IV SEMESTER - ELECTRONICS

LAB

1. Explain inverting operational Amplifier
2. Explain Non-inverting operational Amplifier
3. Explain Differential Amplifier circuit in detail
4. Draw the circuit diagram of Summing operational amplifier
5. Explain Subtractor op-Amp
6. Explain Integrator op-Amp
7. Discuss Comparator op-Amp
8. Explain Second order differential equation of op-Amp
9. Explain Sine wave generator
10. Square wave generator
11. Draw the circuit diagram of Astable multivibrator using IC-555
12. Draw the circuit diagram of Monostable multivibrator using IC-555
13. What is need for modulation. How many types of modulations are there. Explain different degrees of modulation

(14) write down the equation for Amplitude modulation and draw the frequency spectrum diagram and explain it.

(15) Draw the circuit diagram of Amplitude modulator and Explain the Amplitude modulation in detail. And obtain the mathematical expression for it

(16) Define Demodulation. Explain diode detector (or) linear diode detector (demodulation) circuit and obtain mathematical expression

(17) Explain simple frequency modulator circuit

(18) Explain Varactor diode fm modulator

(19) Basic reactance modulator

(19) Double discriminator demodulator circuit in fm

(20) Ratio detector.

Short Questions

(1) Ideal characteristics of op-Amp

(2) Ac voltage follower

(3) Dc voltage follower

(4) Parameters of op Amp

(5) write a short notes on differential circuit

(6) Logarithmic op Amp

(7) Draw the pin diagram of IC-555 and explain

(8) High pass filter and low pass filter

(9) Modulation index, modulation factor, percentage modulation - definations

(10) Need for demodulation

(11) Common mode rejection ratio (CMRR)

(12) Slew rate - notes

(13) write a short notes on carrier swing

(14) Define frequency modulation with neat diagram

(15) Draw frequency spectrum of FM

(16) Define Amplitude modulation with neat diagrams

(17) write a short notes on power in AM.