Roll No. | | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(AI&ML/DS/CSE/IT/Internet of Things and Cyber Security including Block Chain Technology) (Sem.–3)

DIGITAL ELECTRONICS

Subject Code : BTES-301-18

M.Code : 76435

Date of Examination : 04-01-2024

Time : 3 Hrs. **Max. Marks : 60**

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

1. **Write briefly :**

a) Differentiate between Minterms and Maxterms.

b) What do you mean by principle of duality?

c) What are the applications of Gray codes?

d) Draw full adder circuit.

e) How can you define BCD codes?

f) What is the significance of excitation table?

g) What is the difference between asynchronous and synchronous counters?

h) What do you mean by PLA?

i) What are the various types of ROM?

j) Draw sample and hold circuit.

SECTION-B

2. With the help of examples, explain Boolean laws.

3. Convert hexadecimal number "7C" into other number systems.

4. Design mod-6 counter.

5. Draw and explain field programmable gate array.

6. Design R-2R ladder type converter.

SECTION-C

7. Explain ASCII and Excess-3 codes.

8. Design master slave flip - flop and explain its working.

9. Draw and explain 3 bit parity checker.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.