

Forensic Science

POST GRADUATE DEGREE STANDARD

UNIT I

Forensic Science - Definition - Development of Forensic Science in India and other countries - Organisation and functions of Forensic Laboratory.

UNIT II

Physical evidences - Their classification and significance - Locard's principle of exchange - Class and individual characteristics.

UNIT III

Crime Scene examination - Documentation of crime scene- Recognition, Collection, Preservation and transportation of physical evidence for laboratory examination.

UNIT IV

Fundamentals of photography - Crime scene photography - Micro and Macro photography - colour Photography.

UNIT V

Foot and tyre impressions - Walking pattern - Recording and Examination of foot prints and tyre prints.

UNIT VI

Finger prints - Fundamental principles - Finger print patterns - Classification of finger prints - Methods of development of latent finger prints.

UNIT VII

Tool marks - Identification - Restoration of filed off/erased marks - Detection of counterfeit coins and currency.

UNIT VIII

Fire arms - Bullet and cartridge case identification - Pellets and wads - Range of firing.

UNIT IX

Fire and arson - Natural fires - Arson - Accelerants - Combustible properties of flammable substances.

UNIT X

Explosives - Classification of explosive substances - Combustion, detonation and explosion - Effects of explosions- Military and Industrial explosives - Improvised explosive devices - explosive residues examination.

PAPER -II

UNIT I

Questioned Documents Identification of handwriting, typewriter and forged signatures - Erasures and alterations on documents and their detection

UNIT II

Broken glass - Glass fractures - Direction of force - backward fragmentation -Comparison of glass fragments.

UNIT III

Forensic Examination of Soil, paint, fibres, hair, bones, teeth and skull.

UNIT IV

Toxicology - Classification and mode of action of poisons - Narcotic drugs -Alcoholic beverages - Isolation and Identification of poisons, drugs and alcohol.

UNIT V

Examination of biological fluids - Blood, Seminal and Saliva stains - Forensic characterisation of the above stains - Stain patterns of blood - Fundamentals of DNA typing.

UNIT VI

Motor Vehicle accidents - Hit and run - Skid marks - Speed of the vehicle at the time of accident - Broken head light and its significance.

UNIT VII

Theory and practice of polygraph and voice identification.

UNIT VIII

Microscopy - Compound, Stereo, comparison and polarising microscopes-transmission and scanning electron microscope.

UNIT IX

Instrumental methods for organic analysis-Principles of Chromatography, spectrophotometry and mass spectrometry.

UNIT X

Instrumental methods for inorganic analysis - principles of emission and atomic absorption spectra - x-ray diffraction - Neutron activation analysis.