

B.Sc. Forensic Science: Semester-IV	
FST402: Forensic Biology & Serology	
Teaching Scheme	Examination Scheme
Lectures: 3 hrs/Week	Class Test -12 Marks
Tutorials: 1 hr/Week	Teachers Assessment – 6 Marks
Credits: 4	Attendance – 12 Marks
	End Semester Exam – 70 marks

Course Objectives: After studying this paper the students will know –

- The significance of biological evidence.
- The forensic importance of hair evidence.
- The importance of biological fluids – blood, urine, semen, saliva, sweat and milk – in crime investigations.
- How wildlife forensics aid in conserving natural resources.
- How forensic entomology assists in death investigations.

Unit 1: Biological Evidence

Nature and importance of biological evidence. Types of biological evidence. Significance of hair evidence. Transfer, persistence and recovery of hair evidence. Structure of human hair. Comparison of hair samples. Morphology and biochemistry of human hair. Comparison of human and animal hair.

Identification and examination of human body fluids like blood, semen, saliva, urine, etc.

Bloodstain characteristics. Impact bloodstain patterns. Cast-off bloodstain patterns. Projected bloodstain patterns. Contact bloodstain patterns. Blood trails. Bloodstain drying times. Documentation of bloodstain pattern evidence. Crime scene reconstruction with the aid of bloodstain pattern analysis.

Unit 2: Microbial Forensics

Introduction. Types and identification of microbial organisms of forensic significance.

Unit 3: Botanical Evidences

Identification of wood, leaves, pollens and juices as botanical evidence. Diatoms and their forensic significance.

Unit 4: Wildlife Forensics

Introduction and Significance of wildlife forensic. Protected and endangered species of animals and plants. Illegal trading in wildlife items, such as skin, fur, bone, horn, teeth, tusk, claws, flowers and plants. Identification of physical evidence pertaining to wildlife forensics. Identification of pug marks of various animals.

Unit 5: Forensic Entomology

Introduction to forensic entomology. Insects of forensic importance. Collection of entomological evidence during death investigations.

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