FPYC-402 **ELECTRONICS**

UNIT-I(7)

Extrinsic andintrinsic semiconductors, p-type and n-type semiconductors, pn-junction as rectifier, half wave and full wave rectifiers (centre tap and bridge type), efficiency, ripple factor, filter circuits, types of filter circuits, Zener diode, equivalent circuit of Zener diode, Zener diode as voltage stabiliser, solving zener diode circuits, transistor as an amplifier, transistor connections and its characteristics, transistor load line analysis, operating point.

UNIT-II(7)

Single stage transistor amplifier with its practical circuit, phase reversal, D.C. and A.C. equivalent circuit, load line analysis of single stage transistor amplifier, multi-stage transistor amplifiers, role of capacitors in transistor amplifiers, gain, frequency response, decibel gain with its advantages and properties, band width, RC coupled amplifier, transistor audio power amplifier, classification of power amplifiersand efficiency comparison, push-pull amplifier.

UNIT-III(8)

Oscillatory circuit, un-damped oscillation from tank circuit, positive and negative feedback amplifier, criterion for sustained oscillation, Hartley and Colpitt's oscillator, phase shift oscillator, (Principle, Circuit operation, Theory and use)

UNIT -IV(8)

Modulation and demodulation: A.M. and F.M. Modulation index and its significance, Principle of demodulation –linear diode detector, Integrated circuits –advantages, fabrication of monolithic ICS, Digital electronics, binary and decimal number system. Logic gates AND, OR, NOT, NAND, NOR gates, truth table.

References:

1. Solid State Physics –C. Kittel (Wiley Eastern)
2. Solid State Physics –Srivastav
3. Fundamentals of electronics –Chattopadhyay, Rakshit
4. Integrated Electronics –Milkman and Halkias