

Syllabus for Written Examination

Stipendiary Cadet Trainee (SCT) Police Constable (Communication) (Men & Women) in Police Department

1. Electrical : Characteristic and Application of conductors, Insulators, Semiconductors; Construction of carbon, wire wound (linear logarithmic) resistors, thermistors potentiometers; Kirchoff's law, Ohm's Law; principle of construction and special features of simple meter, Moving iron/Moving coil meter, VTVM, Universal meter, Ohm meter and Ammeter; alternating current, A.C induced voltage, current; Faraday's principle; Lenz's law of self induction; A.C generators and Fleming's right hand rule, Frequency peak, average R.M.S values; Function and application of vibrators;

2. Electronics & Radio: Characteristics and Application of inductance in a tuned circuit; Coil-Concept of reactance, phase, power factor, Inductance and coefficient of coupling; series and parallel connection of capacitor in A.C circuits, different types of capacitors and their application, basic elements of resonance circuit, parallel L.C circuit, Anti resonance circuit, tuning and current gain, construction of Transistors, Bi-polar junction devices, PNP & NPN transistors and dynamic curves, principle of FET transistors, uses of diodes as rectifiers, Half wave and Full wave rectifier circuit, Bridge rectifiers, effect of ripples, uses of filters, carrier modulation (AM and FM) Single side band, Band width, Fidelity and quality construction in the receiver, detectors, discriminators, Range of Audio and quality construction in the receiver, detectors, discriminators, Range of Audio Frequency, Necessity for amplifications like Class 'A' 'B' and 'C' , push-pull voltage amplifier, principle of superhetrodyne receiver, frequency conversion, I.F amplification, Principle of Magnetic sound recording, magnetic tapes, magnetic heads erasing head, Television principles, Construction and working principle of Picture tube Deflection camera tube, basic T.V. System scanning synchronization composite video signal.

3. Basics of Computers : MS-Office (MS-word, EXCEL and Power point): Fundamentals of Computer Architecture, Mother board and peripherals, accessories, MS-DOS, Windows operating systems, PC assembly and software installation, networking & LAN, basics of WAN.

4. Telephone System: Basics of PSTN telephone network, Telephone instruments, EPABX, FAX, Internet telephony, GSM and CDMA phone system.