

# AMLT27 ADVANCED BIO-TECHNOLOGY OF LEATHER

## UNIT-1 HISTOLOGY OF LEATHER:

- 1.1 Connective tissue proper
- 1.2 Introduction ,origin of connective tissue fibres,
- 1.3 Loose connetive tissue, Extracellular components, collagenous fibers,
- 1.4 Elastic fibres, Reticular fiber, Ground substance,
- 1.5 Fibroblasts, Mesenchymal cells, adipose cells,
- 1.6 Histological characteristics of different hides and skins
- 1.7 Buffalo, Cow, Goat and Sheep.
- 1.8 Histological characteristics of Hair Histological characteristics of different processed & finished leather.
- 1.9 Histological processes for preparation of hides and Skins for observation under microscope.
- 1.10 Photomicrography and its utility in leather science.
- 1.11 Fermentation Mechanism of alcoholic fermentation of carbohydrate,
- 1.12 Bacterial fermentation, fermentation by coliform organisms,
- 1.13 Fermentation of nitrogenous compounds, vinegar.

## UNIT-2 BACTERIAL GENETICS

- 2.1 Biosynthesis of deoxyribonucleic acid (DNA)- structure of DNA,
- 2.2 The biosynthesis of nucleotides in DNA strands,
- 2.3 Replication of the DNA molecule,
- 2.4 Trancription & translation of genetic information,
- 2.5 The proces of protein synthesis.

## UNIT-3 BACTERIAL MUTATION

- 3.1 Types of mutation, how mutations occur,
- 3.2 How mutations are repaired,
- 3.3 Bacterial recombination,
- 3.4 Bacterial conjugation,
- 3.5 Bacterial transduction,
- 3.6 Bacterial transformatioon.,
- 3.7 Recombinant DNA technology,
- 3.8 DNA cloning .

## Reference Books:

1. Microbiologys- Michel J . Pelczar, JR, E.C.S. Chan, Noel R. Krieg (Fifth Edition)
2. Molecular Biology of the gene-walson, Hopkins, Roberts, Steitz Weiner (Fourth Edition)
3. Standard Methods –Examination of water and wastewater-20th Edition Lenove S. Clesceri, Arnold E. Greenberg,Andrew D. Eaton