

[This question paper contains 2 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 5849

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Unique Paper Code : 2234000016

Name of the Paper : Zoology GE-16; Forensic Biology

Name of the Course : **B.Sc. / B.Com. / B.A. Theory Examination, May 2026**

Semester : VI, UGCF

Duration : 2 Hours

Maximum Marks : 60

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Answer **four** questions in all.
3. Question number **1** is compulsory.
4. Draw well labelled diagrams wherever necessary.

Q.1 A. Define any *four* of the following-

(4)

- a. Law of Independent Assortment
- b. Medullary Index
- c. Odontology
- d. Lip Prints
- e. Karyotype

B. Differentiate between any *four* of the following:

(8)

- a. Micro-dontia and Macro-dontia
- b. Human and Non-human Blood
- c. DNA and RNA
- d. Composition of Saliva and Sweat
- e. Centromere and Telomere

C. Fill in the blanks –

(3)

- a. RFLP is performed when quality and quantity of DNA obtained from crime scene is _____.

P.T.O.

- b. Enzyme used for cleaving DNA is called_____.
- c. Hardest substance in the human body is_____.

Q.2 Give an account of conventional and non-conventional method to identify wildlife material such as hairs, fur, skin, nails, horns and teeth. (15)

Q.3 a) Describe composition of semen, morphology of spermatozoa and their significance in forensic biology. Explain one method to identify semen. (10)

b) Describe method to identify blood group. Give its principle. (5)

Q.4 a) Give an account of STR markers, explain its significance in identifying individuals during forensic investigation. (10)

b) Describe structure of human hair with well labelled diagram. (5)

Q.5 a) What is PCR? Elaborate the mechanism with neatly labelled diagram. What is the difference between RFLP and PCR? (10)

b) Describe Gustafson's method. Explain its significance in forensic investigation (5)

Q.6 Write a short note on *any three* of the following- (5 X 3 = 15)

- a. DNA Profiling
- b. Forensic Microbiology
- c. Pug Marks
- d. Mitochondrial DNA