

Assignment-3

Unit-3

Electronic Instrumentation

1. What is an Oscillator? Differentiate between LF oscillator and RF oscillator.
2. State Barkhausen criterion for sustained oscillation. Derive the gain of a feedback oscillator with neat block diagram of feedback oscillator.
3. What is an operational amplifier (op-amp)? Draw the inverting and non-inverting configurations of op-amp.
4. Draw and explain the working of the circuit of Wein bridge oscillators in detail.
5. Draw and explain the block diagram of Function generator.
6. Draw and explain the circuit of Triangular/Square waveform generator and related circuit waveforms.
7. Draw and explain the Monostable multivibrator circuit as a Pulse generator.
8. What is CRO? Explain the function of each block of Cathode Ray Oscilloscope with neat sketch of block diagram.
9. Why the delay line is employed in C.R.O?
10. Explain the Time base generator used in C.R.O.
11. Draw and explain the basic construction of Cathode Ray Tube.
12. What are the deflection systems used in C.R.O and how they enable the display of waveform on the screen?
13. Explain the functions of following measuring instruments:
 - a) Spectrum Analyzer
 - b) Network Analyzer
 - c) Logic Analyzer
 - d) Distortion meter
 - e) RF Power meter