



# **Ahsanullah University of Science & Technology**

## **Department of Computer Science & Engineering**

**Course No : CSE2214**  
**Course Title : Assembly Language Programming Sessional**  
**Assignment No : 03**  
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**Section : A**

1. Determine the physical address of a memory location given by  $0A51:CD90h$

⇒ find physical address formula

$$= \text{segment} * 10 + \text{offset}$$

~~loc~~ location :  $0A51 : \cancel{CD90} CD90h$ .

$$\text{segment} = 0A51$$

$$\text{offset} = CD90$$

$$\therefore \text{Physical Address} : 0A51 * 10 + CD90$$

$$= 0A510 + CD90$$

$$= 172A0h.$$

2. A memory location has a physical address  $4A37Bh$ , compute.

(2.1) The offset address if the segment number is  $40FFh$

(2.2) The segment number if the offset address is  $123Bh$ .

(2.1)  $\Rightarrow$  physical address =  $4A37Bh$   
segment =  $40FFh$

$$\text{Physical address} = \text{Segment} * 10 + \text{offset}$$

$$4A37Bh = 40FFh * 10 + \text{offset}$$

$$4A37Bh = 40FF0h + \text{offset}$$

$$\therefore \text{offset} = 4A37Bh - 40FF0h$$

$$\text{offset} = 938Bh$$

2.2

⇒ we know that

$$\text{physical address} = \text{segment} * 10h + \text{offset}$$

thus

$$\text{segment} * 10h = \text{physical address} - \text{offset}$$

in this example

$$\text{physical address} = 4A37Bh$$

$$- \text{offset} = 123Bh$$

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$$\text{segment} * 10h = 49140h$$

∴ so the segment = 4914h.

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