

Họ và tên: Trần Vũ Tiến Minh

MSSV: B23DCCF067

Lớp: D23CQC04-B

Môn: Hệ điều hành

Bài Question 4 & 5 Chapter 3

Question 4:

~~4 2 3 4 2 1 5 6 2 1 2 3~~

OPT

	1	2	3	4	2	1	5	6	2	1	2	3	7	6	3	2	1	2	3	6
OPT	1	1	1	1	1	1	1	1	1	1	1	3	3	3	3	3	3	3	3	6
		2	2	2	2	2	2	2	2	2	2	2	7	7	7	7	2	2	2	2
			3	4	4	4	5	6	6	6	6	6	6	6	6	6	1	1	1	1
				F			F	F				F	F			F	F		F	

⇒ Page missing events = ~~8~~ 11

	1	2	3	4	2	1	5	6	2	1	2	3	7	6	3	2	1	2	3	6
FIFO	1	1	1	4	4	4	4	6	6	6	6	3	3	3	3	2	2	2	2	6
		2	2	2	2	1	1	1	2	2	2	2	7	7	7	7	1	1	1	1
			3	3	3	3	5	5	5	1	1	1	1	6	6	6	6	6	3	3
				F			F	F	F	F		F	F	F		F	F		F	

⇒ Page missing events = ~~13~~ 16

	1	2	3	4	2	1	5	6	2	1	2	3	7	6	3	2	1	2	3	6
LRU	1	1	1	4	4	4	5	5	5	1	1	1	7	7	7	2	2	2	2	2
		2	2	2	2	2	2	6	6	6	6	3	3	3	3	3	3	3	3	3
			3	3	3	1	1	1	2	2	2	2	2	2	6	6	6	1	1	1
				F			F	F	F	F		F	F	F		F	F		F	

⇒ PMV = ~~12~~ 15

Question 5  
OPT

Date:

No:

1	2	3	4	5	3	4	1	6	7	8	7	8	9	7	8	9	5
1	1	1	1	1	1	1	1	6	7	7	7	7	7	7	7	7	7
	2	2	2	5	5	5	5	5	5	5	5	5	5	5	5	5	5
		3	3	3	3	3	3	3	3	8	8	8	8	8	8	8	8
			4	4	4	4	4	4	4	4	4	4	9	9	9	9	9
				F				F	F	F			F				

FIFO

1	2	3	4	5	3	4	1	6	7	8	7	8	9	7	8	9	5
1	1	1	1	5	5	5	5	5	5	8	8	8	8	8	8	8	8
	2	2	2	2	2	2	1	1	1	1	1	1	9	9	9	9	9
		3	3	3	3	3	3	6	6	6	6	6	6	6	6	6	5
			4	4	4	4	4	4	7	7	7	7	7	7	7	7	7
				F			F	F	F	F			F				F

LRU

1	2	3	4	5	3	4	1	6	7	8	7	8	9	7	8	9	5
1	1	1	1	5	5	5	5	6	6	6	6	6	6	6	6	6	5
	2	2	2	2	2	2	1	1	1	1	1	1	9	9	9	9	9
		3	3	3	3	3	3	3	7	7	7	7	7	7	7	7	7
			4	4	4	4	4	4	4	8	8	8	8	8	8	8	8
				F			F	F	F	F			F				F



No:

Question 5 Clock:

1	2	3	4	5	3	4	1	6	7	8	7	8	9	7	8	9	5
1*	1*	1*	1*	5*	5*	5*	5*	5	5	8*	8*	8*	8*	8*	8*	8*	8
→		2*	2*	2*	2	2	2	1*	1	1	1	1	1	9*	9*	9*	9
	→		3*	3*	3	3*	3*	3*	6*	6*	6*	6*	6*	6*	6*	6*	5*
		→		4*	4	4	4*	4*	4	7*	7*	7*	7*	7*	7*	7*	7
				F			F	F	F	F			F				F

### Question 4: Clock

[illegible]

$$\Rightarrow \text{PMEs} = 16$$