D-C E T – 2018

TX	COURSE: TEXTILE TECHNOLOGY	VERSION CODE: A	QUESTION BOOKLET SERIAL NUMBER: 201445

MAXIMUM MARKS	TOTAL DURATION	TIME
180	200 Minutes	10.00 a.m. to 1.00 p.m.

MAXIMUM TIME FOR ANSWERING	MENTION YOUR DIPLOMA CET NUMBER				
180 Minutes					

A

DOs :

1. Candidate must verify that the DCET number and Name printed on the OMR Answer Sheet is tallying with the DCET number and Name printed on the Admission Ticket. Discrepancy if any, report to invigilator.
2. This question booklet is issued to you by the invigilator after the **2nd bell i.e., after 9.50 a.m.**
3. The Version Code of this Question Booklet should be entered on the OMR Answer Sheet and the respective circle should also be shaded completely.
4. The Version Code and Serial Number of this question booklet should be entered on the Nominal Roll without any mistakes.
5. Compulsorily sign at the bottom portion of the OMR answer sheet in the space provided.

DON'Ts :

1. **THE TIMING AND MARKS PRINTED ON THE OMR ANSWER SHEET SHOULD NOT BE DAMAGED / MUTILATED / SPOILED.**
2. The **3rd Bell rings at 10.00 a.m., till then;**
   - Do not remove the seal present on the right hand side of this question booklet.
   - Do not look inside this question booklet.
   - Do not start answering on the OMR answer sheet.

IMPORTANT INSTRUCTIONS TO CANDIDATES

1. This question booklet contains 180 (items) questions and each question will have one statement and four answers. (Four different options / responses.)
2. After the **3rd Bell is rung at 10.00 a.m.**, remove the paper seal of this question booklet and check that this booklet does not have any unprinted or torn or missing pages or items etc., if so, get it replaced by a complete test booklet. Read each item and start answering on the OMR answer sheet.
3. During the subsequent 180 minutes:
   - Read each question (item) carefully.
   - Choose one correct answer from out of the four available responses (options / choices) given under each question / item. In case you feel that there is more than one correct response, mark the response which you consider the best. In any case, choose **only one response** for each item.
   - Completely **darken / shade** the relevant circle with a **blue or black ink ballpoint pen against the question number on the OMR answer sheet**.

ಸರಿಯಾದ ಕ್ರಮ CORRECT METHOD	ತಪ್ಪು ಕ್ರಮಗಳು WRONG METHODS
① ● ③ ④	⊗ ② ③ ④ ① ② ③ ✓ ① ● ● ④
	● ② ③ ④ ① ● ③ ④

4. Use the space provided on each page of the question booklet for Rough Work. Do not use the OMR answer sheet for the same.
5. After the **last bell is rung at 1.00 p.m.**, stop marking on the OMR answer sheet and affix your **left hand thumb impression** on the OMR answer sheet as per the instructions.
6. Hand over the **OMR answer sheet** to the room invigilator as it is.
7. After separating the top sheet (Dept. Copy), the invigilator will return the bottom sheet replica (candidate's copy) to you to carry home for self-evaluation.
8. Preserve the replica of the OMR answer sheet for a minimum period of **ONE year**.

[P.T.O.

DO NOT WRITE HERE

PART – A

It consists of **1 – 40** questions.

1. If $A = \begin{bmatrix} 3 & 0 \\ -2 & 1 \end{bmatrix}$, then $2A - 3A^T =$

   (1) $\begin{bmatrix} -3 & -6 \\ -4 & 1 \end{bmatrix}$ (2) $\begin{bmatrix} -3 & 6 \\ -2 & 1 \end{bmatrix}$

   (3) $\begin{bmatrix} -3 & 6 \\ -4 & -1 \end{bmatrix}$ (4) $\begin{bmatrix} -3 & 6 \\ 4 & -1 \end{bmatrix}$

2. If $\begin{bmatrix} 3 & 4 & x \end{bmatrix} \begin{bmatrix} -1 \\ 2 \\ 5 \end{bmatrix} = [2x + 8]$ then the value of x =

   (1) 1 (2) –1

   (3) $-\frac{1}{2}$ (4) $\frac{1}{2}$

3. If $\begin{vmatrix} 3 & m-1 \\ m+1 & 2 \end{vmatrix} = 3$, then the value of m =

   (1) ±1 (2) $\pm\sqrt{2}$

   (3) ±3 (4) ±2

4. In solving simultaneous linear equations $x - y = 4$, $2y + 3z = -2$ and $3x + y + 2z = 1$ using Cramer's rule, the value of determinant of co-efficients of x, y and z is

   (1) 6 (2) 12

   (3) –8 (4) –16

SPACE FOR ROUGH WORK

5. If $A = \begin{bmatrix} -2 & 5 \\ 2 & -3 \end{bmatrix}$, then inverse of A =

(1) $\frac{1}{4}\begin{bmatrix} 2 & -5 \\ -2 & 3 \end{bmatrix}$ (2) $\frac{1}{4}\begin{bmatrix} -3 & -5 \\ -2 & -2 \end{bmatrix}$

