

S.No. 3371

16 SCCEL 5

(For candidates admitted from 2016–2021 Batch)

B.Sc. DEGREE EXAMINATION, NOVEMBER 2023.

Part III — Electronics - Major

LINEAR INTEGRATED CIRCUITS

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20)

Answer ALL the questions.

1. List out the IC classification.
2. Define oxidation.
3. Which circuit is called inverting amplifier?
4. Define offset error voltage.
5. Define input offset voltage.
6. Define slew rate.
7. What is a scale changer?
8. Draw the Schmitt trigger circuit.

9. Define Astable mode.
10. List out any two applications of Schmitt trigger.

PART B — ($5 \times 5 = 25$)

Answer ALL the questions, Choosing either (a) or (b).

11. (a) Explain Epitaxial growth.
- Or
- (b) Write short notes on development of IC.
12. (a) List out characteristics for ideal op amp.
- Or
- (b) With the neat diagram explain the working operation of Non inverting amplifier.
13. (a) Define the following terms (i) Output resistance (ii) Band pass Filter
- Or
- (b) Explain Band pass filter with the neat diagram.
14. (a) Sketch the voltage to converter and explain it.
- Or
- (b) Explain square wave generator with neat diagram.

15. (a) Explain the power supply connection of IC 741.

Or

- (b) With the neat diagram explain the missing pulse detector.

PART C — ($3 \times 10 = 30$)

Answer any THREE questions.

16. Explain photolithography.
17. Discuss briefly about the common mode rejection ratio.
18. Describe briefly about frequency response of operational amplifiers.
19. Explain the Triangular wave generator with neat diagram.
20. Draw the functional diagram of IC 555 timer and explain it.