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**Question Paper Code: 31552**

B.E. / B.Tech. DEGREE EXAMINATION, NOVEMBER 2015

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. If the clock frequency is  $5MHz$ , how much time required executing instructions of 18 T - states?
3. Write the functions of an assembler.
4. Define the concept of looping and its classification.
5. List the main features of 8259A interrupt controller.
6. Mention the applications of A/D converters.
7. Compare serial data transfer and parallel data transfer.
8. Point out the salient features interrupt structure of an 8086 microprocessor.
9. Write a time delay program to generate a time delay of  $120ms$  in 8086 based system that runs on a  $10MHz$  frequency clock.
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) Discuss the execution of OUT instruction in 8085 processor and also draw the timing diagram. (16)
12. (a) Exemplify the instructions given below with example, (a) CMA (b) INR (c) JMP (d) RAR. (16)

Or

- (b) Point out the instructions required for using stack in 8085 processor. Also explain its functions. (16)
13. (a) Sketch the block diagram of 8279 and explain the functions of various components. (16)

Or

- (b) Relate the detailed concept of interfacing A/D converter with 8085 processor. (16)
14. (a) Illustrate in detail about the 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 (*FOH* and *50H*) in 8086 processor and store the result in the memory, when MASM assembler is used. (16)

Or

- (b) Create an Assembly language program to convert 8 bit binary number *FFH* into a *BCD* number using 8086 instructions. The result is to be stored at the memory locations *3000H: 2000H* and *3000H: 2001H*. (16)