

i) MOV AL, [2000H]

[Given, SI = 2000H  
DS = 1000H]

$$\begin{aligned}EA &= DS \times 10H + [2000H] \\ &= 1000 \times 10 + [2000H] \\ &= 10000 + 2000 \\ &= 12000H \text{ (Ans).}\end{aligned}$$

ii) MOV AX, [SI]

$$\begin{aligned}EA &= DS \times 10 + [2000H] \quad [SI = 2000H \text{ given}] \\ &= 1000 \times 10 + 2000 \\ &= 10000 + 2000 \\ &= 12000H \text{ (Ans).}\end{aligned}$$