(3) $\frac{1}{4}\begin{bmatrix} -2 & 2 \\ 5 & -3 \end{bmatrix}$ (4) $\frac{1}{4}\begin{bmatrix} 3 & 5 \\ 2 & 2 \end{bmatrix}$

6. The characteristic roots of the matrix $\begin{bmatrix} 4 & -2 \\ -3 & -1 \end{bmatrix}$ are

(1) 2 and –5 (2) –2 and 5

(3) –2 and –5 (4) 2 and 5

7. If $\vec{a} = 2\hat{i} - 3\hat{j} + 5\hat{k}$
$\vec{b} = 3\hat{i} - 2\hat{j} - 5\hat{k}$ and
$\vec{c} = \hat{i} + 4\hat{k}$

then the scalar product of $\vec{a} + \vec{b}$ and $\vec{b} - \vec{c}$ is

(1) –9 (2) 9

(3) 20 (4) –20

8. If A, B and C are three consecutive vertices of a parallelogram with position vectors $3\hat{i} - 2\hat{j} + \hat{k}, 2\hat{i} + \hat{j} - \hat{k}$ and $\hat{i} - \hat{j} + \hat{k}$, then area of the parallelogram is

(1) $3\sqrt{5}$ sq. units (2) $5\sqrt{3}$ sq. units

(3) $2\sqrt{5}$ sq. units (4) $5\sqrt{2}$ sq. units

9. Work done by the force 2i – 3j + 5k in moving a particle from (–3, 1, 2) to (1, –1, 1) is

(1) 3 (2) 9

(3) 6 (4) 15

SPACE FOR ROUGH WORK

10. The probability of drawing a non-diamond card from a well shuffled deck of 52 cards is

(1) $\frac{3}{4}$ (2) $\frac{1}{2}$

(3) $\frac{1}{4}$ (4) $\frac{12}{13}$

11. If $\tan\theta = \frac{2}{3}$ and $\pi < \theta < \frac{3\pi}{2}$, then $\sin\theta + \cos\theta =$

(1) $\frac{5}{\sqrt{13}}$

(2) $\frac{-1}{\sqrt{13}}$

(3) $\frac{1}{\sqrt{13}}$

(4) $\frac{-5}{\sqrt{13}}$

12. If $\tan A + \tan B + \tan A \tan B = 1$, then $A + B =$

(1) 180° (2) 90°

(3) 45° (4) 360°

13. $\sqrt{\frac{1-\cos 40^\circ}{1+\cos 40^\circ}} =$

(1) tan 20° (2) cot 40°

(3) tan 10° (4) tan 40°

14. If $\tan A = \frac{1}{2}$ and $\tan B = \frac{2}{3}$ then $\tan(A - B)$ is

(1) –1 (2) 1

(3) $\frac{-1}{8}$ (4) $\frac{1}{8}$

SPACE FOR ROUGH WORK

15. The numerical value of $\sin 10^\circ \sin 50^\circ \sin 70^\circ =$

(1) $\frac{\sqrt{3}}{8}$ (2) $\frac{1}{8}$

(3) $\frac{3}{16}$ (4) $\frac{1}{16}$

16. $\frac{\sin 12^\circ + \cos 12^\circ}{\sin 12^\circ - \cos 12^\circ} =$

(1) $\cot 33^\circ$ (2) $-\tan 33^\circ$

(3) $-\tan 57^\circ$ (4) $\tan 57^\circ$

17. The polar form of the complex number $\sqrt{3} - i$ is

(1) $2\left[\cos\frac{\pi}{6} + i\sin\frac{\pi}{6}\right]$ (2) $2\left[\cos\frac{\pi}{6} - i\sin\frac{\pi}{6}\right]$

(3) $2\left[\cos\frac{\pi}{3} + i\sin\frac{\pi}{3}\right]$ (4) $2\left[\cos\frac{\pi}{3} - i\sin\frac{\pi}{3}\right]$

18. The value of $\lim_{x \to \infty} x\left[\sqrt{x^2+1} - x\right]$ is

(1) 1 (2) 2

(3) $\frac{1}{2}$ (4) 0

19. The value of $\underset{x \to 3}{Lt} \frac{x\sqrt{x} - 3\sqrt{3}}{\sin(x-3)}$ is

(1) $\frac{3\sqrt{3}}{2}$ (2) $3\sqrt{3}$

(3) $\frac{2}{3\sqrt{3}}$ (4) $\frac{1}{3\sqrt{3}}$

SPACE FOR ROUGH WORK

20. The value of $\lim_{x \to 0} \frac{1-\sqrt{\cos x}}{x^2}$ is

(1) 1 (2) $\frac{1}{4}$

(3) 2 (4) $-\frac{1}{2}$

21. The equation of line passing through the point (1, –3) and having slope $\frac{1}{2}$ is

(1) $x - 2y - 7 = 0$ (2) $2x - y + 7 = 0$

(3) $x - 2y - 4 = 0$ (4) $x - y + 4 = 0$

22. The equation of line passing through the point (–2, 3) and parallel to the line $5x + 3y + 5 = 0$ is,

(1) $5x + 3y - 19 = 0$ (2) $5x + 3y + 1 = 0$

(3) $5x + 3y + 19 = 0$ (4) $3x - 5y + 1 = 0$

23. If $y = e^x \log x$ then $\frac{dy}{dx}$ is

(1) $e^x\left[\frac{1}{x} + \log x\right]$ (2) $e^x\left[\frac{1}{x} - \log x\right]$

