colours
- (4) Reactives

91. Which of the following is a durable mechanical finish ?

- (1) Sanforizing
- (2) Calendering
- (3) Anti-creasing
- (4) Softener finish

92. Formaldehyde release is.....in case of DMDHEU

- (1) High
- (2) Moderate
- (3) Low
- (4) Nil

93. What type of bond is formed in anti-crease finish ?

- (1) Electrovalent
- (2) Covalent
- (3) Hydrogen
- (4) None of these

94. Synergism is seen in flame-retardant finish between the following

- |          |          |
|----------|----------|
| (1) P-N  | (2) P-Cl |
| (3) N-Cl | (4) N-Sb |

95. What is the LOI value of wool ?

- |          |          |
|----------|----------|
| (1) 18.4 | (2) 21.6 |
| (3) 25.2 | (4) 29.1 |

96. Acrylic copolymers are effective

- (1) Antioxidants
- (2) Soil-release agents
- (3) Cross-linkers
- (4) Stiffeners

97. Stain repellency is facilitated by

- (1) Fluorocarbons
- (2) Amines
- (3) Halides
- (4) Phosphonic Acid

98. Polysiloxanes do not cause

- (1) Water repellency
- (2) Lubrication
- (3) Softening effect
- (4) Anti-creasing

99. Decatizing is pertinent for

- |               |           |
|---------------|-----------|
| (1) Cotton    | (2) Wool  |
| (3) Polyester | (4) Nylon |

100. Following has good anti-microbial properties

- |            |          |
|------------|----------|
| (1) Silver | (2) Gold |
| (3) Copper | (4) Zinc |



51. Skirt measurements are based on  
 (1) Waist (2) Hip  
 (3) Skirt Length (4) All of them
52. Grain is categorised as  
 (1) Warp grain  
 (2) Weft grain  
 (3) Bias grain  
 (4) All of them
53. Pattern is categorised as  
 (1) Commercial pattern  
 (2) Drafted Pattern  
 (3) Production pattern  
 (4) All of them
54. Grading of pattern means  
 (1) Increase in size  
 (2) Decrease in size  
 (3) Both increase and decrease in size  
 (4) No change
55. Draping in pattern making means :  
 (1) Flat pattern  
 (2) Drafted pattern  
 (3) Fitting in dress forms  
 (4) None of them
56. Special care is required in Pattern cutting of  
 (1) Plain fabrics  
 (2) Coloured fabrics  
 (3) Check fabrics  
 (4) Stripe fabrics
57. Ease allowance is required in pattern making of garments  
 (1) Tight fitting  
 (2) Loose fitting  
 (3) Normal fitting  
 (4) None of these
58. For making patterns for Trousers, body measurements are not required for  
 (1) Chest  
 (2) Hip  
 (3) Crotch  
 (4) Length of legs
59. Lectra Computerised Pattern making and Grading systems are used for  
 (1) Pattern making  
 (2) Pattern making and Grading  
 (3) Marker planning, pattern making and Grading  
 (4) Pattern cutting
60. For making flat patterns, tools are required  
 (1) L-square  
 (2) Hip curve  
 (3) French Curve  
 (4) All of them
61. The term Apparel Merchandising is associated with  
 (1) Marketing  
 (2) Selling  
 (3) Buying  
 (4) Liaison work of all related activities
62. Apparel Production industries are associated with  
 (1) Twisting  
 (2) Cutting, Making and Trimming  
 (3) Reeling  
 (4) Bonding



63. Cutting department of Garment Production industries are associated with
- (1) Laying and cutting
  - (2) Sewing
  - (3) Ironing
  - (4) Finishing
64. Spreading in Garment Production Industries means
- (1) Stitching of garments
  - (2) Laying of fabric layers
  - (3) Ironing of fabrics
  - (4) Finishing of garments
65. Widely used Sewing machines types in Garment Production industries are
- (1) Single needle lock stitch
  - (2) Double needle lock stitch
  - (3) Flat lock
  - (4) Overlock
66. What is the full form of AM ?
- (1) Apparel merchandising
  - (2) Accessory merchandising
  - (3) Auto merchandising
  - (4) None of them
67. AQL stands for
- (1) Acceptable Quality Level
  - (2) Apparel Quality Level
  - (3) Apparel Quality Limit
  - (4) None of them
68. Widely used Fabric inspection systems in Apparel industries are based on
- (1) 4-point
  - (2) 10-point
  - (3) 36-point
  - (4) None of them
69. Seam pucker is controlled by
- (1) Thread size
  - (2) Seam Type
  - (3) Stitch type
  - (4) Differential feed mechanism
70. Widely used sewing threads in Apparel Industries are based on
- (1) Cotton
  - (2) Polyester
  - (3) Core-spun
  - (4) Viscose
71. The term Fashion Design is associated with
- (1) Sketching
  - (2) Accessory designing
  - (3) Dress Designing
  - (4) All above factors
72. The Fashion is mainly associated with
- (1) Clothing
  - (2) Shoes
  - (3) Jewelry
  - (4) All sectors
73. The term FAD is related to
- (1) Classic fashion
  - (2) Short-lived fashion
  - (3) Long-lived fashion
  - (4) High Fashion
74. The term Avant Garde is related to
- (1) Classic fashion
  - (2) Wild design
  - (3) Long-lived fashion
  - (4) Mass Fashion



