

QP Code :14870**(3 Hours)****[Total Marks : 80**

- Question number 1 is compulsory
- Solve any three out of remaining

- Q1. A. Explain Concept of Cortex-A, the Cortex-R, and the Cortex-M. (5 marks)
- Q1 B. Explain SCON register of 8051. (5 marks)
- Q1 C. Explain features of ARM 7. (5 marks)
- Q1 D. Write short note on CPSR. (5 marks)
- Q2. A. Draw and explain internal structure of Port 0 and Port 3 of 8051. (10 marks)
- Q 2. B. Design a microcontroller system using 8051 microcontroller, 8 KB EPROM & 8 KB RAM.
(10 marks)
- Q3. A. Interface 8051 with four, 7- segment displays and write assembly language program to display "2014". (10 marks)
- Q.3 B.. Interface 8051 with DAC 0808. WAP to generate a triangular waveform. (10 marks)
- Q4. A. Draw and explain dataflow model of ARM7. (10 marks)
- Q 4 B . Design an IR based wireless communication system . (10 marks)
- Q5 A Explain ARM instructions (10 marks)
- a. CMP R0, R1, LSR #7 b. ADDS Rd, Rm, Rs c. LDR Rd,[Rs]
- d. CMN R0,R1 e. AND R0,R0,#3
- Q5. B. Explain digital camera as an example of embedded systems. (10 marks)
- Q6 A. Timer modes of 8051. (10 marks)
- Q6. B Addressing modes of ARM 7. (10 marks)