(3) $e^x \cdot \frac{1}{x}$ (4) $e^x + \frac{1}{x}$

24. If $y = \log(\tan x + \sec x)$, then $\frac{dy}{dx}$ is,

(1) $-\sec x$

(2) $\sec x$

(3) $\frac{\sec x}{\tan x + \sec x}$

(4) $\log(\sec^2 x + \tan x \sec x)$

SPACE FOR ROUGH WORK

25. If $\frac{x^2}{2}+\frac{y^2}{2}=1$ then $\frac{dy}{dx}$ is

(1) $\frac{1+x}{y}$ (2) $\frac{x}{y}$

(3) $\frac{-x}{y}$ (4) $\frac{1-x}{y}$

26. If $x=\frac{1}{t}$; $y = 3t^3$ then $\frac{dy}{dx}$ is,

(1) $-6t^4$ (2) $-9t^4$

(3) -6 (4) -9

27. If $y = (\sin x)^{\log x}$ then $\frac{dy}{dx}$ is

(1) $(\sin x)^{\log x}\left[\log x \cos x + \frac{\log \sin x}{x}\right]$ (2) $(\sin x)^{\log x}\left[\frac{\log x}{\sin x}+\frac{\log \sin x}{x}\right]$

(3) $(\sin x)^{\log x}$ [$-\log x \cot x + \log \sin x$] (4) $(\sin x)^{\log x}\left[\log x \cot x + \frac{\log \sin x}{x}\right]$

28. If $y = e^{5x} + e^{-5x}$ then $\frac{d^2y}{dx^2}$ at $x = 0$ is,

(1) 25 (2) -25

(3) 50 (4) -50

29. The rate of change of volume of a sphere with respect to radius, when its radius 3 cm is

(1) 3π (2) 6π

(3) 18π (4) 36π

30. The equation of normal to the curve $y = x^2$ at (2, 2) is

(1) $x - 4y - 10 = 0$ (2) $x - 4y + 10 = 0$

(3) $x + 4y - 10 = 0$ (4) $x + 4y + 10 = 0$

SPACE FOR ROUGH WORK

31. The value of $\int e^{5\log x}\,dx$ is

(1) $5x^4 + C$ (2) $\frac{x^6}{6} + C$

(3) $6x^6 + C$ (4) $\frac{x^5}{5} + C$

32. The value of $\int \frac{\cos x - \sin x}{\cos x} dx$ is

(1) $x - \cos x + C$ (2) $x + \cos x + C$

(3) $x + \log \sec x + C$ (4) $x - \log \sec x + C$

33. The value of $\int (2 + \sin^3 x)\cos x\,dx$ is,

(1) $2\sin x + \frac{(\sin x)^4}{4} + C$ (2) $\frac{\sin^4 x}{4} + C$

(3) $2\cos x + \frac{(\cos x)^4}{4} + C$ (4) $\frac{\cos^4 x}{4} + C$

34. The value of $\int \frac{x+5}{x^2+10x-5} dx$ is,

(1) $\log (x^2 + 10x - 5)^2 + C$ (2) $\frac{1}{2}\log (x^2 + 10x - 5) + C$

(3) $\frac{1}{2}\log (x + 5) + C$ (4) $\log (x + 5)^2 + C$

35. The value of $\int 4x \log 5x\,dx$ is,

(1) $\frac{x^2 \log 5x}{2} - \frac{x^2}{4} + C$ (2) $\frac{x \log 5x}{5} + \frac{x^2}{2} + C$

(3) $5x \log 5x + 1 + C$ (4) $2x^2 \log 5x - x^2 + C$

SPACE FOR ROUGH WORK

36. $\int_0^{\pi/4} \frac{\sec^2 x}{1+\tan x}\,dx =$

(1) $-\log 2$ (2) $\log 2$

(3) $\log 3$ (4) $\log 4$

37. The volume of a solid generated by revolving the curve $y = \tan x$ about x-axis between the lines $x = 0$ and $x = \frac{\pi}{4}$ is,

(1) $\pi + \frac{\pi^2}{4}$ cu. units (2) $1 + \frac{\pi}{4}$ cu. units

(3) $1 - \frac{\pi}{4}$ cu. units (4) $\pi - \frac{\pi^2}{4}$ cu. units

38. Order and degree of differential equation $\frac{d^2y}{dx^2} = \sqrt{1 - \frac{dy}{dx}}$ are

(1) 2 and 2 respectively (2) 2 and 1 respectively

(3) 1 and 2 respectively (4) 1 and 1 respectively

39. The differential equation obtained by eliminating the arbitrary constants from the equation $y^2 = a \sin x + b \cos x$ is

