Electronic Engineering

POST GRADUATE DEGREE STANDARD

UNIT I
ELECTRON DEVICES:
Semiconductor Diodes - Transistors - FETS - UJT - SCR - Dial - Trial - Microwave Devices - IMPATT Diode - TRAPATT Diode - GUNN Diode - Microwave tubes - Klyatron - Reflex Klystron - Magnetron - TWT.

UNIT II
ELECTRONIC CIRCUITS:
Rectifiers - Controlled rectifiers - Transistors - Voltage regulators - Switched Mode Power Supply - UPS - Transistor Amplifiers - Power amplifiers - R.F. amplifier - Video Amplifier.

UNIT III
INTEGRATED CIRCUITS:
Operational Amplifier - Applications - I.C. Voltage regulators - Active filters - Function generator - Wave form generators - Digital Ics - Multipleuers - Demultipleuers - Counters - D/A and A/D converter.

UNIT IV
DIGITAL INSTRUMENTATION: Principle and operation of DVM, DMM, Digital ICR meters - Frequency and time interval meters - digital storage oscilloscope - Logic analyser - Spectrum analyser - Digital R.F. Signal generator.

UNIT V
MICROPROCESSOR BASED SYSTEM:
Microprocessors - 8085, 8086, 8088, 6800, 80286, 80386, 80486, Basic Architecture - instruction sets - Special features - peripheral and interfacing devices - Applications of micro processors - Data acquisition system, traffic controller - patient monitoring system - temperature controller.

PAPER -II
UNIT I
PRINCIPLES OF COMPUTERS:
Organisation of computers - Arithmetic logic unit - Memory devices - Input/Output devices - Control unit - Execution of Instruction - Software - High level languages - BASIC - COBAL - PASCAL and C.

UNIT II
SIGNALS AND ANALOG SYSTEMS:
Fourier Analysis of continuous time signals - Fourier transforms of Impulse, Pulse, Sinersold, step, Signum, gaussian signals - Analog modulation methods - AM, FM and PM - AM and FM transimitters - and receivers - FM steres broadcast method.

UNIT III
DIGITAL COMMUNICATION SYSTEM:
Sampling theorem - PCM, DM and ADM system - ASK, FSK and PSK systems - Optimum detection, error detection and correction - Linear block, cyclic and convolution codes - Data compression technique.

UNIT IV
FIBRE OPTIC COMMUNICATION SYSTEM:
Lasers - Different types - principle of operation - optical detectors - different types - optic modulators - fibre optic cables - wavelength division - multiplication - typical analog and digital fibre optic communication systems.

UNIT V

COMPUTER COMMUNICATION:

Network architecture, ALOHA - X-21, Digital Interface - Network nodes - Network protocol - x-25 procedures - routing algorithm - ISDN - FAX - Email - Teletext - Video text - Teleconferencing.