

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.