

Assignment Questions

Subject: Analog Electronics

Semester: 4th (Electrical)

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1. What do you mean by P-N Junction? Explain the V-I characteristics of P-N Junction diode.
2. Define knee voltage, breakdown voltage, Ideal diode, Zener Breakdown.
3. Explain different types of clipper circuits.
4. Explain different types of clampers.
5. Explain the working of Zener diode, Tunnel diode and PIN diode.
6. Define Rectification. Explain the working of full wave bridge Rectifier.
7. Derive the Mathematical expression of Rectifier efficiency.
8. Explain different types of filter circuits.
9. Define transistor. What are the different circuit configurations of Bipolar junction transistor?
10. Draw the circuit diagram and explain input and output characteristics of common emitter configuration.
11. Define transistor biasing, stabilization. What are different methods of transistor biasing?
12. Explain with Mathematical derivation of voltage divider biasing.
13. What do you mean by DC load line and ac load line? Draw the DC equivalent circuit and ac equivalent circuit.
14. With neat diagram explain the working of R-C coupled amplifier.
15. With a neat diagram explain the working of transformer-coupled amplifier.
16. What do you mean by feedback? Write its types. Write the advantages of Negative feedback.
17. Classify the power amplifiers. Differentiate between voltage and Power amplifiers.
18. Explain the construction and working of transformer coupled class-A power amplifier.
19. Explain the construction and working of class-B push-pull amplifier.
20. Define oscillator. Write its types. Explain the working of Phase shift and Wien bridge oscillator.
21. Differentiate between FET and BJT.
22. Explain the different biasing of FET.

23. Define OP-Amp. Draw the general circuit of simple OP-Amp and IC-741 OP-Amp. and its equivalent circuit.
24. Explain the working of inverting and non-inverting amplifiers.
25. Explain with circuit diagram, the working of summing amplifier, Subtractor, Integrator, Differentiator and Comparator.