(1) $2y\frac{d^2y}{dx^2} + 2\left(\frac{dy}{dx}\right)^2 - y^2 = 0$ (2) $\frac{d^2y}{dx^2} + \left(\frac{dy}{dx}\right)^2 + y^2 = 0$

(3) $2y\frac{d^2y}{dx^2} - 2\left(\frac{dy}{dx}\right)^2 + y^2 = 0$ (4) $2y\frac{d^2y}{dx^2} + 2\left(\frac{dy}{dx}\right)^2 + y^2 = 0$

40. The solution of differential equation $x\frac{dy}{dx} + y = x - 1$ is

(1) $xy = x - \frac{x^2}{2} + C$ (2) $xy = \frac{x^2}{2} - x + C$

(3) $xy + \frac{x^2}{2} + x = C$ (4) $xy - \frac{x^2}{2} - x = C$

SPACE FOR ROUGH WORK

PART – B

It consists of **41 – 80** questions.

41. The value of 20 peta Hertz is

(1) 20×10^{9} Hz (2) 20×10^{12} Hz

(3) 20×10^{15} Hz (4) 20×10^{18} Hz

42. The total reading for Screw Gauge is found by

(1) TR = PSR + (HSR × LC) ± ZE

(2) TR = PSR + (HSR × LC) ± ZC

(3) TR = (PSR + HSR) × LC ± ZE

(4) TR = (PSR + HSR) × LC ± ZC

43. The least count of a slide calipers is 0.01 cm. In a setting the zero of the Vernier Scale lies between 3.2 cm and 3.3 cm and 5th division of the Vernier co-incides with the main scale division. The total reading is

(1) 3.35 cm (2) 3.35 mm

(3) 3.25 cm (4) 3.25 mm

44. The rectangular component of a vector R are

(1) $R_X = R\cos\theta$, $R_Y = R\sin\theta$

(2) $R_X = R\sin\theta$, $R_Y = R\cos\theta$

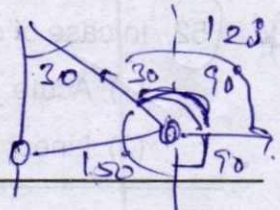
(3) $R_X = \cos\theta$; $R_Y = \sin\theta$

(4) $R_X = -\cos\theta$; $R_Y = -\sin\theta$

45. A body of weight 5 kg is suspended by means of a light string. It is pulled horizontally until the string makes an angle of 30° with the vertical. Then the horizontal force applied is

(1) $\frac{1}{\sqrt{3}}$ kg wt (2) 5 kg wt

(3) $5\sqrt{3}$ kg wt (4) $\frac{5}{\sqrt{3}}$ kg wt



SPACE FOR ROUGH WORK

$\frac{W}{\sin 120} = \frac{H}{\sin 150}$

$H = \frac{5 \times \sin 150}{\sin 120} = \frac{5 \times \frac{1}{2}}{\frac{\sqrt{3}}{2}}$

46. Among these which is the vector quantity ?
(1) Work (2) Energy
(3) Surface tension (4) Power

47. The resultant of two like parallel forces P and Q acting at a point is
(1) P + Q away from P
(2) P + Q away from Q
(3) P ~ Q in between P and Q
(4) P + Q in between P and Q

48. Shock absorbers in automobiles is an example for
(1) Tensile stress (2) Compressive stress
(3) Shear stress (4) Breaking stress

49. The elasticity of steel compared to rubber is
(1) More (2) Less
(3) Equal (4) Less than or equal

50. The stress-strain graph for an elastic body within elastic limit is
(1) Linear (2) Curved
(3) Parabola (4) Hyperbola

51. The maximum stress of steel wire is 500 N/mm^2, if the area of cross section of wire is 0.05 m^2 then the force is
(1) 25 N (2) 25 KN
(3) 25 MN (4) 250 N

52. In case of concave meniscus, the angle of contact is
(1) Acute (2) Right angle
(3) Linear (4) Obtuse

SPACE FOR ROUGH WORK

53. The surface tension of a liquid varies as
(1) Directly with temperature, inversely with density
(2) Directly with both temperature and density
(3) Inversely with both temperature and density
(4) Inversely with temperature and directly with density

54. The thrust on the bottom of a container having base area 0.5 m^2 filled with water to a height of 6 cm is
(1) 147 N
(2) 294 N
(3) 147 dynes
(4) 294 dynes

55. The fastest mode of transfer of heat is
(1) Conduction
(2) Convection
(3) Radiation
(4) Transmission

56. Pressure is directly proportional to absolute temperature at constant volume is a statement of
(1) Charle's law
(2) Boyle's law
(3) Gay-Lussac's law
(4) Boltzmann's law

57. Boyle's law is applicable for
(1) Isothermal process
(2) Isobaric process
(3) Isochoric process
(4) Isotonic process

58. At absolute zero temperature, the pressure and volume of a given mass of gas is
(1) 1
(2) 273
(3) −273
(4) 0

59. In cold countries, the windows are provided with double doors because
(1) Air between two windows behaves as a perfect insulator
(2) Air between two windows behaves as a perfect conductor
(3) To strengthen the windows
(4) Security purpose

