



## AF-3038

B. Sc. (Part - II)  
Term End Examination, 2017-18

Paper - I

Electronics

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

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**Note** : Answer **all** questions. The figures in the right-hand margin indicate marks. Draw the suitable circuit diagram wherever necessary.

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### Unit-I

- |   |   |
|---|---|
| 1. (a) Explain Gray Code with proper example. | 4 |
| (b) Explain X-NOR gate.                       | 4 |
| (c) Add $(11)_2$ and $(100)_2$ .              | 2 |

### OR

- |  |   |
|--|---|
| (a) Explain circuit and operation of NOT gate. | 5 |
| (b) Multiply $(110)_2$ and $(10)_2$ .          | 3 |
| (c) Subtract $(11)_2$ from $(110)_2$ .         | 2 |

( 2 )

**Unit-II**

2. Explain laws of Boolean Algebra (any four). 10

**OR**

Explain Sum of Product (SOP) for logic function with examples.

**Unit-III**

3. Explain DTL logic. Write its characteristics. 10

**OR**

Explain JK flip-flop.

**Unit-IV**

4. Explain Synchronous Counter. 10

**OR**

Explain D/A converter.

**Unit-V**

5. Write short notes on Memories. 10

**OR**

Draw block diagram of a 8085 microprocessor. Explain it.