Tilak Maharashtra University
Diploma in Engineering
SUB: Linear Integrated Circuits (LIC)

Year –SY Branch- E&TC Semester -4th

Assignment No: 1

Answer any Five

Q1) State & Prove Superposition Theorem

Q2) What are the basic components of electronics. Explain each with its unit & different type of combination.

Q3) Write a Short Note ON
   1. Application of IC’s
   2. Switching regulator
   3. 1C-SG-1524

Q4) What is 1C? Explain the different classification of IC’s

Q5) Draw & Explain the Functional Block diagram of 1C 723.

Q6) What are different types of current limiting techniques. Explain in detail.

Q7) Describe Audio Power Amplifiers.

Q8) Draw Explain the block diagram of Audio Power amplifier 1C 810
Assignment No: 2

Answer any Five

Q1) Draw & Explain the functional block diagram of 1C 555?

Q2) WRITE A Short Note ON>
   a) 555 timer as a Schmitt Trigger
   b) IDEAL OP-AMP
   c) Passive filter Circuit
   d) Notch filter

Q3) What are the AC & DC characteristics of OP - AMP? Explain each characteristic in detail?

Q4) What are the various application of Passive filter?

Q5) Explain the first & second order of Butterworth Low pass filter.

Q6) What are the difference between Active & Passive filter.

Q7) State the advantage & disadvantage of Active filter.
Assignment No: 3

Answer any Five

Q1) What is Precision Rectifier? Explain in detail its different types.

Q2) Derive the equation for output voltage of closed loop Non-converting Amplifier

Q3) Write a Note on:-
   a) Voltage follower
   b) VIC
   c) Logarithmic Amplifier
   d) Schmitt Trigger
   e) 1C 8038

Q4) What is Peak detector? What are the different types of Peak detector? How can OP - AMP be used as zero crossing detector

Q5) Draw the block diagram of PLL & Explain its working ?

Q6) How the square & Triangular waveforms can be obtain from OP-AMP?