SPACE FOR ROUGH WORK

60. The sound waves and light waves can be differentiated by

(1) Interference (2) Diffraction

(3) Reflection (4) Polarization

61. The velocity of sound in gas is independent of

(1) Temperature (2) Pressure

(3) Humidity (4) Density

62. The superposition of two waves of same frequency moving in opposite direction is

(1) Progressive wave (2) Transverse waves

(3) Sound wave (4) Stationary wave

63. For every degree raise of temperature, the velocity of sound waves in gas is increased by

(1) 6 m/s (2) 60 m/s

(3) 0.6 s/m (4) 0.6 m/s

64. The angle between the particle vibration and wave propagation in a transverse wave is

(1) 0° (2) 45°

(3) 90° (4) 180°

65. The original tension in the string if the frequency of a sonometer wire is doubled, when the tension is increased by 12 kg wt is

$T = ?$
$f = 2f$
$T = 12+T$

(1) 2 kg wt (2) 4 kg wt

(3) 8 kg wt (4) 12 kg wt

66. At resonance, the body vibrates with

$\frac{f \propto \sqrt{T_1}}{2f_2 \quad \sqrt{T_1}} = \sqrt{\frac{T}{12+T}}$

(1) Small amplitude (2) Large amplitude

(3) Zero amplitude (4) Same amplitude

SPACE FOR ROUGH WORK

67. Beats occurs in mining due to the presence of
(1) Ore (2) Water
(3) Contaminated air (4) Fossils

68. The statement which is correct in these is
(1) X-rays have longer wavelength than microwaves
(2) Gamma rays have shorter wavelength than microwaves
(3) UV-rays have shorter wavelength than violet rays
(4) Red rays have longer wavelength than infrared rays

69. LASER is used in
(1) LIDAR (2) RADAR
(3) SONAR (4) GPS

70. Nano means
(1) One hundredth of meter
(2) One thousandth of meter
(3) One millionth of meter
(4) One billionth of meter

71. Microphone is a
(1) Transducer (2) Receiver
(3) Channel (4) Transmitter

72. The principle behind optical fibre is
(1) Total internal refraction (2) Total internal reflection
(3) Reflection (4) Refraction

73. Faraday's I law of electrolysis is represented mathematically as
(1) M = ZQ (2) Z = MQ
(3) Q = MZ (4) $M = \frac{Z}{Q}$

SPACE FOR ROUGH WORK

74. A galvanic cell setup between two dissimilar metals in contact is called
(1) Concentration cell (2) Composition cell
(3) Stress cell (4) Secondary cell

75. In which of these cells the reaction can be reversed ?
(1) Primary cell (2) Secondary cell
(3) Solar cell (4) Photo cell

76. The statement which is true for fuel cell is
(1) They make more pollution
(2) They produce noise
(3) They liberate more heat
(4) They are heavy in weight

77. Alloy of steel is a mixture of
(1) Chromium, iron and nickel
(2) Chromium, iron and zinc
(3) Chromium, iron and aluminium
(4) Chromium, iron and tin

78. The materials with weak intermolecular forces of attraction between polymer chains are
(1) Elastomers (2) Fibres
(3) Thermoplastic (4) Thermosetting polymers

79. The type of composite material to which reinforced concrete belongs is
(1) Laminate (2) Particulate
(3) Short fibre (4) Long fibre

80. pH value of a solution is given by
(1) $-\log_{10}[H^+]$ (2) $-\log_e[OH^-]$
(3) $-\log_e[H^+]$ (4) $\log_{10}[H^+]$

SPACE FOR ROUGH WORK

PART – C

It consists of **81 – 180** Questions :

81. Polyethylene is produced by
    (1) Addition polymerisation
    (2) Condensation polymerisation
    (3) Step growth polymerisation
    (4) Ring opening polymerisation

82. Degree of polymerisation of cotton is approximately
    (1) 50 (2) 500
    (3) 5000 (4) 5

83. Wool keratin polymer contains about
    (1) 10 Amino Acids (2) 20 Amino Acids
    (3) 100 Amino Acids (4) 200 Amino Acids

84. Number of carbon atoms present in Nylon 66 repeat unit are
    (1) 6 (2) 12
    (3) 18 (4) 66

85. The following are hydrophobic fibres
    (1) Polyester and polyethylene
    (2) Polyester and cotton
    (3) Polyester and viscose
    (4) Polyethylene and wool

86. Melting point of Nylon 66 is
    (1) 180°C (2) 250°C
    (3) 100°C (4) 300°C

SPACE FOR ROUGH WORK

87. Which of the following statement is not correct with respect to polyester ?
    (1) Polyester is hydrophilic fibre
    (2) Polyester is produced by step growth polymerisation
    (3) Polyester is produced from ethylene glycol and dimethyl teraphthalate
    (4) Polyester T_m is 260°C

