B.E.(with Credits)-Regular-Semester 2012-Electronics & Communication Engineering & (Telecom. Eng) Sem V

ET504 Micro Controller and its Applications

P. Pages : 4

Time : Three Hours Max. Marks : 80

Notes : 1. All questions carry marks as indicated.
2. Assume suitable data wherever necessary.
3. Illustrate your answers wherever necessary with the help of neat sketches.

1. a) Explain special function register as mention below. **8**
i) DPTR
ii) SBUF
iii) IE
iv) IP

b) Draw and explain Architecture of 8051 Microcontroller. **8**

OR

2. a) Draw internal data memory & explain bank register & stack in brief. **10**

b) Explain PSW or (Program status word) register of 8051 μc. **6**

3. a) Explain Alternate functions of I/o ports of 8051 μc. **8**

b) Explain mode 1 and mode 2 of counters and timers of 8051 microcontroller. **8**

OR

4. a) Draw format of SCON Register. Explain different bits in it. **8**

b) What is interrupt? Explain interrupt structure of 8051 μc. **8**

5. a) Explain addressing modes of 8051 Microcontroller with the help of example. **8**

b) Write an ALP to transfer Data from memory block B1. to memory block B2. Assume two blocks are non overlapped. **8**

OR

6. a) Write a program to get the x value from P1 & send x^2 to P2 continuously using Look - up table. **8**

b) Classify the Instraction Sets in 8051 μc & explain the function of following instructions. **8**
   i) SWAP;
   ii) DAA;
   iii) DJNZ

7. Interface 4x4 matrix keyboard with 8051 Microcontroller ports. Draw diagram and flowchart. **16**

OR

8. a) Write an ALP to display digit 0 to 9 on common cathode seven segment display with some interval of delay. **8**

b) Write an ALP to interface stepper motor with 8051 μc. Assume motor rotate in clockwise direction. **8**

9. a) Draw and explain Architecture of AT 89C51 Microcontroller. **8**

b) Explain the concepts of flash memory of AT 89C51. **8**

OR

10. a) Explain the following of AT 89C2051 **8**

1) Alternate functions of Port 3,

2) Oscillator characteristics.

b) Explain features of At 89C2051. **8**

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