16.317: Microprocessor Systems Design I Fall 2015

Lecture 6: Key Questions September 16, 2015

1.	(Review) Describe the operation of the MOVSX/MOVZX instructions.				
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2.	2. Assume: $AX = 0100H$, $DX = 8100H$, $(100H) = 00H$, $(101H) = FFH$. What are the result following instructions?				
a.	MOVSX EBX, AX				
b.	MOVSX EBX, DX				
c.	MOVZX EBX, DX				
d.	MOVSX EBX, BYTE PTR [100H]				
e.	MOVSX EBX, WORD PTR [100H]				

3. Explain the operation of the XCHG instruction.

4. Explain the operation of the LEA instruction.

5. **Example:** Given the initial memory state below:

	Hi			
0x528000	50	88	31	А3
0x528004	B2	FF	0F	7D
0x528008	07	D0	BE	22
0x52800C	11	96	00	14

Show the results of the following short instruction sequence.

MOV EAX, 528000h MOV EBX, [EAX+2] XCHG BL, BH LEA EDX, [EAX+8] MOV ECX, [EDX-3]