

Roll No. ....

**D-3674**

**B. Sc. (Part II) EXAMINATION, 2020**

INFORMATION TECHNOLOGY

Paper First

**(Digital Circuits and Computer Hardware)**

*Time : Three Hours ]*

*[ Maximum Marks : 50*

**Note :** Answer all the *five* questions. *One* question from each Unit is compulsory. All questions carry equal marks.

**Unit—I**

1. What is K-Map ? Explain SOP and POS with proper example.

*Or*

What is number system ? Explain Octal and Hexadecimal system with example.

**Unit—II**

2. Explain the term Flip-Flop and discuss its types.

*Or*

Write short notes on the following :

- (a) Half-adder
- (b) Full-adder

**Unit—III**

3. What is TTL ? Describe NAND circuit inTTL family.

**(B-7) P. T. O.**

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*Or*

What is multivibrator circuit ? Define monostable, astable and bistable in detail.

**Unit—IV**

4. Explain modes of data transfer with available types.

*Or*

What do you understand by addressing modes ? Explain in detail.

**Unit—V**

5. Explain memory management techniques briefly.

*Or*

Differentiate cache memory and virtual memory.

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