

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

SBS-B.Tech. (Electronics & Communication Engineering) (Sem-4)

**MICROPROCESSORS AND MICROCONTROLLERS**

Subject Code : BTEC-402-18

M.Code : 77566

Date of Examination : 09-06-2023

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 microprocessor and microcontroller.
- b) Explain the function of ALE signal.
- c) What is the use of HOLD and HLDA.
- d) Draw the program memory organization in 8051.
- e) State the function of RS1 and RSO bits in the flag register of 8051.
- f) List the various registers used in 8051.
- g) What is the default priority of the interrupts in 8051?
- h) What is the difference between opcode and operand?
- i) What is the difference between parallel and serial interfacing?
- j) Explain the role of cache memory in brief.

## SECTION-B

2. Explain the following instructions of 8085 with the help of suitable examples :  
LXI, SBI, CMP, JC, XRA.
3. Differentiate between RISC and CISC.
4. Classify different types of instructions in 8051 microcontrollers. Explain one instruction of each type with suitable example.
5. Describe the DAC interfacing with 8051 microcontroller using suitable diagram.
6. Discuss PSW registers in detail.

## SECTION-C

7. Explain the pin configuration of 8085 microprocessor in detail.
8. Describe the stepper motor interfacing with microcontroller in detail.
9. **Write a short note on the following :**
  - a) Input-output ports
  - b) Assembler directives
  - c) Stack.

**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.**