

B.E./B.Tech. (FT) DEGREE END SEMESTER EXAMINATIONS, NOV/DEC 2011

BRANCH: ELECTRONICS AND COMMUNICATION ENGINEERING

FIFTH SEMESTER

BM9305 – MICROPROCESSOR, MICRO CONTROLLER AND SYSTEM DESIGN

REGULATIONS: 2008

Time: 3 Hours

Max.Marks: 100

Answer ALL questions

PART A – (10 x 2 = 20 marks)

1. Define the Instruction Format used in 8085
2. What do you mean by machine cycle and instruction cycle?
3. Name the various flag bits available in 8085 microprocessor?
4. Describe any two assembler directives used in 8086
5. List the operating modes of 8254 timer.
6. What is USART? What are its uses?
7. What are the internal features of 8051 microcontroller?
8. What is the purpose of EA/VPP and PSEN pin of 8051
9. What are the signals necessary for doing ADC
10. What is the advantage of Stepper Motor in Industrial Applications?

PART B – (5 x 16 = 80 marks)

11 (i) Explain the architecture of Intel 8085 with the help of a block diagram? (12)

(ii) Explain the similarities and difference between subtract and compare instructions in 8085? (4)

12 (a) With a neat sketch explain the architecture of 8086 processor?

(OR)

12 (b) Explain the addressing modes of 8086 with the help of examples?

13 (a) With a neat diagram, explain the architecture of 8255 and its different modes of operation

(OR)

13 (b) Draw the Block diagram of 8279 and explain the functions of each block.

14 (a) Explain the interrupt structure, SFR and timers of 8051 Microcontroller

(OR)

14 (b) A switch is connected to pin P1.0 and LED to pin P2.7. Write a program to get the status of the switch and send it to the LED. Assume all other relevant details. (Give 100% working diagram including the connection of VCC, Gnd, crystal ,reset etc and program).

15 (a) Design a 8051 based system to display your University name in the LCD panel.

(OR)

15 (b) Describe any two ideas in the field Bio-medical system where we can use 8051 system design to capture the biological parameters
