APRIL/MAY 2019

BEL 32 — ANALOG ELECTRONICS

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What is an amplilifer?
2. Define power dissipation.
3. What is distortion?
4. What is bandwidth?
5. Define CMRR?
6. What do you mean by slow rate?
7. Draw the PIN diagram of OP-AMP.
8. What are inverting and non-inverting modes?
9. What is multivibrator?
10. State Barkhausen criterion for oscillation.

SECTION B — (5 × 5 = 25 marks)

Answer ALL the questions.

11. (a) Explain the action of emitter follower

Or

(b) Explain input and output impedance.

12. (a) Explain the distortion and bandwidth in an amplifier.

Or

(b) Explain the general characteristics of negative feedback amplifier.

13. (a) Derive an expression for differential gain in OP-AMP.

Or

(b) Explain the role of offset parameters.

14. (a) Explain the action integrator using OP-AMP.

Or

(b) Explain the action of differentiator using OP-AMP.

15. (a) Explain the requirement of phase shift oscillator.

Or

(b) Explain the action of relaxation oscillator

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Explain the working of Class A and Class B power amplifiers.

17. Describe the effect of negative feedback on gain

18. Discuss the principles of Adder and Subtractor using Op- Amp.

19. Elucidate the working of square waveform generator.

20. Explain the action of monostable multivibrator.

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