D 132017 **(Pages : 2)** **Name.....**

Reg. No.....

THIRD SEMESTER M.Sc. DEGREE (REGULAR/SUPPLEMENTARY) EXAMINATION, NOVEMBER 2025

(CBCSS)

Forensic Science

FSC 3E 18—MODERN AND APPLIED ANALYTICAL FORENSIC CHEMISTRY

(2019 Admission onwards)

Time : Three Hours Maximum : 30 Weightage

I. Answer any *four* of the following. Short Answer Type Questions. Weightage 2 :

1 Give the method of calculation of smoke point for Gasoline (Motor Spirit).

2 Write a note on the tetrahedron of fire.

3 Give a brief on any two forms of heat transfer.

4 How is rancidity determined in edible oils ?

5 Write the scheme of analysis for low explosives.

6 Give the significance of Maquis's Test.

7 What are the constituents of raw opium ?

(4 × 2 = 8 weightage)

II. Answer any *four* of the following. Short Essay Type Questions. Weightage 3 :

8 What are the potential adulterants in Disel? How are they detected ?

9 Give the method of determining heat and temperature of explosion in a post blast scene.

10 Explain the method of determining adulterants in coconut oil.

11 Write a note on the dynamics of fire.

12 Mention any two methods of detection for any two adulterants present in butter.

13 Explain the conduction of Dequeens Levine Test

14 How are barbiturates detected in a sample ?

(4 × 3 = 12 weightage)

Turn over

III. Answer any *two* of the following. Long Essay Type Questions. Weightage 5 :

15 Elaborate on qualitative analysis of PDS

16 Discuss the Classification of Explosives in detail.

17 Elucidate on the standard methods of analyzing an unknown white powdery substance.

18 Describe the method of determining hydrocarbon in arson debris.

(2 × 5 = 10 weightage)