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

Question Paper Code: 31562

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

Fifth Semester

Instrumentation and Control Engineering

01UIC502 - MICROPROCESSOR AND MICROCONTROLLER

(Regulation 2013)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. Write the function of the ALE signal.
2. What is a flag?
3. Write the function performed by the RIM instruction.
4. Define T-state.
5. Compare mode 0 and mode 3 of serial port of 8051.
6. What are the four machine cycles available in 8051?
7. What is the purpose of 8255 programmable peripheral interface?
8. Write the need for interrupt controller.
9. Define embedded system.
10. What are the components of embedded system?

PART - B (5 x 16 = 80 Marks)

11. (a) With necessary block diagram explain the architecture of Intel 8086. (16)

Or

(b) (i) Explain the 8085 interrupts in detail. (8)

(ii) Compare the maximum and minimum modes of 8086. (8)

12. (a) (i) Discuss in detail about the addressing modes supported by 8085. (8)

(ii) Discuss the machine control and branching instructions of 8085. (8)

Or

(b) (i) Write a program to find the largest number in an array of 8-bit data using 8085 instruction set. (10)

(ii) Write a 8085 program to add two 16 bit numbers. (6)

13. (a) Draw and explain the functional block diagram of 8051 microcontroller. (16)

Or

(b) (i) Explain the 8051 timer modes in detail. (8)

(ii) Discuss the addressing modes supported by 8051. (8)

14. (a) Draw and explain the functional block diagram of 8259 and also explain its applications. (16)

Or

(b) Explain in detail about traffic light control system. (16)

15. (a) Explain the different types of memory and memory management methods. (16)

Or

(b) Discuss in detail about CAN, USB, PCI and PCI/X parallel buses. (16)

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