

**Syllabus of lateral entry in B.Tech in Electronics & Communication Engineering
(Mizoram University Engineering Entrance Examination)**

Electronics device and Circuit : Diodes, Half wave, full wave rectifier, Zener Diode, Voltage regulator Bipolar Junction Transistor(BJT), Common Base, Common Collector, Common Emitter configuration, Biasing circuit, Field Effect Transistor, Light Emitting Diode, Silicon Control Rectifier (SCR).fundamental of Operational Amplifier(OP-AMP).

Switching Circuits: Switching action of transistor, multivibrator, Asatable multivibrator, Monostable multivibartor, bistable multivibartor.

Digital Electronics : Binary number system, Decimal to binary conversion, binary to decimal conversion, octal, hexadecimal , binary addition, subtraction, logic gates, De-Morgan's theorem, Boolean algebra, half adder, Full adder, Flip Flop, combinational circuits.

Communication: Modulation, need of modulation, Amplitude Modulation(AM), Frequency modulation(FM), Generation of AM and FM, Demodulation, Pre-emphasis, De-emphasis, Principle of radio transmission and reception, radio receiver, Television fundamental, monochrome and colour television.

Wave propagation : Basic concept of antenna, types of wave propagation, surface wave propagation, space wave propagation, duct propagation, ionospheric propagation. Transmission lines, charactersictics impedance of coaxial and two wire lines, Basic concept of wave guides.

Instrumentation and measurement: Electrical measuring instruments, Galvanometer, Ammeter, power measurement, cathode ray oscilloscope (CRO), Digital meters.

Microprocessor: Basic concepts of Microprocessor, Instruction sets of 8-bit microprocessor 8085, 8-bit address bus, data bus, accumulator, registers, Interrupt, peripherals.