

## Section 6

e(a)	Segment	base	length
	0	219	600
	1	2300	14
	2	90	100
	3	1327	580
	4	1952	96

given logical address

Segment, logical address

( 0 , 430 )

( 1 , 12 )

( 2 , 500 )

( 3 , 400 )

( 4 , 110 )

$$430 < 600 \text{ (length)}$$
$$\text{then, } 430 + 219 \text{ (Base)}$$
$$= 649$$

$$12 < 14$$
$$\text{then } 12 + 2300$$
$$= 2312$$

$$500 < 100$$
$$\text{then, } 500 + 90 = 590$$

$$400 < 580$$
$$\text{then } 400 + 1327$$
$$= 1727$$

$$110 < 96 = \text{Illegal}$$

Segment	Physical Address
0	649
1	2312
2	590
3	1727
4	Illegal

(ii) Paging is implemented by breaking up an address into a page offset number. Because each bit position represent a power of 2, splitting address between bits result in a page size that is a power of 2. That's why our page number always in the form of  $2^k$