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

Question Paper Code: 31552

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

Fifth Semester

Electronics and Instrumentation Engineering

01UEI502 – MICROPROCESSOR AND INTERFACING

(Regulation 2013)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions.

PART A - (10 x 2 = 20 Marks)

1. Differentiate program counter and stack pointer.
2. The clock frequency of microprocessor is 5MHz. How much time is required to execute an instruction of 18 states.
3. Write the functions of an assembler.
4. Define : Stack and Subroutine.
5. List the main features of 8259*A* interrupt controller.
6. What are the different types of data transfer?
7. Compare serial data transfer and parallel data transfer.
8. What are the special purpose registers in 8086? How they are used?
9. How physical address is generated in 8086?
10. Mention any four flag manipulation instructions.

PART - B (5 x 16 = 80 Marks)

11. (a) With neat diagram, summarize 8085 microprocessor architecture and its operations. (16)

Or

(b) (i) Draw the PIN diagram of 8085 microprocessor and explain the function of each pin. (10)

(ii) Explain in detail about register organization of 8085. (6)

12. (a) (i) Write an 8085 assembly language program to find average of an array. (10)

(ii) Explain in detail the steps involved in execution of CALL instruction. (6)

Or

(b) Point out the instructions required for using stack in 8085 processor. Also explain its functions. (16)

13. (a) (i) Interface an ADC to 8255 and write an assembly language program to convert the analog voltage into digital. (10)

(ii) Draw the pin diagram of 8259 and explain about the function of each pin. (6)

Or

(b) Relate the detailed concept of interfacing A/D converter with 8085 processor. (16)

14. (a) Illustrate in detail about the architecture of 8086 microprocessor. (16)

Or

(b) Classify the various addressing modes of 8086 microprocessor. (16)

15. (a) Develop a program to add two 8 bit data (*F0H* and *50H*) in 8086 processor and store the result in the memory, when MASM assembler is used. (16)

Or

(b) Write in detail about the classification of instruction set of 8086. (16)

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