

Question Bank LIC- IA1- 2022

- 1) Define a) CMRR b) Slew rate c) Input offset voltage d) Input Bias current as related with op-amp. Give its practical values.
- 2) Explain in detail functional block diagram of op-amp 741
- 3) Derive an expression for Non-inverting amplifier. Design an op-amp circuit for voltage gain of 10.
- 4) Derive an expression for Inverting amplifier. Explain virtual ground concept
- 5) Explain Ideal Integrator with circuit diagram. Derive the equation for output voltage. Draw the frequency response.
- 6) Explain Ideal Integrator with circuit diagram. Derive the equation for output voltage. Draw the frequency response.
- 7) Draw and explain Inverting summing amplifier and Average amplifier using three inputs. Derive the expression for output voltage.
- 8) Explain Two-Op-amp Difference Amplifier with the help of circuit diagram.
- 9) Explain Ideal Differentiator with circuit diagram. Derive the equation for output voltage. Draw the frequency response
- 10) Draw the input and output waveforms for a practical integrator circuit along with its circuit when the input is a) Sine wave b) Square Wave
- 11) Draw the input and output waveforms for a practical differentiator circuit along with its circuit when the input is a) Sine wave b) Square Wave
- 12) Draw & Explain the circuit diagram to generate square- wave using op-amp 741. Give the exp. for frequency. Draw the output waveforms.
- 10) Explain Non- Inverting type Comparator with the help of circuit diagram and draw output waveform for Sine wave input.
- 11) Draw and Explain the working of a Schmitt trigger circuit
- 12) What is the difference between a basic Comparator and the Schmitt Trigger
- 13) Give complete procedure to design Schmitt Trigger & hence design circuit for $UTP = 0.5V$ $LTP = -0.5V$