

*BE (Seventh Semester)*  
*Electronics and Telecommunication*  
*Microcontroller and Embedded systems - 328713(28)*  
*2014 - Summer Session , Old Scheme*

**Chapter 1**

- 1 Outline the difference between 8051,8031,8052. **2**
- 2 What do you mean by OTP version of microcontroller ? Explain difference criterias for choosing microcontroller. **7**
- 3 Explain the structure of port  $p_0$  with open drain and with external puli-up register ? **7**
- 4 Sketch a block-diagram of 8051 and explain its various blocks. **7**

**Chapter 3**

- 1 Explain various bits of TCON register. **2**
- 2 Write a program to generate a square wave 2ms- on time and 6ms- off line on all pin of port1 using time 0 mode 1. Assume XTAL = 22 MHz. **7**
- 3 Explain the interrupt structure of 8051. Discus how interrupt priority is set in 8051. **7**
- 4 Explain the steps involved in mode 1 programming. Also explain how can we activate TIMER externally. **7**

**Chapter 4**

- 1 what is difference between bit rate and boud rate ?What is the advantage of serial communication over parallel communication.? **2**
- 2 Explain how boud rate is set in 8051. Also explain function of SBUF and SCON register of 8051. **7**
- 3 Write short note on RS-232 standard. **7**
- 4 Write a program to send character "CSVТУ" serially at boud rate 9600.Assume the character are stored from memory location 30H - 34H and 35H contain null character (0) to signify end of character. Assume serial mode 1 and XTAL = 11.0592 MHz **7**

**Chapter 5**

- 1 What do you mean by "step angle" in stepper moter. for what kind of application stepper moter is mostly used ? **2**
- 2 Explain the role of EA and PSEN pin of 8051. design a memory system for 8051 using 8kB data RAM kB program ROM,8kB data ROM. **7**
- 3 Sketch a block diagram of 8086 controller and list its salient feature. **7**
- 4 Explain the block diagram of ADC0808. Sketch a hardware interfacing of ADC0808 with 8051.Write an ALP convert analog signal applird at channel 3 of ADC088 to digital signal. **7**