

PART III**18 - LEATHER TECHNOLOGY**

(Answer ALL questions)

56. Which gas is emitted during liming operation?
- Ammonia
 - Hydrogen sulphide
 - Chlorine
 - Volatile Organic Compounds
57. Which enzyme is used for unhairing process?
- Collagenase
 - Protease
 - Lipase
 - Amylase
58. Which of the following agent is used for bating process?
- Alkali
 - Acid
 - Enzyme
 - Salt
59. Which of the following can cause high TDS in liming wastewater is?
- Use of Na_2S
 - Use of lime
 - Solubilizing hair and use of Na_2S
 - Residual lime
60. Major issue associated with curing by freezing is
- Exorbitant cost
 - Red heat
 - Cracking of hides
 - Transportation
61. If the moisture content in leather is more than adequate during staking, leather becomes
- Weak
 - Loose
 - Soft
 - Fluffy
62. Relationship between softness and fluffiness in leather is
- None
 - Directly proportional
 - Inversely proportional
 - Directly proportional upto a point
63. Which of the following raw materials has high hair density?
- Sheep
 - Cow
 - Buff
 - Goat
64. Fine break is an important property requirement of
- Shoe upper leather
 - Lining leather
 - Glove leather
 - Garment leather
65. Which of the following is a major gas produced in aerobic digestion of sludge?
- NO_2
 - CO_2
 - O_2
 - H_2S
66. Which process of wastewater treatment is done to avoid floating debris, branches of trees or other large particles suspended in wastewater?
- Screening
 - Aeration
 - Primary sedimentation
 - Secondary sedimentation

67. The double layer effect in sheep skin is a result of
- Breed variation
 - Fat pockets
 - Curing methods
 - Bad flaying
68. Red Heat is caused by
- Halophilic bacteria
 - Cyano bacteria
 - Algae
 - Fungi
69. Among the following which is acidic amino acid?
- Aspartic acid
 - Glycine
 - Cysteine
 - Lysine
70. Toggling operation is done to enhance the
- Softness
 - Area yield
 - Run
 - Thickness
71. In the analysis of Bating agent, which combination of mixed indicator is used?
- Bromocresol green – Methyl orange
 - Bromothymol blue – Phenol red
 - Methyl red – Methyl orange
 - Bromocresol green – Methyl red
72. The indicator used in estimation of Aluminium tanning agents is
- Eriochrome Black T
 - Ethylene Diamine Tetra Acetic acid
 - Fast Sulphon
 - Murexide
73. Which of the following is not analyzed in Vegetable tanned leather used for determination of degree of tannage?
- Moisture content
 - Insoluble ash
 - Total sulphate
 - Hide substance
74. In microscopy, Gram positive bacterium is stained using which material
- Fast green
 - Haematoxylin
 - Crystal violet
 - India ink
75. Rod shaped bacteria are known as
- Cocci
 - Comma forms
 - Bacilli
 - Pleomorphic forms
76. Which of the following process treatment provides better permeability property of a leather?
- Chrome tanning
 - Post tanning
 - Aldehyde tanning
 - Vegetable tanning
77. Addition of cationic fatliquor during chrome tanning is mainly due to
- Facilitates Cr penetration
 - Renders chrome fixation
 - Retains the moisture in wetblue
 - Makes the surface smooth
78. Zirconium tanning imparts _____ in leather.
- Softness
 - Fullness
 - Fluffiness
 - Smoothness
79. Iron tanned leathers deteriorate rapidly due to
- Oxidation
 - Reduction
 - Olation
 - Redox reaction
80. Syntans, dyes and fatliquors bind with collagen predominantly through _____ interactions.
- Covalent bond
 - Coordinate-covalent bond
 - Ionic bond
 - Metallic bond

81. Aldehyde tanning results in ——— linkage.
- $-\text{NH}-\text{CH}_2-\text{NH}-$
 - $-\text{NH}-\text{CH}_2\text{OH}$
 - $-\text{NH}-\text{CHO}$
 - $-\text{NH}-\text{CO}-\text{NH}-$
82. Piling of chrome tanned leather helps in
- Fixation of Cr
 - Stripping of unfixed chromium
 - Improves the color of the leather
 - Facilitates uniform distribution of chromium
83. What is the functionality of fatliquors?
- Lubrication
 - Cross linking
 - Swelling
 - Bleaching
84. Building blocks of triglycerides and phospholipids are called as
- Carbohydrates
 - Proteins
 - Fatty acids
 - Amino acids
85. During staining, the smear is heat-fixed in order to
- kill the organism so that dyes will penetrate
 - attach the organism firmly to the slide
 - kill the organism and attach the organism firmly to the slide
 - neither kill the organism nor attach the organism firmly to the slide
86. Which is a property of garment leather?
- Drape
 - Hardness
 - Stiff
 - Rough
87. Which of the following is a functional property?
- Fullness
 - Roundness
 - Strength
 - Firmness
88. Which of the following is a preferred ratio for syntans:fatliquors in garment leather processing?
- 1 : 2
 - 2 : 1
 - 2 : 0.5
 - 0.5 : 2
89. Which of the following processes that contributes to high VOC emissions?
- Fatliquoring and Finishing
 - Dyeing and Tanning
 - Retanning and Dyeing
 - Bleaching and Neutralization
90. Which type of syntan are mainly prepared by the condensation of urea, thio-urea, dicyandiamide and melamine either as a single amino base or in mixture?
- Phenolic Syntan
 - Amino resin Syntan
 - Neutralization Syntan
 - Bleaching Syntan
91. Commercial belly filling syntans are made up of
- Melamine
 - Phenol - Formaldehyde
 - Vegetable Tannins
 - Protein
92. Which one of the following is the precursors for phenol-formaldehyde syntan?
- Resorcinol
 - Sulfonyl chloride
 - Acetone
 - Ethylene oxide

