

Roll No.

CD-2853

B. C. A. (Part I) EXAMINATION, 2020

(Old Course)

Paper Third

INTRODUCTORY ELECTRONICS

Time : Three Hours

Maximum Marks : 50

Note: Attempt any *two* questions from each Unit. All questions carry equal marks.

Unit—I

1. (a) Explain N and P type semiconductors and its conductivity property.
- (b) What is diode ? Explain the biasing modes of diode.
- (c) Describe in detail any *two* types of logic families.

Unit—II

2. (a) Explain how different components can be fabricated in a monolithic IC.
- (b) What is Integrated Circuits ? Write advantages and drawbacks of ICs.
- (c) What are the advantages and limitations of monolithic integrated circuit technology ?

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Unit—III

- 3. (a) Discuss 1's and 2's complements with example. What are overflow and underflow codes ?
- (b) Explain error detection and correcting codes.
- (c) Discuss ASCII, Gray and BCD codes.

Unit—IV

- 4. (a) What is K-map ? Discuss sum of product and product of sum with and example.
- (b) State and prove de Morgan's theorem.
- (c) Explain OR and NOT operations.

Unit—V

- 5. (a) Explain in detail the principle and working of a multiplexer.
- (b) Explain the working of R-S-flip flop with Logic diagram and truth table.
- (c) Differentiate between Encoder and Decoder.

Unit—II

- 3. (a) Explain how different components can be fabricated in a monolithic IC.
- (b) What is Integrated Circuit ? Write advantages and drawbacks of ICs.
- (c) What are the advantages and limitations of monolithic integrated circuit technology.