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

Question Paper Code: 31354

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2017

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. Define the function of auxiliary carry and parity flag.
2. What is ALE?
3. How PUSH B instruction is executed? Give the stack register after execution?
4. How is time delay generated using Subroutines?
5. What is the purpose of overflow flag in 8051 Microcontroller?
6. Mention the interrupts of 8051 microcontrollers.
7. What is the need for 8259 PIC?
8. What are the functions of USART.
9. LED is connected to P0.7. Write an assembly language program to toggle the LED?
10. State the principle of microcontroller based Stepper motor control System.

PART - B (5 x 16 = 80 Marks)

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

Or

(b) With timing diagram, explain the opcode fetch operation in 8085 Microprocessor. (16)

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

Or

(b) Write an assembly language program based on 8085 microprocessor instruction set which uses a Lookup table. (16)

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

Or

(b) Discuss about the organization of Internal RAM and Special function registers of 8051 microcontrollers. (16)

14. (a) Explain with neat sketch, the A/D and D/A converter interfacing with 8085 Microprocessor. (16)

Or

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

15. (a) Explain about the closed loop control of servo motor using 8051 Microcontroller. (16)

Or

(b) Explain with neat diagram the application of 8051 microcontroller in Washing machine control. (16)