KUMARAGURU college of technology
character is life

Register Number: ……..

B.E / B.TECH DEGREE EXAMINATIONS: MAY 2015

(Regulation 2009)

Fourth Semester

ITY102:MICROPROCESSORS

(Common to CSE/IT)

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

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. Which stack is used in 8085?
   a) FIFO b) LIFO
   c) FILO d) LILO
2. Expansion of SIM
   a) Select Interrupt Mask b) Sorting Interrupt Mask
   c) Set Interrupt Mask d) Sorted Input Multiplier
3. A single instruction to clear the lower 4 bits of accumulator
   a) XRI 0F b) ANI F0
   c) XRI F0 d) ANI 0F
4. Maximum number of I/O devices that can be addressed by Inter 8085 is
   a) 65536 b) 255
   c) 512 d) 256
5. In BSR mode, only port C can be used to
   a) set individual ports b) reset individual ports
   c) set and reset individual ports d) programmable I/o ports
6. In 8257 (DMA), each of the four channels has
   a) a pair of two 8-bit registers b) a pair of two 16-bit registers
   c) one 16-bit register d) one 8-bit register
7. The instruction, MOV AX, [2500H] is an example of
   a) immediate addressing mode b) direct addressing mode
   c) indirect addressing mode d) register addressing mode

8. The stack pointer register contains

a) address of the stack segment
b) pointer address of the stack segment
c) offset of address of stack segment
d) data present in the stack segment

9. In a tightly coupled system, when a processor is using the bus then the local bus of other processors is in

a) hold state
b) high impedance state
c) halt state
d) low impedance state

10. The memory device that holds branch target addresses for previously executed branches is

a) tristate buffer
b) RAM
c) ROM
d) branch target buffer

PART B (10 x 2 = 20 Marks)

11. Write a short note on status register of 8085 microprocessor
12. Give the significance of SIM and RIM instructions available in 8085.
13. Differentiate between maskable and non-maskable interrupts.
14. Why 8085 processor is called an 8 bit processor?
15. Write a short note on control word register of 8255.
16. Draw the internal architecture of IC 8259.
17. Discuss the function of instruction queue in 8086.
18. How single stepping can be done in 8086?
19. What is interrupt service routine?
20. What are the advantages of segmented memory concept?

PART C (5 x 14 = 70 Marks)

21. a) Draw neat block diagram of 8085 microprocessor and explain in detail its functional units.

(OR)

b) Draw the timing diagram of 8085 for the following instructions. a) STA 4100 b) MOV A, B c) MVI C, 34

22. a) Draw the interfacing diagram for 8085 based system with the following specifications: 16KB RAM and 8 KB EPROM. Show the required latches, buffers and decoders. Draw the memory map for the above interface.

(OR)

b) (i) Write an ALP to display hours01-12 continually. (8)

(ii) Write the significance of hardware and software interrupts in 8085. (6)

23. a) Explain about Programmable Interval Timer with neat block diagram.

(OR)

b) Draw the block diagram of 8255 and explain its working. Determine the control word for the following configuration of 8255:

Port A – output
Mode of Port A – Mode 1
Port B Output
Mode of Port B – Mode 0
Port C –lower pins - output

24. a) With suitable examples, discuss the different addressing modes available in the 8086 microprocessor.

(OR)

b) Write an assembly language program to move a string of data words from offset 2000H to offset 3000H. The length of the string is 0FH.

25. a) Explain the basic features of Pentium microprocessor with neat block diagram.

(OR)

b) Describe the entire process of how an interrupt is handled by the processor in real mode operation and also give details on special interrupts incorporated into the Pentium.

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