

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (Automation and Robotics) (Sem.-6)
MICROPROCESSORS AND MICROCONTROLLERS

Subject Code : BTAR-604-18

M.Code : 79279

Date of Examination : 09-07-22

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) Discuss the differences between microprocessor and microcontroller.
- b) Draw the structure of TMOD register.
- c) What is the significance of SBUF register?
- d) What is the use of Timers in 8051 microcontroller?
- e) Show the steps to create a program in hex code from assembly language.
- f) How can we select timer and its modes in 8051 microcontroller?
- g) What is the significance of subroutine in 8085 microprocessor?
- h) Show the I/O ports of 8051 microcontroller.
- i) List arithmetic and logical instructions of 8085 microprocessor.
- j) Show the interconnections of LCD with microcontroller.

SECTION-B

2. Write an assembly language program to find the largest number of an array 8- bit array.
3. Differentiate between maskable and non-maskable interrupts of 8085 microprocessor.
4. Explain the architecture of 8051 microcontroller with a neat block diagram.
5. Draw the pin diagram of 8085 microprocessor and explain the function of each pin.
6. Draw the flag register of 8085 microprocessor and explain the function of each flag.

SECTION C

7. Explain the different types of instructions for 8051 microcontroller with examples.
8. Draw the interrupt vector table of 8051 microcontroller and explain its operation in detail.
9. a) Discuss the following SFRs in 8051 microcontroller:
 - i) PSW
 - ii) SCON
- b) Discuss the working of stack and subroutine in 8085 programming with the help of 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.