88. The elements present in carbon fibre is
    (1) C, H, O
    (2) C, N, O
    (3) C, S, O
    (4) Only C

89. The replacement of hydrogen atoms of polyethylene by fluorine atoms is known as
    (1) Carbon fibre
    (2) Teflon fibre
    (3) Nomex fibre
    (4) Glass fibre

90. Which among the following is heat resistant fibre ?
    (1) Wool
    (2) Polyethylene
    (3) Kevlar
    (4) Viscose

91. Partial hydrolysis step is essential to manufacture
    (1) Acrylic
    (2) Diacetate
    (3) Polyethylene
    (4) Polypropylene

92. Aromatic polyamide fibres are
    (1) Carbon and Teflon
    (2) Nomex and Teflon
    (3) Carbon and Kevlar
    (4) Nomex and Kevlar

93. The example for leaf fibre is
    (1) Cotton
    (2) Sisal
    (3) Wool
    (4) Jute

SPACE FOR ROUGH WORK

94. The weight of lint is 10 grams. The weight of seeds is 20 grams. Then ginning percent is

(1) 18% (2) 33%

(3) 67% (4) 97%

95. Piano feed regulating mechanism is associated with

(1) Porcupine opener (2) Card

(3) 3-bladed beater (4) Scutcher

96. A system of feeding small tufts of fibres directly from blowroom to card is known as

(1) Blending (2) Mixing

(3) Chute feed (4) Cleaning

97. The objects of carding are

(i) Individualization of fibres

(ii) Removal of impurities

(iii) Converting lap to siiver

(1) (i) and (ii) (2) (ii) and (iii)

(3) (i) and (iii) (4) (i), (ii) and (iii)

98. Heel and Toe arrangement is found in the region of

(1) Feed roller and licker in

(2) Cylinder and flats

(3) Cylinder and doffer

(4) Cylinder and mote knives

99. The objects of Draw frame are

(1) Drawing and twisting

(2) Twisting and winding

(3) Drawing and opening

(4) Doubling and drawing

SPACE FOR ROUGH WORK

100. The comber is used in the production of
(1) Coarse yarns and fine yarns
(2) Coarse yarns and texturized yarns
(3) Medium and fine yarns
(4) Fancy and texturized yarns

101. Hackling comber is suitable for
(1) Cotton (2) Wool
(3) Jute (4) Viscose

102. The good dust removing machine (80% extraction) is
(1) Scutcher (2) Card
(3) Draw frame (4) TFO

103. Flyer is made from the following would not spread at legs is
(1) Steel (2) Rubber
(3) Wood (4) Light alloy

104. The features of modern ring frame drafting systems are
(1) $\frac{3}{3}$ and double apron (2) $\frac{3}{4}$ and single apron
(3) $\frac{4}{4}$ and double apron (4) $\frac{3}{5}$ and single apron

105. The inclined flange ring is
(1) T-flange ring (2) ORBIT ring
(3) Anti-wedge ring (4) Cropped ring

106. The following is not a feature of rotor spinning
(1) Rotor speed is 35000 – 160000 rpm
(2) Opening roller speed is 6000 to 10000 rpm
(3) Draft range is 40 – 400 fold
(4) The count range is 60 Ne to 100 Ne

SPACE FOR ROUGH WORK

107. The surface speed of spindle on winding machine is 10 mtrs/min. The time required to produce 180 km of yarn on 10 head machine is

(1) 10 hrs (2) 15 hrs

(3) 20 hrs (4) 30 hrs

108. The resultant count of 10 Tex and 20 Tex yarn is

(1) 5 Tex (2) 15 Tex

(3) 30 Tex (4) 200 Tex

109. Yarn faults are removed in the process of

(1) Sizing (2) Warping

(3) Weaving (4) Winding

110. The objectionable fault is

(1) A_1 (2) A_2

(3) B_1 (4) D_4

111. Truck creel is used in

(1) Winding (2) Sizing

(3) Warping (4) Weaving

112. For producing stripes, the warping process used is

(1) Ball warping (2) Sizing

(3) Sectional warping (4) Beam warping

113. Weft preparatory process is

(1) Pirn winding (2) Beam warping

(3) Sizing (4) Ball warping

114. Starch in size paste is

(1) Adhesive agent (2) Softening agent

(3) Hygroscopic agent (4) Antiseptic agent

SPACE FOR ROUGH WORK

115. Weft is pushed to the fell of cloth by
(1) Shedding
(2) Picking
(3) Beat up
(4) Let off

116. The angle between the two tappets in a loom of two tappets is
(1) 60°
(2) 90°
(3) 120°
(4) 180°

117. Primary motions of a loom are
(1) Shedding and let off
(2) Shedding and picking
(3) Let off and take up
(4) Beat up and let off

118. The warp protector mechanism in a loom is
(1) Centre weft fork motion
(2) Picking motion
(3) Fast reed mechanism
(4) Dobby mechanism

119. Feeler mechanism is a feature of
(1) Handloom
(2) Air jet loom
(3) Water jet loom
(4) Automatic loom

120. 'C' link is used in shedding device of
(1) Dobby
(2) Jacquard
(3) Tappet
(4) Tappet and Jacquard

