2611E666

Candidate's Seat No : _____

B.Sc. Sem-5 Examination
ELE 302
Electronics

Time : 2-00 Hours]   November 2021   [Max. Marks : 50

Instructions : (1) All questions in section-I carry equal marks.
(2) Attempt any three questions in section I
(3) Questions-9 in section II is compulsory.

SECTION I

1 (a) Draw a circuit of 2 × mod 5, mod 10 counter & explain its working.   7
(b) Draw a circuit of synchronous 4 bit up-down counter & explain its working.   7

2 (a) Draw a circuit of mod 3 × 2, mod 6 counter & explain its working.   7
(b) Write notes on Decoding gates.   7

3 (a) Draw the block diagram of IC 8085 & explain all 6 blocks.   7
(b) Draw the timing diagram of memory write cycle & explain all T states.   7

4 (a) Explain in brief FLAG Register.   7
(b) Explain about "Generating control signals".   7

5 (a) Explain about data transfer, logical & branch instruction in detail.   7
(b) Give timing diagram of "OUT" instruction.   7

6 (a) Explain about execution of memory related data transfor instruction with timing diagram.   7
(b) Give comparision of memory mapped I/O & peripheral I/O.   7

7 (a) Assume accumulator contents are AAH & CY = 0. Illustrate accumlator contents after executon of instruction RLC twice.   7
(b) Assume Accumulator contents are AAH & CY = 0. Illustrate accumulator contents after execution of instrution RAL twice.   7

8 (a) A set of current reading is stored in memory location stating at CO70 H. The end of data string is inducted by data by OOH. Add the set of readings the answer may be larger than FFH. Display the entire sum at memory location E090 H & E091 H.   7
(b) The following block of data is stored in memory location from CO 55 H to CO5AH. Transfer the data to new location CO80H to CO85H in reverse order.
Data (H) 33, 22, 11, A2, CD, B9.   7

[P.T.O.

SECTION II

9 Answer the following in brief (any eight) :   8

(1) What is glitch?

(2) How many flip flops are required to construct mod-512 counter?

(3) Deffine Ripple counter.

(4) What is an excitation map?

(5) Give the full form of ALE.

(6) Give the full form of BCD.

(7) Stack pointer is a .... bi register.

(8) IC 8085 has .... pins.

(9) State difference between MOV & MVI instructions.

(10) State difference between CMP & CMA instructions.

(11) The 8085 microprocessor uses .... bit address bus.

(12) In is a .... byte instruction.

(13) Explain about the following instructions :
      (a)   XRA A
      (b)   INX H
      (c)   HLT
      (d)   STA COO5 H.