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B—476—2019

FACULTY OF SCIENCE

B.Sc. (Second Year) (Third Semester) EXAMINATION

MAY/JUNE, 2019

(CGPA Pattern)

COMPUTER SCIENCE

Paper VI

(Digital Electronics and 8085 Microprocessor)

(MCQ & Theory)

(Friday, 3-5-2019)

Time : 2.00 p.m. to 4.00 p.m.

Time—2 Hours

Maximum Marks—40

N.B. :— (i) Attempt all questions.

(ii) Assume suitable data, if necessary.

MCQ

1. Select the *correct* answer for the following : 10

(i) are called as universal gates.

(a) NAND, AND

(b) NOR, OR

(c) NAND, NOR

(d) None of these

(ii) The output of gate is '1' only if all inputs '1'.

(a) AND

(b) OR

(c) NOT

(d) EX-OR

(iii) $AB + \bar{A}C + BC = \dots\dots\dots$

(a) $AB + \bar{A}C$

(b) $AB + \bar{A}C$

(c) $(A + B)(\bar{A} + C)$

(d) None of these

P.T.O.

- (iv) The basic digital memory circuit is known as
- (a) Register (b) Gate
(c) Counter (d) Flip-Flop
- (v) A master slave JK Flip-Flop is a cascade of two Flip-Flops.
- (a) D (b) S-R
(c) T (d) None of these
- (vi) Data in serial form also known as
- (a) Temporal (b) Special code
(c) Flags (d) None of these
- (vii) Asynchronous counters are also called as counter.
- (a) Synchronous (b) Ripple
(c) Simultaneous (d) None of these
- (viii) In all Flip-Flops are not clocked simultaneously.
- (a) Asynchronous Counter (b) Shift Register
(c) Synchronous Counter (d) Master Slave Flip-Flop
- (ix) 8085 microprocessor has pins.
- (a) 08 (b) 32
(c) 64 (d) 40
- (x) Mov A, B instruction is byte instruction.
- (a) 08 (b) 01
(c) 02 (d) 03

Theory

2. Explain the construction of basic gates using universal gates. 10

Or

- (a) Explain the use of KMOP with example. 5

- (b) Explain De-Morgan's theorems. 5

3. What is Flip-Flop ? Explain in detail master slave J-K Flip-Flop. 10

Or

- (a) Explain Ripple counters. 5

- (b) Describe an ideal microprocessor. 5

4. Draw and explain the architectural block diagram of 8085 microprocessor. 10

Or

- (a) Explain basic laws of Boolean Algebra. 5

- (b) Explain arithmetic instructions of 8085 microprocessor. 5