EC 8453 Linear Integrated Circuits

Important 13mark questions

Unit I

1. List and explain the function of all the basic building blocks of an op-amp.
2. Briefly explain the techniques used for frequency compensation.

Unit II

1. Explain the operation of
   (i)   Schmitt Trigger
   (ii)   Precision rectifier
2. Draw the circuit diagram of an instrumentation amplifier and explain its operation. List few applications.

Unit III

1. Explain PLL characteristics and derive the lock range and capture range equations.
2. Explain the working principle of four quadrant variable from transconductance multiplier.

Unit IV

1. Explain the working of R-2R ladder DAC with a circuit schematic. List converter characteristics.
2. With neat internal diagram, explain the following
   (i)   Dual slope ADC
   (ii)   Successive Approximation ADC.

Unit V

1. Explain the working principle of Triangular wave generator circuit using op-amp and mention its application.
2. Briefly describe about monolithic switching regulators.