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

Total No. of Questions : 09

B.Tech.(Electronics & Computer Engg.) (2011 Onwards) (Sem.–5)

MICROCONTROLLER & EMBEDDED SYSTEM

Subject Code : BTEL-502

M.Code : 70578

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) What is microcontroller?

(b) Write the features of an embedded system.

(c) What are the components of an embedded system?

(d) Discuss the criteria for selecting a microcontroller device.

(e) What is the purpose of ALU?

(f) Explain the flag register format of 8051 microcontroller?

(g) Write few lines about history of microprocessor.

(h) Draw and discuss the register organization of an embedded system.

(i) Give two examples of Logic instructions of 8051 microcontroller.

(j) Write few applications of an embedded system.

SECTION-B

2. Write an ALP using 8051 microcontroller to generate a square wave of 50% duty cycle.

3. Discuss the various Interrupts of 8051 microcontroller.

4. Explain PSW register of 8051 microcontroller.

5. Explain the addressing modes of 8051 microcontroller with examples.

6. List the features of ARM processor.

SECTION-C

7. With neat block diagram, explain the architecture of 8051 microcontroller.

8. a. What is the difference between RISC and CISC processor? Explain with suitable example.

   b. Draw and explain the block diagram of an embedded system.

9. Explain the interfacing of LCD with 8051 and write a program to display 'YES' to LCD.

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.