

GUJARAT NATIONAL LAW UNIVERSITY
GANDHINAGAR
Course: **Nano Technology and Forensic Chemistry**
Semester- IV (Batch: 2018-23)

End Semester Online Examination: February 2021

Date: 10th February, 2021

Duration: 8 hours

Max. Marks: 40

Instructions:

- The respective marks for each question are indicated in-line.
- Indicate correct question numbers in front of the answer.
- Draw diagrams wherever applicable
- Cite the reference source used for answering the question.
- No questions or clarification can be sought during the exam period, answer as it is, giving reason, if any.
- Prescribed Word Limit: 10 Marks: 700-800 words, 7 Marks:500-600 words, 5 Marks:350-400 words.

Q.1 Examine all the images carefully while linking with the case and answer the following questions:

Marks
(10+5
=15)

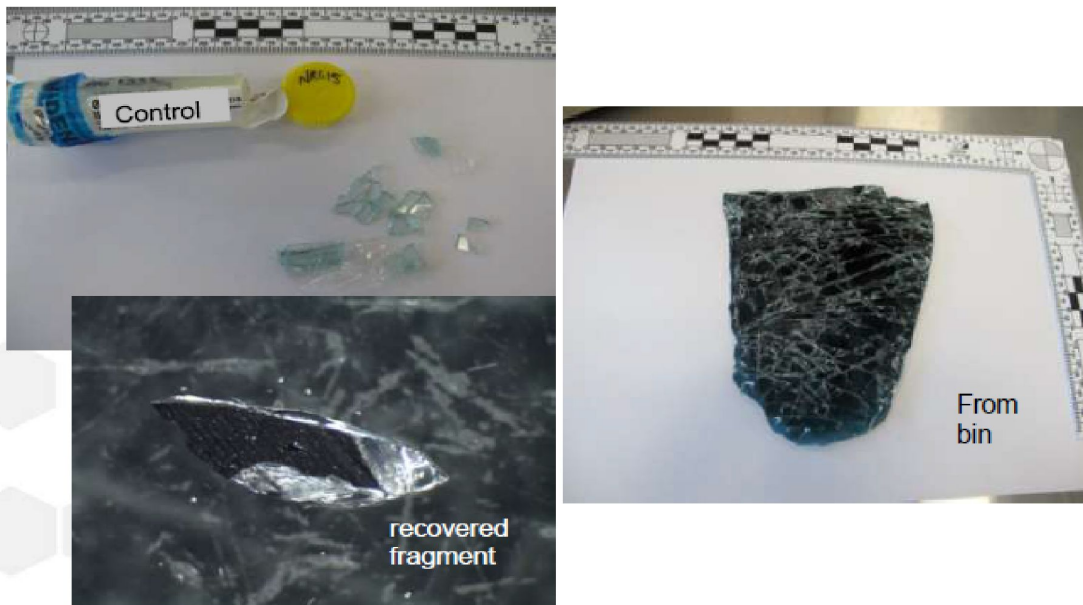


Trace evidence found from the scene of offense were as follows: a) control glass from vehicle windscreen b) glass from the bin in the driveway where car located c) outer clothing of Victims.

Clothes-



Glass-



4th July 2020, the suspect self-confessed of two incidences of dangerous driving, one causing the death of Paul Freez and the other causing grievous bodily harm to Anthony Freez and failing to stop at a fatal traffic crash. The witnesses determined that suspect was also at Ballys Bar drinking with friends and was driving up to 75 km/h in a 50 km/h zone (46mph/31mph). Police could not conclusively determine if alcohol was a factor because the medical examination was not conducted within four hours.

- Frame your opinion with the assistance of scientific examination of trace evidences as a valuable resource in the criminal proceedings. (10 Marks)
- Explain the forensic toxicology of alcohol and elucidate the scientific process to determine that the suspect might be under the influence of alcohol. (05 Marks)

- Q.2 Read the following facts related to the explosive case and answer the following questions: (10)
Mr. Edem Rosh planted a bomb in Centennial Olympic Park in Atlanta, Georgia, where thousands had gathered to celebrate the Olympics. The resulting explosion killed one and injured over 100. Rosh carried out two additional bombing incidents in the interval of three months in Atlanta and Birmingham, killing one and injuring over 50. The Atlanta bombings had secondary devices, timed to detonate after investigating officers had arrived on the scene. Explain the difference between standard composition and IED. Determine the complications of identifying the IED and suggest suitable scientific techniques for shifting of the assembly to a safe place to minimize the destruction.
- Q.3 Samples of Motor spirit were collected from a reputed petrol pump of Bharat Petroleum Pvt. Ltd. and sent to laboratory examination for adulteration analysis. Determine the steps for the collection of petroleum sample. Explain any two spot tests for the adulteration analysis. (05)
- Q.4 When Elvis was 16 years old, he was polite and clean-cut. Although disciplined by modern standards, his parents back in that time saw his hip revolutions and racy lyrics as an indication of serious moral decline. When Elvis went to the job, he began taking amphetamines. As he progressed in his career he got involved in Barbiturates drug overdose. Explain the effects of barbiturates, signs and symptoms and forensic analysis of barbiturates. (10)
