

2021  
B.E. (Information Technology)  
Third Semester  
ITE-303: Digital Electronics

Time allowed: 3 Hours

Max. Marks: 50

**NOTE:** Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit.

x-x-x

I. Answer the following:-

- a) Priority encoder
- b) Single output functions
- c) EPROM
- d) Excitation Table
- e) Enable circuit (5x2)

**UNIT – I**

II. Design master slave JK flip flop. (10)

III. A combinational circuit is defined by the functions:-

$$F_1(A, B, C) = \Sigma(3,5,6,7)$$

$$F_2(A, B, C) = \Sigma(0,2,4,7)$$

Implement it with a PLA having three inputs four product terms, and two outputs. (10)

IV. Design Modulo-N Ripple Counter. (10)

**UNIT – II**

V. Explain Successive approximation A/D converter. (10)

VI. Explain digital logic families. Also compare characteristics of TTL, ECL, MOS and CMOS logic circuits. (10)

VII. a) Explain reading and writing operation in RAM.  
b) Explain various characteristics of digital circuits. (2x5)

x-x-x