# CBCS SCHEME

USN | | | | | | | | | |

**BBT515B**



## Fifth Semester B.E./B.Tech. Degree Examination, Dec.2025/Jan.2026
## Forensic Biology

Time: 3 hrs. Max. Marks: 100

*Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.*
*2. M : Marks , L: Bloom's level , C: Course outcomes.*

| | | Module – 1 | M | L | C |
|---|---|---|---|---|---|
| Q.1 | a. | Describe the developments in Forensic Biology. | 10 | L2 | CO1 |
| | b. | Apply the principle of forensic biology to analyze a given crime case. | 10 | L3 | CO1 |
| | | OR | | | |
| Q.2 | a. | Interpret the role of a forensic scientist. | 10 | L2 | CO1 |
| | b. | Apply the knowledge of different areas of forensic biology to solve multidisciplinary forensic problem. | 10 | L3 | CO1 |
| | | **Module – 2** | | | |
| Q.3 | a. | Demonstrate how sings of death can be used to estimate the Postmortem Interval (PMI) in a hypothetical case. | 10 | L3 | CO2 |
| | b. | Describe the relevant forensic methods to determine whether the sample belongs to a human or a animal. | 10 | L2 | CO2 |
| | | OR | | | |
| Q.4 | a. | Demonstrate the forensic characterization of hair by analyzing its microscopic features in a given case. | 10 | L3 | CO2 |
| | b. | Explain the emerging forensic techniques to propose a futuristic model for brain mapping in criminal justice. | 10 | L2 | CO2 |
| | | **Module – 3** | | | |
| Q.5 | a. | Explain the forensics significance of mt-DNA and y-chromosome markers in establishing identify. | 10 | L2 | CO3 |
| | b. | Interpret on DNA polymorphism and its types. | 10 | L3 | CO3 |
| | | OR | | | |
| Q.6 | a. | Illustrate the DNA profiling in forensic science. | 10 | L3 | CO3 |
| | b. | Explain the basic steps in organic DNA extraction. | 10 | L2 | CO3 |

| | | | | | |
|---|---|---|---|---|---|
| | | **Module – 4** | | | |
| Q.7 | a. | Explain the major branches of toxicology and discuss their significance in forensic application. | 10 | L2 | CO4 |
| | b. | Classify poisons based on their origin, mode of action and chemical nature with suitable examples. | 10 | L2 | CO4 |
| | | **OR** | | | |
| Q.8 | a. | Describe the procedures for extraction of poisons from biological specimens such as blood, urine, stomach wash, vomit, cold drinks and food materials. | 10 | L2 | CO4 |
| | b. | Describe about forensic pharmacology entomotoxicology. | 10 | L2 | CO4 |
| | | **Module – 5** | | | |
| Q.9 | a. | Exemplify the legal processes involved in environmental forensic investigation with examples. | 10 | L3 | CO5 |
| | b. | Explain Bioterrorism. Interpret on major bioterrorism threats and the concept of biosecurity in preventing such attacks. | 10 | L2 | CO5 |
| | | **OR** | | | |
| Q.10 | a. | Illustrate the concept of biometrics. Explain how biometric authentication plays a role in personal identification. | 10 | L2 | CO5 |
| | b. | Discuss on microbial forensics and how does it helps in investigating and attributing biological attacks. | 10 | L2 | CO5 |

* * * * *