

M.Sc.(FS) Semester - 1 (CBCS) Examination
Nov/Dec - 2022 [NEW COURSE]
Forensic Physics and Ballistics (CORE)

Time: 2:30 Hours**Marks: 70****Instructions:**

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

Q1 (A) Answer all questions in short: (04)

1. Describe how glass is made.
2. Describe the importance of soil as proof.

Q1 (B) Answer any two questions out of three: (10)

1. Specify the various forms of paint and their relevance to forensics
2. List the different kinds of tool marks.
3. Clearly describe soil forensic analysis: Ignition test, PH, and particle size distribution are the first three.

Q2 (A) Answer all questions in short: (04)

1. What is the purpose of spraying shellac on the surface before pouring POP?
2. Using a diagram, define (i) step length and (ii) step angle.

Q2 (B) Answer any two questions out of three: (10)

1. Describe the various lifting procedures utilized in the study of foot wear impressions.
2. On a swampy area, a dead body was discovered, and footprints could also be spotted close by. Later, the police and forensic experts examined the foot prints to identify the suspect and ultimately the offender. Mention the specific approach that forensic scientists took to locate the offender.
3. How would skid markings be useful in the investigation of hit-and-run cases?

Q3 (A) Answer in short: (04)

1. Define: (i) Muzzle Blast (ii) Paradox gun
2. What exactly are country-made firearms? Please provide two examples.

Q3 (B) Answer any two questions out of three: (10)

1. Describe in detail the cartridge classification.
2. Make a note of projectiles and their various types.
3. What are the various types of propellants? Which propellant, and why, is utilized in long- range weapons?

Q4 (A) Answer in short: (04)

1. Describe how internal and external ballistics differ.
2. What distinguishes a temporary cavity from a permanent cavity?

Q4 (B) Answer any two questions out of three: (10)

1. How may the entry wound caused by a rifle firearm be used to calculate the range of firing?
2. Describe the differences between a rifle firearm's entering wound and exit wound.
3. What are the characteristics of entry wound produce by smooth bore firearms?

Q5 (A) Answer in short: (04)

1. What is IBIS? How it is useful in criminal investigation?
2. Describe the role that BDAS plays in the forensic ballistics section.

Q5 (B) Answer any two questions out of three: (10)

1. How does a forensic expert establish a link between a bullet and a firearm? Describe the comparison procedure.
2. Explain the GSR collection techniques from the suspect's hand, as well as any two tests for gsr analysis.
3. Describe the type and unique features of fired cartridge cases.
