Roll No. | | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 18

B.Tech. (Electrical & Electronics/Electronics & Electrical) (2018 Batch)
(Sem.–3)

ANALOG ELECTRONICS

Subject Code : BTEEE-302-18
M.Code : 76464

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

Write briefly :

1. Compare CB and CE amplifier.
2. Explain the need of a biasing circuit.
3. Write down the ideal characteristics of an Op-Amp.
4. What do you mean by slew rate? Explain.
5. What do you mean by output offset voltage? Explain.
6. Write down the basic requirements for the oscillation to occur.
7. What do you mean by Clipping? Explain.
8. Draw the circuit of Band reject active filter.
9. What is the need of voltage regulator? Explain.
10. Comment upon the input and output impedance of MOSFET.

SECTION-B

11. Draw and discuss CB transistor configuration. Also draw and explain its input and output characteristics.

12. Draw the circuit diagram and explain the working of full wave rectifier using bridge connections. Explain why a bridge rectifier is preferred over center-tap rectifier.

13. Draw a diagram constructional features of a MOSFET. Also draw and explain its VI characteristics.

14. Discuss the working of an operational amplifier as inverting and non-inverting amplifier.

15. Draw the circuit diagram and explain the working of direct coupled multistage amplifier.

SECTION-C

16. Draw the circuit diagram and explain in detail differential and instrumentation amplifiers.

17. Explain :

    i) Power amplifier

    ii) Common gate amplifier and its small signal equivalent circuit

18. Discuss the following

    i) Clamping Circuits

    ii) Zener Diode