Question No: 01

Question: Determine the physical address of a memory location given by 0A61:AD90h

Answer:

Physical address = segment * 10h + offset
Here,   segment = 0A61h
        offset = AD90h

Thus, Physical address = (0A61 * 10h) + AD90h
                        = 153A0h

Question No: 02

Question: A memory location has a physical address 3A9B2h. Compute
a) The offset address if the segment number is 20FAh
b) The segment number if the offset address is A322h

Answer:

(a) Physical address = segment * 10h + offset
    => Offset = Physical address - segment * 10h
            = 3A9B2h – (20FAh * 10h)
            = 19A12h

(b) Physical address = segment * 10h+ offset
    => segment = (Physical address – offset) / 10h
            = (3A9B2h – A322h) / 10h
            = 30690h / 10h
            = 3069h