Roll No. Total	No. of Pages : 02
Total No. of Questions:09	
B.Voc. (Electronics & Information Technology) DIGITAL ELECTRONICS Subject Code : BVET-201-20 M.Code : 79546 Date of Examination : 13, 12, 2022	(Sem.–2)
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. What is the significance of Truth table?
- b. Discuss the significance of Gray code.
- c. Differentiate between Boolean algebra and Ordinary algebra.
- d. State De-Morgan's theorems.
- e. What is the significance of don't care conditions in digital electronics?
- f. Differentiate between EPROM and EEPROM.
- g. List the advantages of R-2R D/A converter.
- h. What is excitation table? Discuss.
- i. Why parity checker is required? Discuss.
- j. Draw the logic symbol and truth table of D-flip flop. Discuss its need.

SECTION-B

- 2. Convert 101001.10010 binary number to decimal number, hexadecimal and octal.
- 3. Draw the K-map of the following expression and obtain the minimal SOP form. The expression is ABCD+A \overline{C} +CD+A $\overline{B}C$ +ABC
- 4. Discuss the working of SR flip flop. Also, mention how the limitations of SR flip flop can be removed.
- 5. Explain the working of ring and twisted ring counters.
- 6. Compare RAM and ROM. Also, discuss the organization of ROM.

SECTION-C

- 7. Why analog to digital converter are required? Explain the successive approximation and counter type analog to digital converter in detail.
- 8. Design a MOD-6 synchronous counter using JK and T flip flops.
- 9. Explain
 - a) BCD adder
 - b) Encoder and decoder

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.