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**Y—475—2019**

**FACULTY OF SCIENCE**

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

**NOVEMBER/DECEMBER, 2019**

**(CGPA Pattern)**

**COMPUTER SCIENCE**

**Paper VI**

**(Digital Electronics and 8085 Microprocessor)**

**(MCQ + Theory)**

**(Saturday, 14-12-2019)**

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

*Time— Two 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) All of these

(ii) The output of .....gate is '1' only if one or more inputs are 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)  $(AB) + (\bar{A} + C)$

(d) None of these

**P.T.O.**

- (iv)  $A + BC = \dots\dots\dots$
- (a)  $AB + AC$  (b)  $(A + B)(A + C)$   
 (c)  $ABC$  (d) None of these
- (v)  $\dots\dots\dots$  flip-flop is a cascade of two S-R flip-flop.
- (a) D (b) T  
 (c) Master Slave JK (d) R-S
- (vi) Data in series form is also known as :
- (a) Temporal code (b) Special code  
 (c) Flogs (d) None of these
- (vii) In  $\dots\dots\dots$  flip-flops are clocked simultaneously.
- (a) Shift Register (b) Ripple counter  
 (c) Asynchronous counter (d) Synchronous counter
- (viii) MOV A, B is  $\dots\dots\dots$  byte instruction.
- (a) 01 (b) 02  
 (c) 03 (d) 08
- (ix) 8085 microprocessor is  $\dots\dots\dots$  pia IC.
- (a) 08 (b) 16  
 (c) 32 (d) 40
- (x) Program counter is  $\dots\dots\dots$  bit Register.
- (a) 08 (b) 16  
 (c) 20 (d) 40

**(Theory)**

2. Explain in detail universal gates. 10

Or

- (a) Explain the use of K-map with an example. 5  
 (b) Explain the use of Don't care condition with an example. 5

3. What is flip-flop ? Explain in detail master slave J-K flip-flop. 10
- Or*
- (a) Explain shift Register. 5
- (b) Explain types of Instructions in 8085 microprocessor. 5
4. Explain the architecture of 8085 microprocessor. 10
- Or*
- (a) Explain any *three* logical instructions of 8085 microprocessor. 5
- (b) Explain synchronous counter. 5