Register Number.....

B.E. DEGREE EXAMINATIONS: NOVEMBER 2009

Fifth Semester

ELECTRONICS AND COMMUNICATION ENGINEERING

U07EC503: Microprocessors and its Applications

me: Three Hours **Maximum Marks: 100**

Answer ALL the Questions:-

PART A (10 × 1 = 10 Marks)

Specify the type of addressing: LXI H, 4500

A) Immediate B) Register C) Direct D) Indirect

The software that translates assembly language program to machine language is

A)Editor B)Assembler C) Compiler D)Locator

3. ___ bit in ICW_1 indicates whether the 8259A is cascade mode or not.

A) LTIM=0 B) LTIM=1 C) SNGL=0 D) SNGL=1

4. The 8279 normally provides a maximum of _____ keyboard and seven segment display interface with CPU.

A) 8x8, 8 B) 8x8, 16 C) 4x4, 32 D) 4x4, 18

5. What is the output of the following code PUSH AL?

A) Decrement SP by 2 & push a word to stack B) Increment SP by 2 & push a word to stack

C) Decrement SP by 2 & push a AL to stack D) Illegal

6. In 8086 microprocessor one of the following instructions is executed before an arithmetic operation

A) AAM B) AAD C) DAS D) DAA

7. The SP is of ___ wide register. And this may be defined anywhere in the _____.

A) 8 byte, on-chip 128 byte RAM. B) 8 bit, on chip 256 byte RAM.

C) 16 bit, on-chip 128 byte ROM D) 8 bit, on chip 128 byte RAM.

8. If the IT1 bit in TCON register is set then external interrupts will be recognized when _____ occurs in the INT1 pin of 8051

A) Low level B) High Level C) Raising edge D) Falling edge.

9. In microcontroller and LCD interface the pin RS=0 selects

A) Command register B) Data register C) Enable read operation D)Enable write operation

10. If a 2KHZ square wave is to be generated using 8051 Timer 1 in mode 1 the v
loaded into Timer 1 is

A) FF1AH B) FF1BH C) FF0AH D) FF0BH

PART B (10 x 2 = 20 Marks)

11. What is the function performed by SIM instruction?
12. Give the format of flag register in 8085.
13. What are the functions performed by 8251 chip?
14. Write the BSR control word format in 8255.
15. What are advantages of memory segmentation in 8086?
16. What is meant by segment override prefix? Give example.
17. What is stack pointer and write the stack level of 8051 ?
18. List the SFRs of 8051 that are bit addressable.
19. Write an ALP for 8 bit multiplication in 8051.
20. Explain the SWAP and DJNZ Rn, rel instructions of 8051.

PART C (5 x 14 = 70 Marks)

21(a) With neat diagram explain the architecture of 8085 microprocessor.

(OR)

(b) Write a program to count continuously in hexadecimal from FFH to 00H in a system
a 0.5 microsecond clock period. Use registers C to set up a one millisecond delay betv
each count and display the number at one of the output ports.

22(a) Draw the circuit diagram showing the interfacing of a DAC with 8085 microproce
and write the assembly language program to generate a square wave form at the outpu
DAC.

(OR)

(b) Explain with a neat diagram the working of 8279 keyboard and display controller.

23 (a) Discuss the addressing modes supported by 8086 with suitable example.

(OR)

Explain the different sources of interrupts in 8086. Specify their priority levels and specify the action when an interrupt is executed. Draw and explain the INTA cycle of 8086.

Draw the block diagram of 8051 microcontroller and explain each block.

(OR)

Explain with an example how 8051 can be interfaced with external RAM and ROM.

Explain how a Keyboard can be interfaced with 8051 microcontroller. Write the program for reading the keyboard.

(OR)

i) Write an 8051assembly language program to add two BCD numbers (6)

ii) Write an 8051assembly language program to find sum of n elements in an array. (8)

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