

B.Sc. Semester - 5 (CBCS) Examination
Oct/Nov - 2022 (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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- Q-1 Give the answer of following question. (14)
- (A) Answer the following question very shortly (Any four) (04)
- (1) The philosopher _____ was sentenced to death by drinking hemlock Poison.
 - (2) Define Aqua-regia solution?
 - (3) Give the full form of ICP-MS and XRD?
 - (4) Which types of Frequencies are used in NMR Spectroscopy?
- (B) Answer the following question in brief (Any one) (03)
- (1) Define NMR spectroscopy with diagram?
 - (2) Give the legal aspects of Forensic Chemistry?
- (C) Answer the following question in detail (Any one) (07)
- (1) Write a note on GC-MS with proper diagram?
 - (2) Write a note on Examination of Chemical Exhibits in chemistry division?
- Q-2 Give the answer of following question. (14)
- (A) Answer the following question very shortly (04)
- (1) Full form of NDPS and when the act came into action?
 - (2) Give an example of Non-Addictive Drug?
 - (3) Give the types of Narcotic Drugs?
 - (4) Name the Enzymes used for catalyzing in Phase-2 reaction?
- (B) Answer the following question in brief (Any one) (03)
- (1) Write about the Mechanism of Drug Toxicity and it types?
 - (2) Give the classification of Barbiturates?
- (C) Answer the following question in detail (Any one) (07)
- (1) Write a short note on *Opium Poppy* plant as Narcotic Drugs?
 - (2) Define Drug Dependence. How the drug abuse can lead to Dependences, Recognize their Symptoms?
- Q-3 Give the answer of following question. (14)
- (A) Answer the following question very shortly (04)
- (1) What should be used as Preservative for Blood?
 - (2) Give two types of Distillation method?
- (3) Which techniques are used for the extraction of Non-Volatile Inorganic Poison?
- (4) What is the difference between Toxic and Toxin?
- (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?

- (C) Answer the following question in detail. (Any one) (07)
- (1) Write a note on Digestion technique used for the Extraction of poison?
 - (2) Classification of Poison on the basis of their mode of Action and chemical Properties?
- Q-4 Give the answer of following question. (14)
- (A) Answer the following question very shortly (04)
- (1) Full form of LDO & HSD?
 - (2) Give the Density of kerosene at 15°C temperature in CGS unit?
 - (3) Define fire Triangle Mode?
 - (4) Which solvent system is used in TLC for Petrol?
- (B) Answer the following question in brief (Any one) (03)
- (1) Define Flash point and Smoke point in relation to kerosene?
 - (2) Which evidences that should collect in Arson Cases?
- (C) Answer the following question in detail. (Any one) (07)
- (1) Give different types of Cases included under the Arson.
 - (2) Which parameters can be used to detect the Adulteration in Kerosene?
- Q-5 Give the answer of following question. (14)
- (A) Answer the following question very shortly (04)
- (1) Write the uses of Methanol and Ethanol?
 - (2) Give the chemical formula and structure for Anthracene Powder?
 - (3) Give the test for Rancidity in Ghee?
 - (4) The colorless solutions of phenolphthalein give the lambda max value at _____
- (B) Answer the following question in brief (Any one) (03)
- (1) How Detoxification is done by body in case of Alcohol?
 - (2) Give the physical properties for ethanol and methanol?
- (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?
