

(OLD COURSE)QP Code : **12034**

(3 Hours)

Total Marks :100

N. B. : (1) Question No.1 is compulsory.(2) Solve **any four** questions from the remaining **six** questions.(3) Figures to the **right** indicate **full** marks.(4) Assume **suitable** data where **necessary**.

1. (a) Explain the terms T state, Machine cycle and Instruction cycle related to 8085. 5
 (b) Explain the reset state of 8085 microprocessor and 8051 microcontroller. 5
 (c) Explain any four features of ARM processor. 4
 (d) Explain interfacing of ADC 0808 to 8051. 6
2. (a) Explain Internal memory organization of 8051. 10
 (b) Design a 8085 based microprocessor based system with following specifications: CPU of 3 MHz, EPROM of 8 KB using 4 KB chips and RAM of 8 KB using 4 KB chips. Discuss schematic and show the memory map. 10
3. (a) Explain addressing modes of ARM processor. 10
 (b) Explain ICWs and OCWs of 8259. 10
4. (a) Explain control word register format of 8253 10
 (b) Explain the following instructions of ARM processor. 10
 (i) BL label
 (ii) CMN RO,R2
 (iii) TST RO,R1,LSL #3
 (iv) MLA R4,R3,R7,R8
 (v) MVN R1,#6
5. (a) Explain various modes of operation of serial port in 8051 10
 (b) Write assembly language for 8085 to arrange a series of ten, 8 bit numbers in ascending order. 10
6. (a) Write a assembly language program to generate a rectangular waveform of frequency 1KHz and 30% duty cycle at pin P1.0 using 8051. Assume 8051 is operating at frequency 12 MHz. 10
 (b) Draw and explain timing diagram for instruction DCR M. 10
7. Write short note on **any four** of the following :- 20
 (a) Serial communication in 8085.
 (b) PORT 1 structure of 8051.
 (c) Handshake mode of 8155.
 (d) PSW register of 8051.
 (e) DAC 0808 interfacing to 8051.