75. The term Croquis is related to
- (1) Dress form
  - (2) Mannequin
  - (3) Dummy
  - (4) Quick sketching of a figure
76. The term Classic Fashion Cycle is related to
- (1) Continuing Acceptance
  - (2) Strong acceptance
  - (3) Short acceptance
  - (4) No acceptance
77. Factors that accelerate Fashion Movement
- (1) Religion
  - (2) Disruptive world movements
  - (3) Bad economic conditions
  - (4) Seasonal changes
78. What influences what you wear ?
- (1) Friend
  - (2) Media
  - (3) Celebrities
  - (4) All above factors
79. What do clothes provide ?
- (1) Modesty
  - (2) Protection
  - (3) Self-expression
  - (4) All above factors
80. The term Ford is related to
- (1) Best seller style
  - (2) Accessorized outfit
  - (3) Short-lived fashion
  - (4) Quick sketching of a figure
81. Which colour is the primary colour ?
- (1) RGB
  - (2) RYB
  - (3) CYK
  - (4) RYK
82. The elements of designs are
- (1) Line
  - (2) Texture
  - (3) Dots
  - (4) All of the above
83. What are principles of designs ?
- (1) Balance
  - (2) Rhythm
  - (3) Proportion
  - (4) All of the above
84. Ikat is also known as
- (1) Tie and dye technique
  - (2) Resist dye technique
  - (3) Batik
  - (4) Block printing
85. Phulkari is related to state of
- (1) Punjab
  - (2) Bengal
  - (3) Rajasthan
  - (4) Kerala
86. Seams are made of one of different types
- (1) Superimposed seams
  - (2) Chain stitch
  - (3) Lock stitch
  - (4) Blind stitch
87. Stitches are made of one of different types
- (1) Flat lock stitch
  - (2) Lap seam
  - (3) Bound seam
  - (4) Flat seam
88. Sewing threads are made of one of the different raw materials
- (1) Jute threads
  - (2) Polyester threads
  - (3) Sisal threads
  - (4) Pineapple threads

89. Sewing needles are defined by numbers in

- (1) Inches
- (2) Meters
- (3) Feet
- (4) Metric Number

90. The term Ticket number is associated with

- (1) Seams
- (2) Stitches
- (3) Sewing threads
- (4) Sewing Needle

91. Sewing threads are generally made of

- (1) 2-ply yarn
- (2) 1-ply yarn
- (3) 4-ply yarn
- (4) 3-ply yarn

92. Which stitch process is used in stitch class 100

- (1) Interlooping
- (2) Intralooping
- (3) Interlacing
- (4) All of the above

93. What is the name of stitch class 100

- (1) Lock stitch
- (2) Single thread chain stitch
- (3) Overedge stitch
- (4) Interlock stitch

94. What is the name of stitch class 300 ?

- (1) Lock stitch
- (2) Single thread chain stitch
- (3) Overedge stitch
- (4) Interlock stitch

95. What is the name of stitch class 500 ?

- (1) Lock stitch
- (2) Single thread chain stitch
- (3) Overedge stitch
- (4) Interlock stitch

96. What is the name of stitch class 600 ?

- (1) Lock stitch
- (2) Single thread chain stitch
- (3) Overedge stitch
- (4) Covering stitch

97. Overedge stitches are used for what purpose ?

- (1) For neatening
- (2) For stitch placement
- (3) Both of these
- (4) None of these

98. Interlock stitches are also known as

- (1) Multi thread chain stitches
- (2) Single thread chain stitch
- (3) Overedge stitch
- (4) All of above



99. Stitch regulator is used for controlling

- (1) Stitches per inch
- (2) Stitches per minute
- (3) Ticket number
- (4) Metric number

100. Sewing needle used for constructing woven garments are of

- (1) Set needle
- (2) Curved needle
- (3) Ball type needle
- (4) Wedge needle