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B.E/ B. Tech DEGREE END SEMESTER EXAMINATIONS, Apr/May 2014

B.E- Electrical & Electronics Engineering (FULL TIME)

EE 8405/ Microprocessors & Microcontrollers

IV - SEMESTER (REG: 2012)

Time : 3 Hours

Max. Mark : 100

Answer ALL Questions

Part-A(10*2 =20 Marks)

1. State the need for timing diagram.
2. Mention the different registers used in 8085.
3. What is the need for indexed addressing mode?
4. Mention the uses of stack.
5. Compare IO mapped IO and memory mapped IO.
6. Draw the DIP switches diagram.
7. State the need for serial communication.
8. Why CMOS version of 8051 is preferred?
9. Mention the different type of stepper motor.
10. State the applications of 8051 microcontroller.

Part B-(5*16=80 Mark)

11. Write a program to generate PWM with 75 % duty cycle. Explain the necessary algorithm and flow chart. (Compulsory)

12.a. Explain the architecture of 8086 with neat diagram.

Or

12. b (i) Write a program to find the number of positive numbers in an array of 10 elements. (10)

(ii) What will be the contents of accumulator after the execution of the following program. (6)

MVI A, 15H

ORA A

RAL

RRC

13. (a) Explain the various addressing modes of 8085 and subroutines of 8085. (10+6)

Or

13 (b) Write a program to find the factorial of the given number.

14.a. Explain the interfacing of 8085 with an output device.

Or

14.b. Interface a latch and a buffer IC with 8085 using memory mapped IO technique. Use a proper decoder.

15.a Explain the functional block diagram of 8051.

Or

15.b Explain the following .

(i) Temperature control system using 8051 (8 Marks)

(ii) Stepper motor control using 8051 (8 Marks)