3/7/23

RS 66187

THREE YEAR B.Sc. (CBCS) DEGREE EXAMINATION, JUNE/JULY 2023

SIXTH SEMESTER

Physics (WM)

PAPER -VII : ANALOG AND DIGITAL ELECTRONICS

(w.e.f. 2015-16 Admitted Batch)

Time : Three hours Maximum : 75 marks

PART A — (5 × 5 = 25 marks)

Answer any FIVE questions.

1. Explain the advantages of FET over BJT.
2. Explain the drain the transfer characteristics of MOSFET.
3. Explain ideal Op-Amp Characteristics.
4. Explain the internal blocks of Op-Amp and mention its parameters.
5. Explain the Op-Amp as Inverting amplifier.
6. Explain the Op-Amp as summing amplifier.
7. Explain the pin diagram of 555 Timer.
8. Explain 555 timer as Astable Multivibrator.
9. Explain the construction and working of RS FF.
10. Explain the conversion of Flip flops

PART B — (5 × 10 = 50 marks)

Answer ALL questions.

11. Explain the construction and working and characteristics of FET.

(Or)

12. Explain the construction and working of enhancement MOSFET.
13. Explain the CMRR and Slew rate and offset voltages and currents of Op-Amp.

(Or)

14. Draw the circuit and Explain the basic differential amplifier.

15. Explain the Op-Amp as Integrator and Differentiator.

(Or)

16. Explain the difference amplifier and the summing amplifier using Op-Amp.

17. Explain the 555 timer as monostable multivibrator.

(Or)

18. Explain the applications of 555 astable multivibrator as square wave oscillator.

19. Explain the construction and working of D and T FF.

(Or)

20. Explain the construction and working of Clocked RS FF and Master-Slave FF

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