

B.Sc.(FS) Semester - 5 (CBCS) Examination**Oct/Nov - 2025 (NEW COURSE)****Forensic Chemistry(Core)****Time: 2:30 Hours****Marks: 70****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

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- Que. 1 (A) Answer the following question very shortly. (04)
- 1) Chemical name of RDX is _____.
 - 2) which types of detectors is used in UV Spectroscopy.
 - 3) Give three physical properties, which are included in preliminary screening.
 - 4) What is the aqua regia solution?
- Que. 1 (B) Answer the following question in brief: (Any one) (03)
- 1) write the history and scope of Forensic Chemistry?
 - 2) Enlist the type of cases and exhibits in forensic chemistry. (Minimum 12)
- Que. 1 (C) Answer the following question in detail: (Any one) (07)
- 1) Explain in details about the following cases.
 - Body fluid examination
 - Explosives cases.
 - 2) Describe instrument technique, used in forensic chemistry? (Any 2)
- Que. 2 (A) Answer the following question very shortly. (04)
- 1) Full form of NDPS and when the act came into action?
 - 2) Barbituric acid was first discovered by _____.
 - 3) Explain Drug tolerance.
 - 4) Name the Enzymes used for catalyzing in Phase-1 reaction?
- Que. 2 (B) Answer the following question in brief: (Any one) (03)
- 1) How to detect Clandestine labs. and where they are located?
 - 2) Write a short note on drug dependence?
- Que. 2 (C) Answer the following question in detail: (Any one) (07)
- 1) Write a note on cocaine plant as Narcotic Drugs?
 - 2) write a note on clandestine drug laboratory.
- Que. 3 (A) Answer the following question very shortly (Any four) (04)
- 1) Give two types of Distillation method?
 - 2) Who is the Father of Toxicology?
 - 3) What is Lethal Dose (LD₅₀) in relation to Drugs?
 - 4) Define Solvent Extraction.
- Que. 3 (B) Answer the following question in brief: (Any one) (03)
- 1) Difference between Toxic & Toxin. Define Median Lethal Dose (LD₅₀).
 - 2) Explain Solvent Extraction, and also Define Soxhlet Extraction?
- Que. 3 (C) Answer the following question in detail. (Any one) (07)
- 1) Write a note on Dry Ashing and Wet Digestion Methods?
 - 2) What is Distillation, explain its type with proper diagram?

- Que. 4 (A) Answer the following question very shortly. (04)
- 1) What is the chemical name of orange dye?
 - 2) Rf value for kerosene is _____.
 - 3) Which solvent system is used in TLC for Petrol?
 - 4) Complete the reaction: $\text{CH}_4 + 2\text{O}_2 \longrightarrow$ _____.
- Que. 4 (B) Answer the following question in brief: (Any one) (03)
- 1) Classification of Fire on the basis of their source of Ignition?
 - 2) Describe the composition of petroleum product?
- Que. 4 (C) Answer the following question in detail. (Any one) (07)
- 1) Give different types of Cases related to Arson.
 - 2) Write a note on Characteristics of standard Petrol. Give its different Parameters?
- Que. 5 (A) Answer the following question very shortly. (04)
- 1) What is BIS?
 - 2) In silica Gel G, G stands for _____.
 - 3) The alkaline pink solutions of phenolphthalein give the lambda max value at _____.
 - 4) Give the test for Rancidity in Ghee?
- Que. 5 (B) Answer the following question in brief: (Any one) (03)
- 1) Give the chemical method used for the detection of Ethyl Alcohol?
 - 2) Write a note on chemistry of phenolphthalein.
- Que. 5 (C) Answer the following question in detail. (Any one) (07)
- 1) Write a note on methanol & its chemical analysis.
 - 2) Write a note on phenolphthalein as a bribe trap cases.
