Reg. No.:						

# **Question Paper Code: U9B71**

# B.E. / B.Tech. DEGREE EXAMINATION, NOV 2024

### Open Elective

# **Biomedical Engineering**

#### 21UBM971-FORENSIC SCIENCE

(Common To All Branches)

(Regulations 2021)

Duration: Three hours Maximum: 100 Marks

#### **Answer All Questions**

	PART A - $(10 \times 2 = 20 \text{ Marks})$				
1.	Summarize the hierarchy of central forensic organization.	CO1-U			
2.	Describe the role of a crime scene investigator and the importance of evidence collection				
3.	Name two key elements of community policing.				
4.	Why is incapacitation considered an essential goal of the criminal justice system?				
5.	List two methods used to protect a crime scene.	CO1-U			
6.	Name a situation where DNA analysis can provide crucial information.	CO1-U			
7.	Compare Anthropology and Entomology.	CO1-U			
8.	Discuss the impact of a CSI's testimony in court on a criminal case.	CO1-U			
9.	How data analysis contributes to the maintenance investigation process.	CO1-U			
10.	Write the methods burglars may use to gain entry into a home.	CO1-U			
11.	PART – B (5 x 16= 80Marks)  (a) Design a workflow for a hypothetical case that requires input CO1-U from multiple divisions of a forensic science laboratory."  Or	(16)			
	(b) Why is a well-defined organizational structure essential for the CO1-U effective functioning of forensic laboratories in India?	(16)			

12. (a) How can understanding the situational context of crime help law CO1-U enforcement in their investigations? (16)

	(b)	In what scenarios would a specific paramilitary force be deployed to address security challenges in India?	CO1-U	(16)
13.	(a)	Evaluate the role of technology (such as software programs) in enhancing the accuracy of forensic sketches compared to traditional methods	CO1-U	(16)
		Or		
	(b)	In what scenarios might different types of evidence collection methods be employed?"	CO1-U	(16)
14.	(a)	How can photographers use different techniques to enhance the visual appeal of their subjects?	CO5-U	(16)
		Or		
	(b)	Assess the reliability of fingerprint analysis as a method of identification in forensic science.	CO5-U	(16)
15.	(a)	Evaluate how socio-economic factors influence the frequency and severity of railway accidents in different regions.  Or	CO4-U	(16)
	(b)	Describe how investigators determine the causes of an air crash	CO4-U	(16)