

811

REG. NO

OCTOBER 2021

Time: Three hours

Maximum Marks: 75

- Note:
1. Answer ALL the questions in PART-A (1 mark each)
 2. Answer any ONE question from each unit in PART-B (3 marks each)
 3. Answer any ONE question from each unit in PART-C (10 marks each)
 4. The question paper contains TWO Pages

PART-A (1x10=10)

1. Draw the symbol of Zener diode.
2. Define peak inverse voltage.
3. Define transistor biasing.
4. What are the three types of transistor configurations?
5. What are the types of Oscillator?
6. Draw the symbol of FET.
7. Define holding current.
8. State the applications of TRIAC.
9. Draw the symbol of Photo transistor.
10. What is Chipper?

PART-B (3x5=15)

UNIT-I

11. Draw the circuit diagram and waveform of full wave rectifier.
12. Discuss the operation of Pi filter.

UNIT-II

13. Draw the circuit diagram and wave form of CE configuration.
14. Write short notes on Fixed bias.

UNIT-III

15. List the difference between JFET and BJT.
16. Draw the circuit diagram of crystal oscillator.

UNIT-IV

17. How DIAC works as bidirectional switch?
18. Draw and explain SCR as an half controlled rectifier.

UNIT-V

19. Draw the working principle of LDR.
20. Draw the circuit diagram of Schmitt trigger.

PART-C (10x5=50)

UNIT-I

21. (i) Explain the operation of PN junction diode with neat sketch. (6)
(ii) How Zener diode act as a voltage regulator? (4)
22. Explain the operation of full wave rectifier without filter and draw its input/output waveforms.

UNIT-II

23. (i) Compare three different configurations of transistor.
(ii) Explain the operation of push-pull amplifier.
24. Explain the input and output characteristics of a common emitter configuration with a neat circuit diagram.

UNIT-III

25. (i) Draw only the circuit diagram of RC phase shift oscillator.
(ii) Discuss the operation of crystal oscillator.
26. Explain the working principle of UJT and draw its Emitter characteristics.

UNIT-IV

27. (i) Explain the operation of DIAC with its VI characteristics. (6)
(ii) Explain only the construction detail of Depletion mode MOSFET. (4)
28. With neat sketch explain the working principle of TRIAC and draw its VI characteristics.

UNIT-V

29. (i) What are the types of clampers? Explain anyone type with a neat sketch. (6)
(ii) Explain the operation of solar Cell. (4)
30. Explain the operation of Astable Multivibrator and draw its output waveforms.
