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

Question Paper Code: 35034

B.E. / B.Tech. DEGREE EXAMINATION, NOV 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 machine cycle.
2. What is ALE?
3. Define stack.
4. How is time delay generated using Subroutines?
5. Write the features of 8051 microcontroller.
6. Mention the interrupts of 8051 microcontrollers.
7. What is the purpose of control word written to control register in 8255?
8. What are the functions of USART?
9. How a keyboard matrix is formed in keyboard interface?
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) Build the timing diagram for the instruction *MVI A*, 32. (16)

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

Or

(b) Develop an assembly language program with a flowchart to add two 8-bit numbers. (16)

13. (a) Elaborate with a functional block diagram, 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) With functional block diagram, explain the operation and programming of 8251 USART in detail. (16)

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

Or

(b) Elaborate the washing machine control using 8051 microcontroller with neat sketch. (16)