

CSE341 Final

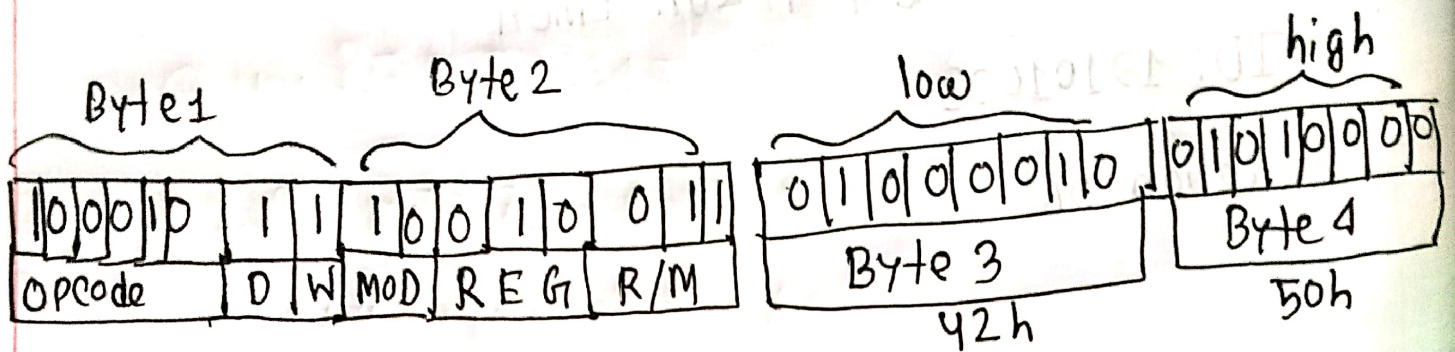
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Section: 06

Ans: to the Q. No 1(a)

8B 934250h = 1000101110010011010000100
1010000



It is 16 bit because its $w=1$

It's 011 shows BP+DI+16b address mode

low byte = 42h

high byte = 50h

Answer to the Q. No 1(b)

MOV [BX + 101], HDI [ESI], HQ VOM ①

1	0	0	0	1	0	0	0	1	0	0	1	1	1	1	1
opcode				D	W	MOD			REG				R/M		

$$= (1000100010010111)_2$$

$$= (104227)_8$$

$$2^8 - 01 \times 1 = F \times 8 - 01 \times 8 (Ans) = 2048 \text{ byte}$$

$$2^8 - 01 \times 15 \times 2 = F \times 15 \times 2 = 2048 \text{ byte}$$

For two more operation total three

$$2^8 - 01 \times 15 \times 2 = F \times 15 \times 2 = 2048 \text{ byte}$$

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Answer to the Q. No 2

- ① MOV BH, [12345 H]
- ② MOV AH, [12347 H]

$$f = 70 \text{ MHz}$$

duty cycle of 70%

$$T = \frac{1}{70 \times 10^6} = 14.28 \text{ ns}$$

$$\text{duty cycle} = 14.28 \times 7 = 9.9 \text{ ns}$$

$$\text{bus cycle} = 4 \times 14.28 = 57.12 \text{ ns}$$

For two move operation total time

$$= 2 \times 57.12 \text{ ns}$$

$$= 114.24 \text{ ns}$$

$$\text{stay low clock cycle} = \frac{114.24}{2}$$

$$= 57.12 \text{ ns}$$

Ans: to the Q No 3

(b)

$$B7D72 - (B021 \times 10)$$

$$\Rightarrow B7D72 - B0210$$

$$= 7B62$$