

# FORENSIC SCIENCE LABORATORIES

POLICE DEPARTMENT

Madivala, Bangalore

## SYLLABUS FOR THE POST OF LABORATORY ASSISTANT (PHOTOGRAPHY) (PHOTOGRAPHY SECTION)

### Paper I: General Paper

- General awareness, Current affairs, Qualitative & Quantitative and general basic questions about all the subjects related to Physics, Chemistry, Biology, Electronics and Computer Science.

### Paper II: Subject Paper

- **History:** Evolution of cinematography, Basic elements of cinematography, various prospective of Cinematography. Early contributions, Image recording medium, early image development techniques, Developments in photography.
- **Camera:** Types of cameras, principles of camera, Anatomy of Still camera- Lens, Aperture, Shutter, Film negative, Latent image formation etc., Types of Still cameras-Pin hole, Box, Folding, Range finder, Studio, TLR,SLR, Stereo cameras and their Applications. Functions and Controls of Camera, Camera Lens and types. Camera Support System. Outdoor & Indoor Shooting accessories.
- **Basic Camera Techniques:** Basic shot Compositions. Exposure, photographic exposure & its effects, Exposure meters, Depth of field, Depth of focus. Aperture, F-stops, Focus, Hyper focal distance. Framing, frame factors-borders, Image size, angle. Concept of looking space, head room. Camera movements, Camera angles, Rule of thirds, Rule of odds, Rule of space, 180axes of action rule, Imaginary line and continuity.
- **Lenses:** Types of lenses, Construction of camera lenses. Lens formula Image formation with convex lens, Real image, Virtual image, Simple/Compound lens, Focal length of a lens, Depth of field, Angle of coverage, Types of lens- Normal, Wide, Telephoto, Macro, Micro, Zoom, Fish eye, Focal length, F-number.
- **Lighting:** Basic properties of Light, Objectives of lighting. Source of light- Light Direction-intensity. Composition of lighting - Unit of light-foot candle, lux. Lighting and exposure-direct light, diffused light. Lighting Instruments, lighting accessories. Quality of light attributes of light – quantity –quality–colour quality–Colour temperature.

- **Filters:** Filter, filter factor, Types, kinds, Light sources, Filter materials – Glass filters – Gelatin filters – Sandwich filters – Filters for black & white-Colour photography –Polarisers – Neutral density filters – UV filters –Contrast filters – Colour correction filters – Special effect filters – Creative use of filters.
- **Digital Cinematography:** Basics of digital Cinematography, Digital Applications, Image Recording, types of digital Cameras, Sensors, pixels and resolutions, Image and Video formats, Data storage.

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