121. The skip draft is suitable for
(1) Plain weave and high warp set
(2) Twill weave and low warp set
(3) $\frac{2}{2}$ twill weave and high warp set
(4) 5 end sateen and low warp set

SPACE FOR ROUGH WORK

122. Cutting ends are used in construction of
(1) Huckaback weave
(2) Honeycomb weave
(3) Twill weave
(4) Bedford cord weave

123. Which of the following are irregular sateen weaves ?
(1) 4 end and 6 end
(2) 5 end and 8 end
(3) 5 end and 7 end
(4) 8 end and 10 end

124. ppm of hard water is
(1) 300 ppm
(2) 100 ppm
(3) 57 ppm
(4) 4 ppm

125. Cellobiose is combination of
(1) β-Glucose + β-Glucose
(2) α-Glucose + β-Glucose
(3) α-Glucose + α-Glucose
(4) γ-Glucose + γ-Glucose

126. The efficient method of singeing
(1) Plate singeing
(2) Roller singeing
(3) Gas singeing
(4) Enzymatic singeing

127. In chlorine desizing starch is attacked by
(1) Nascent chlorine
(2) Nascent oxygen
(3) Nascent bromine
(4) Nascent iodine

128. Strength of hypochlorite solution is estimated by amount of available
(1) Chlorine
(2) Oxygen
(3) Hydrogen
(4) Bromine

SPACE FOR ROUGH WORK

129. The stabiliser used in hydrogen peroxide bleaching is

(1) Sodium Hydroxide
(2) Sodium Chloride
(3) Sodium Silicate
(4) Sodium Carbonate

130. The maximum dye pick-up takes place in

(1) Slack mercerised cotton
(2) Stretched mercerised cotton
(3) Unmercerised cotton
(4) Texturised cotton

131. The dye present on fabric after dyeing 2% shade by exhaust method is

(1) 2 gm/100 gram of fabric
(2) Less than 2 gm/100 gram of fabric
(3) More than 2 gm/100 gram of fabric
(4) 200 gm/100 gram of fabric

132. The MLR in padding mangle is

(1) 1 : 1
(2) 1 : 5
(3) 1 : 20
(4) 1 : 30

133. The direct dyed goods are topped with

(1) Basic dyes
(2) Acid dyes
(3) Vat dyes
(4) Sulphur dyes

134. In IN special vat dyeing method, dye bath temperature is

(1) 40°C
(2) 50°C
(3) 60°C
(4) 80°C

135. The covalent bond between reactive dye and cotton fibre takes place when

(1) Alkali is added to bath
(2) Acid is added to bath
(3) Salt is added to bath
(4) Oil is added to bath

