

M - SCHEME DETAILED SYLLABUS

34073 ELECTRONIC SYSTEM DESIGN

UNIT I DESIGN OF POWER SUPPLY

DC power supply with filters - Regulators and their types - Protection circuits - Multi output and variable power supply design - Rectifiers – types - half wave, full wave.

UNIT II DESIGN OF SMALL SIGNAL AMPLIFIERS

CB,CE configuration - Emitter follower - Darlington pair amplifiers with and without – Bootstrapping - Two stage direct coupled amplifiers - Design of audio power amplifier with drivers - Design of simple PA system - Voltage to current converter, current to voltage converter.

UNIT III DATA ACQUISITION SYSTEM

Analog to digital converter (ADC) - Digital to analog converter (DAC) - Design of Instrumentation amplifier with the bridge type – transducer - Temperature measurement - Design of Electronic voltmeter and ammeter - Design of – multimeter - Display system.

UNIT IV DESIGN OF FUNCTION GENERATORS

Design of AM signal using multiplier IC - AM signal demodulation using envelope detector - Design of FM signal using VCO (using IC NE566) -FM signal demodulation is using phase discriminator and ratio detector.

UNIT V HIGH VOLTAGE/HIGH CURRENT DRIVER

Circuit for Relay and motor control applications - Microcontroller based closed loop system - Security systems, Scrolling display - Microcontroller based stepper motor - Microcontroller based temperature sensor and relay.

REFERENCE BOOKS

- 1) A Monograph on Electronic s Design Principles,N.C.Goyel, R.K.Khetan,Khanna Publishers -Second Edition.
- 2) Electronic devices and circuitsAllen MottersheadPrentice hall of india pvt limited, 19th edition, 1997.
- 3) A Monograph on Electronic s Design Principles,N.C.Goyel, R.K.Khetan,Khanna Publishers -Second Edition.