Roll No. ..... Total Pages : 1

BT–7/M-21 **47132**

MICROCONTROLLERS AND EMBEDDED SYSTEM DESIGN

Paper–ECE-401N

Time Allowed : 3 Hours] [Maximum Marks : 75

Note : Attempt **five** questions in all, selecting at least **one** question from each Unit. All questions carry equal marks.

UNIT–I

1. (a) Differentiate between 8-bit, 16-bit and 32-bit Microcontrollers. 10

   (b) What are the various applications of 8051 Microcontroller. 5

2. (a) Compare the major differences between Microprocessor and Microcontroller. 7

   (b) What is an Embedded system? Explain. 8

UNIT–II

3. Write feature of 8051 Microcontroller. Draw and discuss the pin diagram of the 8051 Microcontroler. 15

4. (a) Explain the differences between Port 0, Port 1 and Port 2 I/O pins in 8051. 10

   (b) Explain the function SCON and PCON register. 5

UNIT–III

5. (a) What is Addressing mode? Explain the various addressing modes with the example of 8051 Microcontroller. 10

   (b) Explain the various arithmetic instructions of 8051 Microcontroller. 5

6. (a) What is Program Memory consideration in PIC? Explain in detail. 10

   (b) Explain various features of PIC Microcontroller. 5

UNIT–IV

7. Discuss the Interfacing of the 7-segment LCD display. Write a program to display PROCESSOR rolling over it. 15

8. (a) Draw and discuss the block diagram of ARM Microcontroller. 10

   (b) Write short note on AVR Microcontroller. 5