

NOVEMBER/DECEMBER 2019

**BEL32 — ANALOG ELECTRONICS**

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What is a multistage amplifier?
2. What is meant by power?
3. What is noise?
4. What is bandwidth?
5. Define CMRR?
6. What is slew rate?
7. Draw a comparator using OP-AMP.
8. What is the use of hold circuit?
9. What are the essential components of an oscillator?
10. State the condition for oscillation.





SECTION B — ( $5 \times 5 = 25$  marks)

Answer ALL the questions.

11. (a) Explain the push-pull configurations.  
Or  
(b) Explain the rule of emitter follower.
12. (a) Explain Input and output resistance in the case of various types of feedback.  
Or  
(b) Explain the effect of negative feedback on gain of an amplifier.
13. (a) Derive an expression for differential gain.  
Or  
(b) Explain the role of offset parameters.
14. (a) Explain the action of inverting and non-inverting modes of OP-AMP.  
Or  
(b) Explain the action of adder using OP-AMP.
15. (a) Explain the feedback requirement of oscillations.  
Or  
(b) Explain the action of Hartley oscillator.

SECTION C — ( $3 \times 10 = 30$  marks)

Answer any THREE questions.

16. Explain the working of Class A and Class B power amplifiers.
17. Discuss the analysis of voltage and current in feedback amplifier circuits.
18. Explain the ideal characteristics of Op- Amp.
19. Explain the working of triangular waveform generators.
20. Explain the action of Phase shift oscillator.

