1.

	Pub CM	Private CM	Stu Rec	Admin DOC	Student	Prof	TA
Student	R		R				
Prof	R W	R* W*	R W	R			
TA	R	Can delegate					
Admin	Read write Exec	R W E	R W E	R W E	Control	Control	Control

Name:

2. In a machine the logical address space is 32 bits, page size is 4KB, Physical address space is 20 bits. Now show,

- no of pages, no of frames and page table size.
- Is it possible two keep it in one level paging? If not, then propose a solution. Show with calculation that your proposed solution is working properly. 10

Ans:

LAS = 32bit = 2^{32} byte

PAS = 20 bit = 2^{20} byte

page size = 4KB = 2^{12} byte

# of page = $\frac{LAS}{PS} = \frac{2^{32}}{2^{12}} = 2^{20}$

# of frame = $\frac{PAS}{PS} = \frac{2^{20}}{2^{12}} = 2^8$

page table size = # of page * one entry size

= # of page * frame bit

= 2^{20} * 8 bit

= $2^{20} \times 1$ byte

= 2^{20} byte

No, page table size = 2^{20} byte > frame size = 2^{12} b

~~new page table size 2^{12}~~

New.

# of page in PT = $\frac{2^{20}}{2^{12}} = 2^8$

outer page bit

$\therefore$ New page table size = $2^8 \times 8$ bit

$= 2^8 \times 1$ byte

$= 2^8$ byte

$=$ frame size

$\therefore$ works properly.