93. The solid type fatty acids may liberate due to crystallization on the surface of the leather is called as
- Fatty spue
 - Fatliquor
 - Wetting agent
 - All of them
94. Low refractive index pigments are also called as
- Extenders
 - Binders
 - Wax
 - Plasticizer
95. Which type of dye aids in achieving perspiration and wash properties in leather?
- Sulfur dyes
 - Metal complex dyes
 - Mordant dyes
 - Basic dyes
96. Which type of binder has high thermal resistance?
- Casein
 - Polyurethane
 - Acrylic
 - Butadiene
97. In Leather abrasion test (Martindale), as per SATRA standards the no. of revolutions the leather is tested
- Dry - 12500 and Wet - 25000
 - Dry - 120000 and Wet - 25000
 - Dry - 2500 and Wet - 25000
 - Dry - 25600 and Wet - 12800
98. What are the minimum recommendations of the Leather in Lastometer test?
- Load - 20 kg and Distension - 7 mm
 - Load - 7 kg and Distension - 20 mm
 - Load - 40 kg and Distension - 20 mm
 - Load - 20 kg and Distension - 40 mm
99. The key species responsible for high Ts in chrome tanning is
- $\text{Cr}(\text{H}_2\text{O})_6$
 - $\text{Cr}(\text{OH})(\text{H}_2\text{O})_5$
 - $\text{Cr}_2(\text{OH})_2(\text{H}_2\text{O})_8$
 - $\text{Cr}_3(\text{OH})_4(\text{H}_2\text{O})_{10}$
100. Chromophores consists of ——— which are responsible for color.
- Covalent compounds with localized electrons
 - Ionic compounds with localized protons
 - Coordinate compounds with delocalized protons
 - Functional groups with delocalized electrons
101. Ideal cutting area of leather for vamp component is from
- Shank
 - Shoulder
 - Butt
 - Belly
102. No of stitches per cm for oxford shoe made of goat leather
- 1-2
 - 2-3
 - 3-4
 - 4-5
103. Bell knife is used
- In splitting machine
 - In edge setting machine
 - In skiving machine
 - In ink marking machine
104. Hot melts adhesive is
- Thermoplastic in nature
 - Thermosetting in nature
 - Electrostatic in nature
 - None of the above

105. White patches in the shoe, which get clean with rubbing is due to
- Fat spew
 - Deposition of moisture
 - Salt spew
 - None of the above
106. Principle of mean forming
- Conversion of 3D surface of last in 2D form
 - Conversion of 2D leather into 3D shoe shape
 - Calculation of leather requirement for a given style
 - Converting shoe upper in lasting form
107. Length increment in English sizing system is
- 8.4 mm
 - 8.4 cm
 - 6.0 mm
 - 4.2 mm
108. The distance between the "Nett Feather Line" and "Gross Feather Line" of a digitized shell is the
- Trimming Allowance
 - Lasting Allowance
 - Folding Allowance
 - Seam Allowance
109. Type of needle one should use to stitch kid leather is
- PCL
 - LR
 - R
 - D
110. Which of the following are chromophoric groups?
- $-\text{NH}_2$, $-\text{NHCH}_3$
 - $-\text{OH}$, $-\text{OR}$
 - $-\text{N}=\text{N}-$, $\text{C}=\text{O}$
 - $-\text{COOH}$, $-\text{SO}_3\text{H}$
111. Which one of the following is unsaturated fatty acid?
- Linoleic acid
 - Stearic acid
 - Lauric acid
 - Myristic acid
112. Functionality of sodium bicarbonate and sodium formate is substituted by which class of syntan?
- Bleaching Syntan
 - Neutralization Syntan
 - Exchange Syntan
 - Selective filling syntan
113. When all the consumers have roughly the same preferences and the market shows no natural segments, then it is called as:
- Homogeneous preferences
 - Diffused preferences
 - Clustered preferences
 - Weighted preferences
114. According to Hersey and Blanchard's Situational Leadership Theory, in which of the following approaches of leadership, the leader assigns decision making responsibility to team members and oversees their work?
- Delegating
 - Telling
 - Selling
 - Participating
115. In cemented shoe construction, one should use _____ adhesive for extreme condition of temperature.
- Single component of PU adhesive
 - Neoprene base adhesive
 - Hot melt adhesive
 - Double component of PU adhesive