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

Total No. of Questions : 09

B.Tech.(ECE) (2012 to 2017)
B.Tech.(Automation & Robotics) (2012 & Onwards)
(Sem.–5)
MICROPROCESSORS & MICROCONTROLLERS
Subject Code : BTEC-504
M.Code : 70480

Time : 3 Hrs.   Max. Marks : 60

INSTRUCTION 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. **Answer briefly :**

   (a) Give any two differences between microprocessor and microcontroller.

   (b) Name three features of 8051 microcontroller.

   (c) Write the working of one of the register used in Execution unit of 8085.

   (d) Write the instruction format of the ADDITION and SUBTRACTION instruction in 8085 microprocessor.

   (e) Discuss the working of stack and subroutine in 8085 programming.

   (f) What components are normally put together with the microcontroller in a single chip?

   (g) Explain the structure of PSW in microcontroller.

   (h) Explain timer mode 1 and mode 2.

   (i) What are assembler directives of 8051 microcontroller?

   (j) What is stepper motor?

SECTION-B

2. Explain Bus organization of 8085 in detail.

3. Discuss the pin configuration of 8051 microcontroller.

4. What are the different types of instruction formats of 8085 microprocessor? Give example of each format.

5. Draw and explain Timers/COUNTERS pulse control circuitry.

6. With the help of diagram explain how 8051 interfaced to external memory.

SECTION-C

7. What are the Different Addressing modes of 8051 microcontroller? Explain each with suitable examples.

8. What is difference between timer and counter of 8051 microcontroller? How to start/stop the counter of 8051 when GATE control is not used?

9. Explain Jump and Logical instructions in 8051 microcontroller with suitable 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.