B.E/B.Tech. DEGREE EXAMINATION, APRIL/MAY 2011
(FIFTH SEMESTER)
Department of ELECTRONICS AND COMMUNICATION ENGINEERING
EC2304- MICROPROCESSOR AND MICRO CONTROLLERS (Regulation 2008)


1. When the 8086 processor is in minimum mode and maximum mode?
2. Define Segment Override Prefix.
3. What are the 8086 instructions used for BCD arithmetic?
4. List any four program control instructions available in 8086?
5. What do you mean by sample and hold circuit?
6. List the major functions performed by CRT interface?
7. What happens in power down mode of 8051 microcontroller?
8. What are the different ways of operand addressing in 8051?
9. Why are relays that use coils called electromagnetic relays?
10. What is PWM?

PART-B

11.(a) (i) Explain the internal hardware architecture of 8086 microprocessor with neat diagram. [12]
(ii) Write briefly about the Direct Memory Access. [[Marks 4]
   (or)
(b) (i) Explain the external memory addressing in 8086 [Marks 8]
   (ii) Discuss the interrupts types of 8086 microprocessor. [Marks 8]

12.(a) (i) Explain the assembler directives ASSUME,EQU,DW,and EVEN with suitable examples. [Marks 8]
(ii) Write an 8086 ALP to sort the array of elements in ascending order. [Marks 8]
   (or)
(b) (i) Write an 8086 ALP to find the largest element in an array elements. [Marks 6]
   (ii) Explain the data transfer group and logical group of 8086 instructions. [Marks 10]

13.(a) With neat block diagram explain the 8255 Programmable Peripheral Interface and its operating modes. [Marks 16]
   (or)
(b) Draw and explain the block diagram of 8254 Programmable Interval Timer. Also explain the various modes of operation. [Marks 16]

14.(a) (i) Explain the architecture of 8051 microcontroller with neat diagram. [Marks 12]
(ii) Write briefly about the operating modes for serial port of 8051 microcontroller. [Marks 4]
   (or)
(b) (i) Write an 8051 ALP to create a square wave of 66% duty cycle on bit 3 of port 1. [Marks 6]
(ii) Describe the different modes of operation of timers/counters in 8051 with its associated register. [Marks 10]

15.(a) (i) Draw and explain the block diagram of traffic light control system. [Marks 10]
(ii) Briefly discuss the features of RTC device. [Marks 6]

(or)

(b) Draw the diagram to interface a stepper motor with 8051 microcontroller and explain. Also write an 8051 ALP to run the stepper motor in both forward and reverse direction with delay. [Marks 16]