SPACE FOR ROUGH WORK

136. Bronziness problem of shade is related to goods dyed with

(1) Sulphur dyes (2) Vat dyes

(3) Acid dyes (4) Reactive dyes

137. Indirect method of printing is

(1) Block printing

(2) Stencil printing

(3) Rotary printing

(4) Transfer printing

138. In rotary printing, the size of repeat of design is limited to

(1) 65 cm (2) 45 cm

(3) 35 cm (4) 25 cm

139. Which calendar is used for drying and finishing ?

(1) 7 Bowl calendar (2) Felt calendar

(3) Friction calendar (4) Schreiner calendar

140. Shiffon finish is weight reduction process given to

(1) PET fabrics (2) Silk fabrics

(3) Cotton fabrics (4) Wool fabrics

141. Dye sampling technique is used for

(1) Cotton (2) Wool

(3) Polyester (4) Viscose

142. The decreasing order of moisture regain values of fibres at standard RH and temperature in sequence is

(1) Cotton, wool, silk and polyester

(2) Wool, silk, cotton and polyester

(3) Polyester, cotton, silk and wool

(4) Polyester, silk, wool and cotton

SPACE FOR ROUGH WORK

143. 2.5% span length is measured on

(1) Comb sorter (2) Ball sorter

(3) Fibrograph (4) Vibroscope

144. The spinning limit depends on

(1) Fibre strength

(2) Fibre fineness

(3) Fibre flexural rigidity

(4) Fibre torsional rigidity

145. Differential dyeing technique test is used to determine

(1) Cotton fibre length (2) Cotton fineness

(3) Cotton strength (4) Cotton maturity

146. The area under load elongation curve of a fibre is a measure of

(1) Tenacity (2) Stress

(3) Work of rupture (4) Strain

147. Load cells are used in the

(1) Strain gauge testers

(2) Pendulum lever testers

(3) Inclined plane testers

(4) Scott serigraph tester

148. 10 Tex is equal to

(1) 10 Ne (2) 30 Ne

(3) 59 Ne (4) 53 Ne

149. The prominence of twill is greatly influenced by

(1) Yarn count (2) Yarn twist

(3) Yarn strength (4) Yarn evenness

SPACE FOR ROUGH WORK

150. In series 20, 10, 0, 5, 8, 10, the means are extremely affected by this series are

(1) Harmonic mean and Arithmetic mean

(2) Harmonic mean and Geometric mean

(3) Median and Mode

(4) Arithmetic mean and Median

151. The relative measure of dispersion is

(1) Standard deviation (2) Range

(3) Variance (4) Coefficient of variation

152. The bending length $C = f_1(\theta).l_1$, if angle of inclination in stiffness tester is 41.5°, then C is equal to

(1) $0.5\, l_1$ (2) l_1

(3) $2\, l_1$ (4) $4\, l_1$

153. Fabric assistance in strip test is related to the effect of

(1) Weave (2) Traverse threads

(3) Twist (4) Weak link effect

154. The fibre which has excellent crease recovery is

(1) Cotton (2) Viscose

(3) Wool (4) Jute

155. In spray tester, the distance between spray nozzle and centre of sample on hoop is

(1) 10.24 mm (2) 12.24 mm

(3) 14.24 mm (4) 15.24 mm

156. In summer, the thermal and static comfort of a garment are provided by a fabric made from

(1) Polyester (2) Wool

(3) Cotton (4) Polyethylene

SPACE FOR ROUGH WORK

157. The basis of control chart with usual notations is

(1) $\bar{x} \pm 3\sigma$ (2) $\bar{x} \pm 1.9\sigma$

(3) $\bar{x} \pm \sigma$ (4) $\bar{x} \pm 3\sqrt{\sigma}$

158. In the following machine, the set of needles are simultaneously raised to form loops is

(1) Plain Jersey (2) Rib

(3) Interlock (4) Tricot

159. In interlock machine, the short dial needle is placed exactly opposite to

(1) Long cylinder needle

(2) Short cylinder needle

(3) Cylinder sinker

(4) Long dial needle

160. The fabric which has V-shape appearance on face and semicircles at back is

(1) Plain Jersey fabric

(2) Purl Jersey fabric

(3) Interlock fabric

(4) Rib fabric

161. Horizontal beds are essential to produce

(1) Plain Jersey fabric (2) Purl fabric

(3) Interlock fabric (4) Rib fabric

162. 'Lacoste' is

(1) Plain Jacquard structure

(2) Tricot structure

(3) Raschel structure

(4) Rib Jacquard structure

SPACE FOR ROUGH WORK

163. In 4-point system, if the length of the defect is 5 inches, then the demerit point assigned is

(1) 1 (2) 2

(3) 3 (4) 4

164. In spreading, 'antifusion paper' is used to avoid

(1) Scorched edges during cutting

(2) Unscorched edges during cutting

(3) Soft edges during cutting

(4) Separate edges during cutting

165. 'Notches' are used to

(1) Spread garment parts during sewing

(2) Fuse garment parts during sewing

(3) Press garment parts during sewing

(4) Align with other garment parts during sewing

166. The drop height of carton box with a weight of 101 to 150 lbs is

(1) 8 inches (2) 12 inches

(3) 18 inches (4) 24 inches

167. 'ANSI' is

(1) American National Standards Institute

(2) American National Study Institute

(3) American Nodal Study Institute

(4) Apparel National Standard Institute

168. The calendar that decides who handles what activity and when the activity is to take place is known as

(1) Season calendar (2) Merchandising calendar

(3) Apparel calendar (4) Business calendar

SPACE FOR ROUGH WORK

169. An array of creases in a garment is produced by

(1) Spreading (2) Fusing

(3) Pleating (4) Grading

170. Harmony, Rhythm and Balance are

(1) Principles of design

(2) Elements of design

(3) Classification of design

(4) Dimensions of design

171. The following extinguisher is suitable for cotton or other textile fibre

(1) H_2O

(2) Soda acid

(3) Foam

(4) Dry chemicals

172. HRM stands for

(1) Humanistic Resource Management

(2) Human Resource Management

(3) Human Recruitment Management

(4) Humanistic Recruitment Management

173. Which feature does not form one of Fayol's 14 principles of management ?

(1) Esprit decorps (2) Initiative

(3) Order (4) Individualism

174. Which of the following motivator is the most basic need in Maslow's hierarchy ?

(1) Safety (2) Belonging

(3) Physiological (4) Esteem

SPACE FOR ROUGH WORK

175. Hygiene factors are associated with which writer ?

(1) Frederick Hertzberg

(2) D. C. McClelland

(3) Abraham Maslow

(4) Douglas McGregor

176. Preventive maintenance activities include

(1) Equipment check

(2) Oil changes

(3) Lubrication

(4) All of these

177. Sequence of steps involved in an operation is represented by

(1) Bar diagram (2) Histogram

(3) Flow chart (4) Scatter diagram

178. The fairness in profession is

(1) Right conduct (2) Peace

(3) Truth (4) Love

179. The civic duties does not include

(1) Paying taxes

(2) Keeping surroundings clean

(3) Following road safety rules

(4) Contesting for elections

180. Lack of leadership and motivation is an impediment to

(1) Honesty (2) Civic duty

(3) Co-operation (4) Courage

SPACE FOR ROUGH WORK

SEAL

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