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Question Paper Code: 33502

B.E. / B.Tech. DEGREE EXAMINATION, AUGUST 2021

Third Semester

Electronics and Instrumentation Engineering

01UEI302 - LINEAR INTEGRATED CIRCUITS AND APPLICATIONS

(Regulation 2013)

Duration: 1:45 hour

Maximum: 50 Marks

PART A - (10 x 2 = 20 Marks)

(Answer any ten of the following questions)

1. Why aluminum is preferred for metallization?
2. Mention the characteristics of an ideal op-amp.
3. What are the applications of V-I converter?
4. What do you mean by monostable multivibrator?
5. Give the classification of voltage regulators.
6. Point out the reason why IC 741 is not used for high frequency applications?
7. Summarize the need for frequency compensation in practical op-amps.
8. What are the applications of V-I converter?
9. For perfect lock, illustrate the phase relation between the incoming signal and VCO output signal?
10. What is an opto-coupler IC? Give examples?
11. Why aluminum is preferred for metallization?

12. Summarize the need for frequency compensation in practical op-amps.
13. What are the applications of V-I converter?
14. What is an opto-coupler IC? Give examples.
15. Give the classification of voltage regulators.

PART – B (3 x 10= 30 Marks)

(Answer any three of the following questions)

16. Explain the fabrication of MOSFET. (10)
17. Describe the DC characteristics of op-amp. (10)
18. With the circuit diagram, discuss the following applications of operational amplifier:
 - (i) Sample and hold circuit (10)
 - (ii) Comparator
19. Describe the block diagram and connection diagram of voltage controlled oscillator. (10)
20. With suitable schematic diagram describe the functioning of an 8038 function generator IC. (10)