

November 2022

Time - Three hours  
(Maximum Marks: 100)

- [N.B. 1. Answer all questions under Part-A each question carries 3 marks.  
2. Answer all the questions either (A) or (B) in Part-B each question carries 14 marks.]

PART - A

1. Draw the schematic symbol of op-amp.
2. Draw the block diagram of op-amp.
3. Draw the schematic diagram of DAC.
4. What is the use of IC 565?
5. State De-Morgan's theorem.
6. Draw the symbol & truth table of tri state logic.
7. State MUX and DEMUX.
8. Write about flipflop.
9. How is memory classified?
10. Define bipolar RAM cell.

[Turn over.....

PART - B

11. (a) (i) Explain the simple equivalent circuit of op-amp.  
(ii) Explain virtual ground.

(Or)

- (b) (i) Explain CMRR.  
(ii) Explain op-amp as non-inverting amplifier.

12. (a) With the diagram explain the operation of weighted resistor DAC.

(Or)

- (b) With the diagram explain ramp type ADC.

13. (a) Explain the Realization of all gates using NAND gates.

(Or)

- (b) Convert the decimal number 73.81 to its equivalent octal, hexadecimal and binary numbers.

14. (a) State and explain parity generator and checker with necessary diagrams.

(Or)

- (b) Explain briefly about encoder and decoder.

15. (a) With the diagram explain flash memory.

(Or)

- (b) Explain the operation of dynamic RAM.

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