

# KAMARAJ COLLEGE (Autonomous)

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(Affiliated to Manonmaniam Sundaranar University, Tirunelveli)

(4 Pages)

Reg. No:.....

Question Code: 26E01309

Course Code : 24PSZO41

PG Degree - End Semester Examinations, April 2026

Fourth Semester

M.Sc., ZOOLOGY

Forensic Science

(For those who joined in July 2024 onwards)

Time : 3Hours

Maximum : 75 Marks

## PART - A (10 × 1 = 10 Marks)

Answer ALL Questions

Choose the correct answer :

- CO:1 1. What is the primary focus of Forensic Science?  
K:1
- (a) Development of legal systems (b) Application of science to criminal/civil laws  
(c) Writing crime novels (d) Arresting suspects
- CO:2 2. A scientist studying insects to determine the time of death is practicing:  
K:1
- (a) Forensic Entomology (b) Forensic Pathology  
(c) Forensic Serology (d) Forensic Botany
- CO:3 3. Which component of blood is the primary source of nuclear DNA for forensic profiling?  
K:1
- (a) Erythrocytes (b) Leukocytes  
(c) Thrombocytes (d) Serum
- CO:4 4. The presence of high levels of "Acid Phosphatase" is used as a presumptive indicator for which fluid?  
K:1
- (a) Saliva (b) Semen  
(c) Sweat (d) Urine
- CO:5 5. Who is credited with developing the first DNA fingerprinting technique?  
K:1
- (a) James Watson (b) Sir Alec Jeffreys  
(c) Francis Crick (d) Kary Mullis

- CO:1 6. Infer the most common fingerprint pattern in the general  
K:2 population:  
(a) Arches (b) Whorls  
(c) Loops (d) Accidentals
- CO:2 7. Find the term which refers to "cooling of the body" after death.  
K:1  
(a) Rigor Mortis (b) Algor Mortis  
(c) Livor Mortis (d) Post-mortem Caloricity
- CO:3 8. Which blood sample is considered the "gold standard" for  
K:1 postmortem toxicology?  
(a) Cardiac blood (b) Peripheral blood  
(c) Subclavian blood (d) Thoracic cavity blood
- CO:4 9. Which insect is typically the first to arrive at a decomposing  
K:1 body, often within minutes?  
(a) House Fly (b) Blow Fly  
(c) Flesh Fly (d) Carrion Beetle
- CO:5 10. In India, where is the first Wildlife Forensic Cell was established?  
K:1  
(a) CFSL, Kolkata (b) Wildlife Institute of India  
(WII), Dehradun  
(c) CCMB, Hyderabad (d) FSL, Delhi

**PART - B (5 X 5 = 25 Marks)**

**Answer ALL Questions choosing either (a) or (b).**

**Answer should not exceed 250 words.**

- CO:2 11. (a) Construct the necessity of forensic science in the modern  
K:3 criminal justice system.

**(OR)**

- (b) Apply Locard's Exchange Principle and illustrate how it serves as the foundational philosophy of modern forensic science.

- CO:3 12. (a) Distinguish between the morphological and serological  
K:4 characteristics of human and non-human blood.

**(OR)**

- (b) Examine the nature and importance of biological evidence.

- CO:3 13. (a) Critically analyze the statement: "DNA is the biological  
blueprint of life," within a forensic context.

K:4

**(OR)**

- (b) Categorize the primary types of fingerprint patterns used in criminal identification.

- CO:3 14. (a) Construct the nature and scope of forensic medicine in legal investigations.  
K:4

**(OR)**

- (b) Identify the chemical intoxication tests and its applications.

- CO:3 15. (a) Simplify the significance of wildlife forensics in combating illegal trade and poaching.  
K:4

**(OR)**

- (b) Examine the various orders of insects that hold forensic importance in death investigations.

**PART - C (5 X 8 = 40 Marks)**

**Answer ALL Questions choosing either (a) or (b).**

**Answer should not exceed 600 words.**

- CO:2 16. (a) Organize the history and development of forensic science.  
K:3

**(OR)**

- (b) Identify the principles and methods of forensic science.

- CO:3 17. (a) Examine the protocols for the collection, preservation and forensic characterization of bloodstain evidence.  
K:4

**(OR)**

- (b) Analyze the chemical composition and physiological functions of urine and evaluate its forensic significance.

- CO:4 18. (a) Explain the significance of DNA testing in resolving paternity disputes.  
K:5

**(OR)**

- (b) Assess the biological basis and fundamental principles of finger printing.

- CO:4 19. (a) Assess the medico-legal autopsy and its importance.  
K:5

**(OR)**

- (b) Evaluate the various analytical techniques used in toxicology to detect and quantify poisons.

- CO:5 20. (a) Elaborate on the method of collection of entomological evidence during a death investigation.  
K:6

**(OR)**

(b) Discuss the fundamental theories and methodologies that define the field of wildlife forensics.