



U7453

Reg. No.: .....

Name:.....

**University of Kerala**

First Semester Degree Examination, November 2024

Four Year Under Graduate Programme

Multi Disciplinary Course

**BOTANY****UK1MDCBOT103- BOTANY IN FORENSIC SCIENCE**

Academic Level: 100-199

**Time:1 Hours****Max. Marks: 28****Part A.****Answer All Questions Objective Type. 1 Mark Each.****(Cognitive Level: Remember/Understand)****4 Marks. Time: 5 Minutes**

<b>Qn. No.</b>	<b>Question</b>	<b>Cognitive Level</b>	<b>Course Outcome (CO)</b>
1.	What is dendrochronology?	Remember	CO-1,6
2.	Give an example of a man-made fiber.	Remember	CO-2
3.	What is dye analysis?	Understand	CO-4
4.	Name any two physical properties of Woods	Understand	CO-4

**Part B.****Answer All Questions Short Answer. 2 Marks Each.****(Cognitive Level: Understand/Apply)****8 Marks. Time: 15 Minutes**

<b>Qn. No.</b>	<b>Question</b>	<b>Cognitive Level</b>	<b>Course Outcome (CO)</b>
5.	Why fungi are included in the 'non-plant group' in botany?	Understand	CO-5
6.	Wood porosity could be 'ring porous' or 'diffuse porously'. Are such wood types correlated to different climatic conditions?	Understand	CO-2,6
7.	How could forensic investigators identify the types of wood fragments found at a crime scene?	Apply	CO-4
8.	How can dye analysis of fiber assist in forensic investigations?	Apply	CO-4

**Part C.**

**Answer all 4 Questions, choosing among options within each question.**

**Long Answer. 4 Marks Each.**

**(Cognitive Level: Apply/Analyse/Evaluate/Create).**

**16 Marks. Time: 40 Minutes**

<b>Qn. No.</b>	<b>Question</b>	<b>Cognitive Level</b>	<b>Course Outcome (CO)</b>
9	a) Briefly explain the biochemical examination of the paper, which is essential in identifying counterfeit currencies. or	Apply	CO-3,4
	b) How can the application of botanical evidence be crucial in solving a murder case?		CO-2,4
10	a) Analyze the role of botanical evidence in the Lindbergh kidnapping case and how it contributed to the investigation. or	Analyze	CO-2,3
	b) How did forensic botany, particularly the discovery of filamentous algae, play a critical role in disproving John C. Hoeplinger's version of events and securing his conviction for the murder of his wife?		CO-3
11	a) Explain the various diatom extraction and testing methods used in Forensic study and add a note on their forensic significance. or	Evaluate	CO-4,2
	b) Evaluate the significance of plant evidence in forensic investigations. ?		CO-1,2
12	a) Illustrate and explain the structure of diatoms. or	Create	CO- 2
	c) What methods are used to analyze dyes on fibers, and how do they aid forensic conclusions?		CO- 3,4