

TIME: 03 Hours

Maximum Marks :60

Instructions to candidates

- 1) Section – A is Compulsory.
- 2) Attempt any Four Questions from Section-B

Section-A

(10x2=20)

Q1)

- a) Perform the following: $(1010)_2 + (1111)_2$
- b) $(.BCBF)_{16} = ()_8$?
- c) Draw the Truth table of XNOR
- d) Give Associative Law?
- e) Define K Mapping?
- f) Define counters?
- g) What is Latch?
- h) Give truth table of T Flip Flop?
- i) Define Boolean Algebra?
- j) Name two universal Gates?

Section-B

(4X10=40)

Q2) Difference between Encoders and Decoders with Example of Each?

Q3) Explain the working of 3 bit synchronous counter?

Q4) Explain Binary Adder and Subtractor with example?

Q5) Explain working of Master Slave JK Flip Flop?

Q6)

- a) Draw the Logic Diagram of Full Adder also give the expression of Sum and Carry?
- b) Draw circuit of 4x1 Multiplexer?

Q7)

- a) Difference between SOP and POS forms?
- b) Draw 8:3 line Encoder?