BSNL JTO Syllabus

BSNL JTO Section I Syllabus

Materials and Components

- Electronic Engineering materials
- Capacitors
- Ceramic materials
- Ceramic resonators
- Conductors
- Electromechanical components
- Ferroelectric material
- Inductors
- Insulators
- Magnetic material
- Optical materials
- Passive components
- Piezoelectric materials
- Resistors
- Semiconductors
- Superconducting materials

Physical Electronics, Electron Devices

- Integrated Circuits
- Bipolar Junction Transistor
- Carrier Statistics
- Electrons and Holes concept
- Hall Effect
- Junction theory
- Power switching devices
- Semiconductors
- Types of diodes
- Types of IC's like bipolar, MOS and CMOS

Electromagnetic Theory

- Basics of antenna theory
- Transmission lines
- Waveguides and resonators

Electronic Measurements and Instrumentation

- Electronic measurements of non-electrical quantities
- Electronic measuring instruments
- Error analysis
- Measurement standards
- Measurements of basic electrical quantities

- Transducers
- Working principles of measuring instruments

Network Theory

- Elements of network synthesis
- Network analysis techniques
- Network theorem
- Transient and steady state sinusoidal response
- Transmission criteria

Power Electronics

- AC regulators
- AC to DC convertors
- Inverters
- Power Semiconductor devices
- Pulse width modulation
- Single-phase and 3-phase Invertors
- Sinusoidal modulation
- Switched capacitor networks
- Transistor

BSNL JTO Section II Syllabus

Digital Electronic Circuits	Analog Electronic Circuits
- Boolean algebra - Boolean functions - Combinational logic circuits - De-multiplexer - Digital Comparator - Flip-flops - Full adder - Half adder - IC logic families - IC Logic gates etc	- Feedback amplifiers - Frequency response - Operational Amplifier - Oscillators - Power amplifiers - Pulse shaping circuits - Rectifiers - Small Signal analysis - Transistor biasing - Tuned amplifiers
Control Systems	Communication Systems
- Compensators - Design of Control Systems - Frequency response analysis - Gain and phase margins - Industrial controllers - Root locus techniques - Transient and steady state response	- Frequency division multiplexing - Optical Communication - Propagation of signals - Quantization & Coding - Sampling - Data reconstruction - Satellite communication - Time division Multiplexing
Microwave Engineering	Computer Engineering
- Microwave antennas - Microwave Communication	- Control unit design - Data representation

• Microwave generation and amplifiers • Microwave Measurements • Microwave Propagation • Microwave Tubes • Solid state devices • Waveguides	• Computer architecture processor design • Data structures • I/O System Organization • Memory organization • Number Systems etc
Microprocessors • Applications of Microprocessors in Telecommunications • Assembly language programming • Instruction set • Interfacing for memory and I/O • Microprocessor architecture	

BSNL JTO General Ability test Syllabus

• English Language
• Current affairs
• Current events and developments in Telecommunication Sector