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

Total No. of Questions : 09

B.Tech. (CE / CSE / EE / FT /IT)   (Sem.–6)
MICROPROCESSORS AND MICROCONTROLLERS
Subject Code : BTEC-402-18
M.Code : 79382
Date of Examination : 17-07-22

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) Give special function registers of 8051 microcontroller.

   b) For 8051 microcontroller with XTAL frequency of 11.0592 MHz, find the TH1 value required to have the following baud rates (i) 9600 (ii) 2400 (iii) 4800.

   c) Draw the format of TCON register of 8051.

   d) List the different features of 8051 microcontroller.

   e) Define instruction cycle, machine cycle and T-state.

   f) Differentiate RISC and CISC architectures.

   g) Give logical instructions with examples.

   h) Give the significance of program counter.

   i) Discuss the steps of SUBB instruction with the help of example.

   j) List the allowed register pairs of 8085.

SECTION-B

2. Explain the Timer modes operation in microcontroller 8051.

3. Explain the system bus architecture for 8085 microprocessor.

4. Draw the Register organization of 8085 Microprocessor and explain the operation of each register in detail.

5. What do you mean by priority interrupt of 8051? Discuss software and hardware interrupts.

6. Give the differences between memory mapped I/O and peripheral I/O.

SECTION-C

7. Discuss the program status word and flags of 8051 microcontroller with examples.

8. a) Explain the different types of interrupts of 8085 processor.

    b) Discuss the steps to receive data serially in microcontroller.

9. Define addressing mode and explain the different addressing modes presented in 8051 microcontroller with examples.

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.