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J-263

B.C.A. (Part-I) Examination, 2021

(Theoretical Foundation of Computer Science)

Paper-III

INTRODUCTORY ELECTRONICS

Time Allowed : Three Hours

Maximum Marks : 50

Minimum Pass Marks : 20

Note : Attempt all the five questions. One question from each unit is compulsory. All questions carry equal marks.

UNIT-I

Q. 1. What do you meant by semiconductor? Explain it's various features in detail. **10**

OR

What is logic family? Explain various types of IC logic families.

UNIT-II

Q. 2. What is IC? Discuss its advantages and limitations. **10**

OR

What do you understand by capacitor? How to use a capacitor in a monolithic IC.

UNIT-III

Q. 3. What do you understand by grey code? Explain the steps to convert grey code to Binary Code. **10**

OR

What is 8421 code? Discuss the advantages and disadvantages of this code.

UNIT-IV

Q. 4. What do you mean by SOP and POS in Boolean form? Explain it with suitable example. **10**

OR

State and prove De Morgan's theorem for Boolean algebra.

UNIT-V

Q. 5. Explain half adder combinational circuit with suitable diagram. **10**

OR

Explain sequential circuits with suitable examples.