Reg. No. : | | | | | | | | | | |

Question Paper Code: 31354

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2016

Fifth Semester

Electrical and Electronics Engineering

01UEE504 – MICROPROCESSORS AND MICROCONTROLLER PROGRAMMING

(Regulation 2013)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions.

PART A - (10 x 2 = 20 Marks)

1. What is a flag? List the flags of 8085?
2. List the Software and Hardware interrupts of 8085?
3. What is addressing mode? What are the various addressing modes available in 8085?
4. Define the types of branching operations.
5. List the features of 8051 microcontroller.
6. Give the format of PSW register of 8051.
7. What are the basic modes of operation of 8255?
8. Give the various modes of 8254 timer.
9. What is the purpose for scan section in Keyboard interface?
10. Write a simple 8051 assembly language program to control stepper motor.

PART - B (5 x 16 = 80 Marks)

11. (a) Explain the architecture of 8085 microprocessor with neat diagram. (16)

Or

(b) Draw the timing diagram for the execution of the instruction MOV A, B in 8085 processor and explain. (16)

12. (a) Discuss about the instruction set of 8085 microprocessor with example. (16)

Or

(b) Write an assembly language program using 8085 instructions to sort an array in ascending order. (16)

13. (a) With neat sketch explain the architecture of 8051 microcontroller. (16)

Or

(b) (i) Demonstrate the different ways of accessing the internal RAM of 8051. (8)

(ii) Write a program in which the 8051 gets data from P1 and sends it to P2 continuously while incoming data from the serial port is sent to P0. Assume that XTAL=11.0592. Set the baud rata at 9600. (8)

14. (a) Explain interfacing of D/A converter with microprocessor. (16)

Or

(b) Explain the block diagram of 8251 in detail and explain the two control words in detail. (16)

15. (a) Explain how to control the stepper motor using 8051.Also write the ALP to run the stepper motor in both forward and reverse directions. (16)

Or

(b) Explain in detail about the keyboard interfacing with the 8051 microcontroller. (16)

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