

B.Sc.(FS) Semester - 5 (CBCS) Examination
Oct/Nov. - 2021(Old 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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- Q.1(A) Answer the following question very shortly (04)
- (1) The great philosopher Socrates was sentenced to death by drinking _____ Poison.
 - (2) Define Forensic Chemist?
 - (3) Give three physical properties, which are included in preliminary screening.
 - (4) Give the types of explosive, with examples?
- Q.1(B) Answer the following question in brief (Any one) (03)
- (1) Define NMR spectroscopy with diagram?
 - (2) Give the legal aspects of Forensic Chemistry?
- Q.1(C) Answer the following question in detail (Any one) (07)
- (1) Write a note on Examination of Chemical Exhibits in chemistry division?
 - (2) Write a note on Gas Chromatography?
- Q.2(A) Answer the following question very shortly (04)
- (1) Full form of NDPS and when the act came into action?
 - (2) Give the types of Narcotic Drugs?
 - (3) Explain Drug Dependence?
 - (4) Write the active Metabolite of Paracetamol?
- Q.2(B) Answer the following question in brief (Any one) (03)
- (1) How to detect Clandestine labs. and where they are located?
 - (2) Give the classification of Barbiturates?
- Q.2(C) Answer the following question in detail (Any one) (07)
- (1) Write a short note on Opium plant as Narcotic Drugs?
 - (2) Give the Pathways of Drug Metabolism through various phases?
- Q.3(A) Answer the following question very shortly (04)
- (1) What is the difference between Toxic and Toxin?
 - (2) Write the Different Route of Administration of drugs?
 - (3) Which techniques are used for the extraction of Non-Volatile Inorganic Poison?
 - (4) What is Lethal Dose (LD₅₀) in relation to Drugs?

- Q.3(B) Answer the following question in brief (Any one) (03)
- (1) Classification of Poison on the basis of their Chemical Properties?
 - (2) Sample collection and Preservation techniques for different evidences related to poisoning cases?
- Q.3(C) Answer the following question in detail. (Any one) (07)
- (1) Write a note on Digestion technique used for the Extraction of poison?
 - (2) What is Distillation, explain its type with proper diagram?
- Q.4(A) Answer the following question very shortly (04)
- (1) Define fire?
 - (2) Give the Density of LDO at standard 15°C temperature?
 - (3) Which solvent system is used in TLC for Petrol?
 - (4) What is Char pattern, give its types?
- Q.4(B) Answer the following question in brief (Any one) (03)
- (1) Classification of Fire on the basis of their source of Ignition?
 - (2) Define Flash point and Smoke point in relation to kerosene?
- Q.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?
- Q.5(A) Answer the following question very shortly (04)
- (1) Full form of FSSAI & BIS.
 - (2) The colorless solutions of phenolphthalein give the $\lambda_{\max}$ value at _____
 - (3) What is Fatal Dose?
 - (4) Give the test for Rancidity in Ghee?
- Q.5(B) Answer the following question in brief (Any one) (03)
- (1) How Detoxification is done by body in case of Alcohol?
 - (2) Write any three test used for the detection of Phenolphthalein?
- Q.5 (C) Answer the following question in detail. (Any one) (07)
- (1) Write a note on Breath testing analyzer used for alcohol measurement?
 - (2) Give the Chemical analysis for both ethyl alcohol and methyl alcohol?
