CSAR101 - Activity 3

Identify the addressing modes for the following instructions and determine the memory address accessed.

1.
Suppose that DS = 0200H, BX = 0300H, and DI = 400H. Determine the memory address accessed by each of the following instructions, assuming real mode operation:
(a) MOV AL,[1234H]
(b) MOV EAX,[BX]
(c) MOV [DI],AL

2.
Suppose that DS = 1000H, SS = 2000H, BP = 1000H, and DI = 0100H. Determine the memory address accessed by each of the following instructions, assuming real mode operation:
(a) MOV AL,[BP+DI]
(b) MOV CX,[DI]
(c) MOV EDX,[BP]

3.
Suppose that DS = 1200H, BX = 0100H, and SI = 0250H. Determine the address accessed by each of the following instructions, assuming real mode operation:
(a) MOV [100H],DL
(b) MOV [SI+100H],EAX
(c) MOV DL,[BX+100H]

4.
Suppose that DS = 1100H, BX = 0200H, LIST = 0250H, and SI = 0500H. Determine the address accessed by each of the following instructions, assuming real mode operation:
(a) MOV LIST[SI],EDX
(b) MOV CL,LIST[BX+SI]
(c) MOV CH,[BX+SI]

5.
Suppose that DS = 1300H, SS = 1400H, BP = 1500H, and SI = 0100H. Determine the address accessed by each of the following instructions, assuming real mode operation:
(a) MOV EAX,[BP+200H]
(b) MOV AL,[BP+SI−200H]
(c) MOV AL,[SI−0100H]

6.
Suppose that EAX = 00001000H, EBX = 00002000H, and DS = 0010H. Determine the addresses accessed by the following instructions, assuming real mode operation:
(a) MOV ECX,[EAX+EBX]
(b) MOV [EAX+2*EBX],CL
(c) MOV DH,[EBX+4*EAX+1000H]