



K.R. MANGALAM UNIVERSITY
THE COMPLETE WORLD OF EDUCATION

Rollno.....

End Semester Examination, December 2024
M.Sc. Forensic Science – I Semester
Forensic Chemistry and Toxicology (MSFS703)

Time: 2.5 hrs.

Max Marks: **50**

Note: *All Questions are compulsory. Marks are indicated against each question.*

PART-A

Q.1 Attempt any five out of the seven small questions given below. Each question carries 2 marks.

- a) Define forensic chemistry and describe its role in forensic investigations. [CO-1, L-1] [2 marks]
- b) Explain the significance of presumptive tests in forensic chemistry. [CO-1, L-2] [2 marks]
- c) What are detective dyes, and why are they used in forensic cases? [CO-2, L-2] [2 marks]
- d) Differentiate between organic and inorganic elemental analysis in forensic chemistry. [CO-1, L-2] [2 marks]
- e) What is the forensic importance of detecting methyl alcohol in illicit liquors? [CO-1, L-2] [2 marks]
- f) List the common signs and symptoms associated with poisoning from common household poisons.
[CO-2, L-2] [2 marks]
- g) Describe the duties of a doctor when managing a poisoning case.
[CO-1, L-2] [2 marks]

PART-B

- Q.2 Discuss the classification of drugs of abuse and explain the physiological effects of stimulants and depressants. [CO-2] [L-3] **10**

OR

Describe the methods and importance of detecting designer drugs in forensic investigations.
Provide examples of such drugs. [CO-2] [L-4] **10**

- Q.3 Illustrate the steps involved in sampling and analyzing contact traces, such as cosmetics, in a forensic case. [CO-3] [L-2] **10**

OR

Explain the forensic techniques for analyzing fire debris samples. How does one differentiate between accidental and intentional fires? [CO-3] [L-4] **10**

- Q.4 Describe the process of conducting an elemental analysis of chemical substances found at crime scenes. How does elemental analysis aid in forensic investigations? [CO-4] [L-3] **10**

OR

Analyze the role of instrumental methods in detecting trace evidence. Provide examples of instruments commonly used in forensic chemistry. [CO- 4] [L-4] **10**

- Q.5 Discuss the medicolegal significance of poisons and the role of toxicologists in criminal investigations. [CO-5] [L-3] **10**

OR

Evaluate the procedures for collecting and preserving viscera samples in suspected poisoning cases. Explain the importance of chain of custody in these cases. [CO- 5] [L-3] **10**