

B.Sc.(FS) Semester - 5 (CBCS) Examination**Oct/Nov.– 2019****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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Q1 (A) Answer in short:**(04)**

1. Which instruments are used for separation of compounds?
2. Mention types of GC instruments.
3. Write two major duties of a forensic chemist.
4. Enlist the evidences encountered in explosion cases.

Q1 (B) Answer any one in brief:**(03)**

1. Write a brief note on presumptive tests.
2. Explain the use of spectrometers in chemistry division of FSL.

Q1 (C) Answer any one in detail:**(07)**

1. Enlist the types of cases involved in chemistry division with appropriate list of exhibits for each type of case.
2. Explain the importance of chemistry division for analysis of evidences.

Q2 (A) Answer in short:**(04)**

1. Give the full form of NDPS.
2. Define drug.
3. From which plant cocaine is extracted?
4. Give the full forms of THC.

Q2 (B) Answer any one in short:**(03)**

1. Explain types of barbiturates in brief.
2. Explain LD₅₀ in detail.

Q2 (C) Answer any one in detail:**(07)**

1. What are the effects of overdose and withdrawal syndromes of opiates on human body?
2. Explain the process of obtaining morphine and heroin in flow chart form.

Q3 (A) Answer in short:**(04)**

1. Define toxicology.
2. Enlist at least two examples of animal poisons.
3. Define pesticides.
4. Give the ingredients of universal antidote.

Q3 (B) Answer any one in brief:**(03)**

1. Explain the preservation process of toxicological samples.
2. Write a note on methods of introducing poisons in human body.

Q3 (C) Answer any one in detail:**(07)**

1. Explain the process of extraction of organic poisons in detail.
2. Explain the preservation of toxicological evidence in detail.

Q4 (A) Answer in short:

(04)

1. Write the full form of CCI and what is it calculated for?
2. Define fire.
3. Draw and mention parts of fire tetrahedron.
4. What is meant by ATF?

Q4 (B) Answer any one in brief:

(03)

1. Explain types of fire.
2. Write a note on collection of petroleum samples for analysis.

Q4 (C) Answer any one in detail:

(07)

1. Write a note on composition of kerosene and parameters of GC analysis.
2. Explain types of arsonists in detail.

Q5 (A) Answer in short:

(04)

1. Define adulteration.
2. Write the chemical formula for phenolphthalein.
3. What is used to stop further fermentation of alcohol?
4. What are the chemical tests for detection of ethanol?

Q5 (B) Answer any one in brief:

(03)

1. Explain dichromate test for ethanol.
2. Draw a flow chart for types of alcohols.

Q5 (C) Answer any one in detail:

(07)

1. Enlist routinely used edibles along with the adulterants used and explain detection of starch used for adulteration.
2. Write a note on chemical tests used for detection of methanol.
