DD-2853

BCA (Part-I) Examination, 2021

Paper - III

Introductory Electronics

Time : Three Hours]   [*Maximum Marks* : 50

Note : Answer any **two** parts from each question. All questions carry equal marks.

Unit-I

1. (*a*) Explain the working of a semiconductor. What are its types ?

   (*b*) Explain difference between PNP and NPN transistors.

   (*c*) What is meant by switching characteristics of a transistor ?

(2)

Unit-II

2. (*a*) What are the advantages and limitations of Integrated Circuits ?

   (*b*) Explain monolithic integrated circuit technology.

   (*c*) Explain advantages and limitations of monolithic integrated circuit technology.

Unit-III

3. (*a*) Explain Data types with example.

   (*b*) What do you understand by 1's and 2's complement ?

   (*c*) Write short notes on any **two** of the following :

   (*i*) ASCII code

   (*ii*) BCD code

   (*iii*) Grey code

Unit-IV

4. (*a*) What are Logic gates ? Explain AND and OR gates.

   (*b*) Explain K-map with an example.

   (*c*) State and prove the De Morgan's theorem.

DRG_60_(3)   *(Continued)*

(3)

Unit-V

5. (*a*) Explain a binary adder circuit.

   (*b*) Write short notes on the following :

   (*i*) RS flip-flop

   (*ii*) Shift Register

   (*c*) Explain working of Multiplexer.

   ———