Reg. No. : | | | | | | | | | | |

Question Paper Code: 33052

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

Third Semester

Electronics and Instrumentation Engineering

01UEI302 - LINEAR INTEGRATED CIRCUITS AND APPLICATIONS

(Regulation 2013)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions.

PART A - (10 x 2 = 20 Marks)

1. State lithography process.
2. List out the applications of the metallization process.
3. Draw the pin configuration of IC*741*.
4. Define CMRR and slew rate.
5. Compare the first order low pass and high pass filters.
6. What are the advantages of voltage follower?
7. List out the features of IC555 timer.
8. Draw the pin configuration of VCO.
9. Define power amplifier.
10. What is meant by optocoupler?

PART - B (5 x 16 = 80 Marks)

11. (a) Explain the fabrication of MOSFET. (16)

Or

(b) Illustrate the basic processes involved in fabricating ICs using planar technology. (16)

12. (a) Illustrate the frequency response characteristics of Op-amp with suitable equations and plots. (16)

Or

(b) Explain about the DC characteristics of Op-Amp. (16)

13. (a) What is an instrumentation amplifier? Draw and explain the commonly used three Op-amp instrumentation amplifier circuits. Derive expression for its gain. (16)

Or

(b) Describe in detail and explain the operation of an inverting Schmitt trigger. (16)

14. (a) With neat circuit diagram, summarize the operation of astable multivibrator and monostable multivibrator. (16)

Or

(b) With the help of a neat sketch, explain PLL demodulation of an FM signal. (16)

15. (a) With neat circuit diagram, explain any two types of voltage regulators. (16)

Or

(b) With functional block diagram explain about general purpose linear IC723 regulator. (16)

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