Register Number:……………………..

B.E DEGREE EXAMINATIONS: NOV / DEC 2014

(Regulation 2009)

Sixth Semester

ELECTRONICS AND COMMUNICATION ENGINEERING

ECE 116: Microprocessors and Microcontrollers

Time: Three Hours   **Maximum Marks: 100**

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. The 8085instruction LDA FFA is an example of

   a) Direct Addressing
   b) Register Addressing
   c) Indirect Addressing
   d) Register in direct Addressing

2. The Memory Mapped I/O means that

   a) An input or Output device is treated by Microprocessor as one memory location
   b) Input or output device are treated as distinct
   c) An address on the address bus may refer either to memory location to an I/O device
   d) An Address on the address may refer to I/O device

3. The operating modes of 8255A are called

   a) Mode 0and Mode1
   b) Mode 0,Mode 1 and Mode 2
   c) Mode 0 and Mode 2
   d) Mode 0,Mode 2and Mode 3

4. The chip 8259 is a

   a) Programmable interrupt controller
   b) Programmable peripheral Interface
   c) I/O device
   d) Memory Chip

5. The signal in 8086 are in minimum mode then

   a) MN/MX' pin is tied to Vcc
   b) MN/MX' pin is grounded
   c) MN/MX' pin is left open
   d) MN/MX' tied to -Vcc

6. The number of register and Flags in 8086 are
   a) 13 and 5 respectively   b) 9 and 5 respectively
   c) 13 and 9 respectively   d) 9 and 9 respectively

7. The Program memory in 8051 is
   a) Read only type   b) Read /Write type
   c) Write only type   d) EPROM Type

8. The Timer in the 8051 is basically
   a) 16 bit register   b) 8 bit register
   c) 12 bit register   d) 10 bit Register

9. 8051 has
   a) 64 kb program memory and 64kb data   b) 128 kb program memory and 64 kb data
      memory   memory
   c) 64 kb program memory and 128 kb   d) 64Kb Program memory and 32 Kb data
      data memory   memory

10. In 8051 ACALL add11 instruction is a
    a) 2 byte instruction   b) 3 byte instruction
    c) Single byte instruction   d) 2 or 3 byte instruction

PART B (10 x 2 = 20 Marks)

11. List the 16 bit register of 8085 microprocessor.
12. What is the function performed by SIM instruction in 8085?
13. What is the size of ports in 8255?
14. What is the necessity of the programmable interval timer?
15. What happened in 8086 when DEN=0and DTR=1?
16. Explain the BHE and LOCK signals of 8086.
17. When 8051 is reset all interrupts are disabled .How to enable these interrupts?
18. Name the six addressing modes of 8051.
19. What are special function Registers in 8051?
20. What are two memory address pointers in 8051 microcontroller?

PART C (5 x 14 = 70 Marks)

21. a) (i) Explain various logical and arithmetic instruction available in 8085 (10)
           microprocessor.
       (ii) Explain the function of various Flags of 8085 microprocessor. (4)

(OR)

	b)	(i)	Differentiate between I/O mapped I/O and memory mapped I/O.	(4)
		(ii)	Draw the internal architecture of 8085 and explain.	(10)
22.	a)	(i)	Draw block diagram of 8251 and explain.	(8)
		(ii)	Explain different modes of operation of serial port in 8251.	(6)

(OR)

	b)	(i)	Draw the block diagram of 8279.	(4)
		(ii)	Explain the operation of 8279 in detail.	(10)
23.	a)	(i)	Draw the functional block diagram of 8086.	(4)
		(ii)	Explain the operation of 8086 in detail.	(10)

(OR)

	b)	(i)	Explain the interrupts in 8086 processor.	(10)
		(ii)	Explain the Flags in 8086.	(4)
24.	a)	(i)	Draw the functional block diagram of 8051.	(4)
		(ii)	Explain the architecture of 8051.	(10)

(OR)

	b)	(i)	Write a note on 8051 timer Registers.	(4)
		(ii)	Explain different modes of operation of 8051 timer.	(10)
25.	a)	(i)	Explain Data Transfer Instruction in 8051.	(8)
		(ii)	Explain Bytes Level logical Instruction in 8051.	(6)

(OR)

	b)	(i)	Explain 8051 I/O ports.	(10)
		(ii)	Briefly explain UART in 8051.	(4)

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