**Assistant Professor of Electronics Engineering written test Syllabus**

1. Communication:  Fundamentals of analog communication ii) Digital Modulation techniques iii) Information theory and source coding iv) Baseband and Bandpass Modulation and Transmission

2. Electronic Devices and Circuits:  i) Diode ii) BJT & FET iii) MOSFET iv) Current mirror circuits & oscillator v) MESFET

3. Network Theory: Analysis of DC and Coupled circuits, Graph Theory, Positive Real Functions, Two-port networks, Network Synthesis.

4. Digital Design: Number systems; Combinatorial circuits: Boolean algebra, minimization of functions using Boolean identities and Karnaugh map, logic gates and their static CMOS implementations, arithmetic circuits, code converters, multiplexers, decoders and PLAs; Sequential circuits: latches and flip flops etc.

5. Control Systems: Basic control system components; Feedback principle; Transfer function; Block diagram representation; Signal flow graph; Transient and steady-state analysis of LTI systems; Frequency response; Routh-Hurwitz and Nyquist stability criteria; Bode and root-locus plots; Lag, lead and lag-lead etc.

6.Microprocessor: Architecture of 16 bit microprocessor, Maximum and Minimum modes module design, Interrupt Structure of 8086,8086 instructions and assembler directives with addressing modes, System design (I/O and memory interfacing), 8051 Architecture, 8051 Interfacing, Comparative study of microcontrollers.

7. Electromagnetics: Maxwell's Equations ii) Wave equation iii) Transmission Lines iv) EMI v) Basics of Antennas: Dipole antennas; radiation pattern; antenna gain.


**Assistant Professor of Electronics and Telecommunication Engineering written test Syllabus**

1. Communication:  Fundamentals of analog communication ii) Modulation techniques iii) Information theory and source coding iv) Baseband and Band pass Modulation and Transmission

2. Electromagnetics:  Maxwell's Equations ii) Wave equation iii) Transmission Lines iv) EMI

3. Antennas:  i) Fundamental Concepts ii) Radiation from wires and loops iii) Antenna Arrays iv) Concept of Smart Antennas

4. Signal and Systems:  i) Fundamental ii) Classification of signal and system iii)LTI Iv) Fourier Transform

5. Electronic Devices and Circuits:   i) Diode ii) BJT & FET iii) MOSFET iv) Current mirror circuits & oscillator