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Question Paper Code: 34304

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

Fourth Semester

Electrical and Electronics Engineering

01UEE404 – ANALOG INTEGRATED CIRCUITS

(Common to Instrumentation and Control Engineering)

(Regulation 2013)

Duration: Threehours

Maximum: 100 Marks

Answer ALL Questions.

PART A - (10 x 2 = 20 Marks)

1. What is ion implantation? Give its advantages.
2. Mention the advantages of Integrated circuits over discrete circuits.
3. Define CMRR.
4. List any three ideal op-amp characteristics.
5. List out the features of instrumentation amplifier.
6. Explain the sample and hold circuit.
7. Draw the functional block of 555 timer IC.
8. Define Pull-in -time of Phase Locked Loop.
9. What is the function of opto couplers?
10. What are the limitations of three terminal regulator?

PART - B (5 x 16 = 80 Marks)

11. (a) Explain the various process involved in IC fabrication. (16)

Or

- (b) Explain in detail, the fabrication of resistance and capacitance. (16)

12. (a) Explain the working of integrator with a neat circuit diagram. (16)

Or

(b) Discuss in detail about differential amplifier using op amp. (16)

13. (a) Explain the types of Clipper circuit with neat diagrams. (16)

Or

(b) With neat diagram, explain the working of SAR type and Flash type A/D converters. (16)

14. (a) Describe the working of Analog Multiplier with a suitable diagram. (16)

Or

(b) Explain how frequency multiplication is done using PLL. (16)

15. (a) Explain the block diagram of a switched mode power supply in detail. (16)

Or

(b) Explain the operation of LM 380 power amplifier. (16)
