

## PART 11 — LEATHER TECHNOLOGY

(Answer ALL questions)

76. The cells that synthesis collagen are called as
1. myoblasts
  2. fibroblasts
  3. lymphocyte
  4. erythrocytes
77. Hair and wool are made up of
1.  $\beta$ -keratin
  2. gelatin
  3.  $\alpha$ -keratin
  4. elastin
78. Collagen in animal skin is mainly of the type
1. I
  2. II
  3. IV
  4. IX
79. Iso-electric point of native collagen in skin is at a pH of \_\_\_\_\_
1. 4.25 – 4.5
  2. 5.0 – 5.25
  3. 6.0 – 6.25
  4. 6.75 – 7.0
80. The percentage of nitrogen present in collagen is around
1. 1.75
  2. 2.75
  3. 17.5
  4. 27.5
81. During soaking of wet salted skins/hides, which of the following protein is released into spent liquor?
1. collagen
  2. keratin
  3. elastin
  4. globulin
82. Preservation of hides/skins by dry salted method reduces the average moisture content from \_\_\_\_\_ % to \_\_\_\_\_ %
1. 65, 45
  2. 60, 45
  3. 65, 35
  4. 65, 15
83. The mechanism of unhairing by sodium sulphide and lime system can be better described as
1. nucleophilic addition
  2. nucleophilic substitution
  3. oxidative addition
  4. free radical displacement
84. Fibre opening in liming is enhanced by the addition of
1. common salt
  2. hypo
  3. KCl
  4. glucose
85. Hydrochloric acid based pickling is preferred for \_\_\_\_\_ leathers
1. Upper
  2. Glove
  3. Sole
  4. Harness
86. Which part of the tree does the vegetable tannin wattle is sourced predominantly?
1. Fruits
  2. Root
  3. Bark
  4. Leaves
87. How many electrons are there in 4d orbital for Zirconium(IV)?
1. 0
  2. 1
  3. 2
  4. 4
88. Synthetic fatliquors are based on long chain hydrocarbons of chain length
1.  $C_2 - C_8$
  2.  $C_{10} - C_{14}$
  3.  $C_{14} - C_{24}$
  4.  $C_{30} - C_{38}$

89. The glass transition temperature of a film forming material for leather application should be
1.  $< -10^{\circ}\text{C}$
  2.  $0^{\circ}\text{C}$
  3.  $< 10^{\circ}\text{C}$
  4.  $> 10^{\circ}\text{C}$
90. The abrasion resistant sole leather is characterized by
1. high angle of weave
  2. medium angle of weave
  3. low angle of weave
  4. none of the above
91. The Indian cow hide is referred to in the international trade as
1. light cow
  2. freezer hide
  3. kip
  4. butty
92. Penetration of vegetable tannin is aided by treatment with
1. chrome
  2. aluminium
  3. zirconium
  4. syntans
93. Plate releasing property in finishing is due to the use of \_\_\_\_\_ in the season mixture
1. resin binder
  2. plasticiser
  3. pigment
  4. wax emulsion
94. Which of the following dyes will exhibit good wash fastness characteristics for chrome tanned leathers?
1. Acid dyes
  2. Direct dyes
  3. Basic dyes
  4. Metal complex dyes
95. Use of phenolic syntans \_\_\_\_\_ the light fastness of leather
1. decreases
  2. increases
  3. does not change
  4. none of the above
96. BOD standard for the discharge of tannery waste water in inland water bodies is
1. 10 ppm
  2. 20 ppm
  3. 30 ppm
  4. 40 ppm
97. Which of the following is an important requirement for upholstery leather?
1. fullness
  2. softness
  3. fire resistance
  4. wrinkle free
98. Treatment using trickling filters is a \_\_\_\_\_ treatment system
1. primary
  2. secondary
  3. tertiary
  4. aerobic
99. Dog chews are prepared from
1. crushed bones
  2. meat meal
  3. poultry feathers
  4. hide trimmings and splittings
100. BOD of spent lime liquors range in the order of (ppm)
1. 500–2000
  2. 2000–4000
  3. 4000 – 6000
  4. 6000 – 10000
101. UASB is a \_\_\_\_\_ Treatment system
1. aerobic
  2. secondary
  3. primary
  4. tertiary
102. Speed of the liming drum should be around
1. 3 rpm
  2. 6 rpm
  3. 10 rpm
  4. 16 rpm

103. If the radius 'r' of a drum is doubled, effective **volume** is increased by a factor of
1. 2
  2. 8
  3. 4
  4. 0.5
104. Hydraulic motors are useful because of their
1. constant speed characteristics
  2. high speed characteristics
  3. variable speed characteristics
  4. low speed characteristics
105. One Baume is equal to
1. 6.9<sup>0</sup> BK
  2. 10.1<sup>0</sup> BK
  3. 13.0<sup>0</sup> BK
  4. 2.1<sup>0</sup> BK
106. The finish adhesion test is carried out by
1. tensometer
  2. lastometer
  3. flexoineter
  4. penetrometer
107. The time of incubation for BOD test is
1. 24 hrs
  2. 48 hrs
  3. 72 hrs
  4. 120 hrs
108. Run in glove leather is
1. non elastic stretch
  2. elastic stretch
  3. contraction across the **backbone**
  4. cloth like feel
109. Degree of tannage is the ratio of
1. final dry weight of the leather to limed pelt weight
  2. fixed vegetable tannins to hide substance
  3. final dry weight of the leather to shared weight
  4. final dry weight of the leather to raw weight
110. Eriochrome Black T is used in
1. checking the **complete** penetration of chrome in the cut cross section of pelt
  2. quantitative analysis of water
  3. estimation of chrome content in **chrome** tanning salt
  4. dyeing of **chrome** tanned leather
111. Minimum stitch tear strength (double hole) of lining leathers should be
1. 50 kg/cm
  2. 50 kg/cm thickness
  3. 50 kg/cm<sup>3</sup>
  4. 50 kg/mm thickness
112. Which of the following property is more essential for sole leather?
1. Bursting strength
  2. Elongation
  3. Abrasion resistance
  4. Water absorption
113. The line where bottom and upper surface of the last meet is known as
1. central line
  2. lasting line
  3. feather line
  4. all of the above
114. Which of the following is an Ornament in leather goods?
1. zip
  2. lining cloth
  3. piping
  4. brass chain
115. A material shaped to conform to the last and inserted between lining and upper is known as
1. Toe puff
  2. Stiffners
  3. Insole
  4. Sock