# SPECIFIC PAPER SYLLABUS FOR THE POST OF SCIENTIFIC OFFICER (FORENSIC PSYCHOLOGY SECTION) IN THE DIRECTORATE OF FSL IN THE DEPARTMENT OF POLICE

### I. Introduction to forensic science

Definition and scope of forensic science; History and development; Basic principles; Organization structure of forensic science laboratories including mobile units; Functions of a forensic scientist.

# II. Crime scene investigation and management

Definition of crime scene; Classification of crime scenes – indoor & outdoor / primary & secondary; Significance of crime scene – Lucard's principle of exchange; Duties of first officer and crime scene investigator of the scene of crime; Specialized personnel at the scene of crime; Crime scene survey; Protection and recording of crime scene - photography / video recording and sketching; Crime scene search for physical evidence – Discovery, collection, preservation, packing and forwarding of physical clues; Collection of standard / reference samples; Chain of custody/events; Reconstruction of the scene of crime.

#### III. Physical evidence

Definition of Physical evidence and its significance; Types of physical evidence and their sources – availability of physical tools at the crime scenes relating to homicide, suicide, house breaking and theft, dacoit, firing, explosions, cyber crimes, terrorist attack and mass disaster (vehicle and plane accidents, air crash, industrial accidents, cyclones etc.); Study of class and individual characteristics – Identification, Comparison and Individualization of physical evidences.

#### IV. Research Methodology And Statistics in Forensic Science

Definition and concept of research; Purpose, characteristics and types of research; Process of research; Formulation of objectives; Formulation of Hypothesis; Research design – experimental / non experimental; Review of literature; Methods of research (survey, observation, case study, experimental, historical and comparative methods). Difficulties in research work; writing of research proposal, report and research paper – stages of preparation – report formatting – characteristics – structure – documentation; Footnotes and bibliography – editing and evaluating the final draft – and checklist for good proposal / report / research; Basic knowledge of organizing conferences, symposia, workshop, exhibition etc.,

Statistics: - Types of data – basic concepts of frequency distribution; measure of central values – mean, median and mode; mean and standard deviation; correlation and regression analysis; variance and discriminating power; Tests of hypothesis – Tests of significant attributes; Z-test of signification and coefficient of correlation; Small sample test; T-test; Paired Test; Chi-square test; F test of equality of variance; Large sample test; Normal test.

## V. Introduction to Forensic Psychology

Definition, goals and scope of Psychology; Forensic Psychology and the Law; Civil and criminal case assessment; Assessing the mental competency and mental disorders; Eye witness testimony; Criminal profiling approaches and types; Clinical interventions – Biological, Psycho dynamic behaviorist, Cross cultural, Humanistic, Evolutionary, Cognitive perspectives; Clinical assessments – Diagnosis and Classification;

#### VI. Psychological assessment

Behavioral assessment; Assessment of personality; Personal history; Mental status examination; Need for psychological tests – testing of violent and sex offenders; Psychological assessment tools and their purpose; Nature and technique of case study; Clinical interview; Observation, assessment of false memory, confabulation, contaminations of eye witness evidence; Conflict and use of defense mechanisms – Various types of mental disorders – Psychology of criminal behavior.

## VII. Investigative methods

Forensic Psychologist as an investigator; Principles of lie detection tests – Polygraph, Psycho physiological changes and operational aspects – question formation and interviewing techniques – Chart recording, analysis and interpretation methodologies – Legal and ethical aspects – Human rights of an individual; Historical aspects of Brain mapping – Neuro Psychological changes and operational aspects – probe preparation for EEG – ERP recording – analysis of results and interpretation skills; Hypnosis – requirements and applications – Narco analysis – General procedure and interpretation.

#### VIII. Mental illness and criminal behavior.

Various types of mental disorders – Psychopath, Anti-social personality, Impulsiveness, Juvenile delinquency, Drug addiction and alcohol dependence – need for social protection and psychological management of violent offenders; re-habitation of addicts; psycho social factors of child sex abuse, domestic violence, crime against women – prevalence and social responsibilities; Social processing theory of origin of crime, social norms of criminal behavior, criminal thoughts and criminal intentions. Crime monitoring by interviewing the suspects to elicit domains of crime, personality, emotional behavioral and cognitive controls, mental health and neuro psychological status; Rehabitation of individuals and psychologically recovered / relapsed offenders responsible for the crime.