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

Question Paper Code: 33502

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2018

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. List the four basic building blocks of an op-amp.
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. Give the application of PLL.
8. Draw the pin configuration of VCO.
9. Define power amplifier.
10. Classify the modes of adjustable voltage regulator.

PART - B (5 x 16 = 80 Marks)

11. (a) Explain the fabrication of JFET. (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) Analyze the 555 timer functional mode of operation in astable. (16)

15. (a) Discuss the 723 general purpose regulators. (16)

Or

(b) Demonstrate the internal structure, operating and electrical characteristics of the ICL8038 of audio function generator. (16)