2014 - 컴퓨터구조 기말고사 답안지

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2, 5, 8, 9, 10 번의 답은 뒷면에 쓸 것.

1. (1) **(   ) ~ (   )**

1-(2) [표 2]

Virtual Address	Virtual page number	Page fault (Y/N)	Physical page number	Physical Address
4A38				
3870				
20B0				
67A4				
2220				
01E0				

[표 1] Page table

	Valid	PPN
0	1	2
1	0	
2	0	
3	0	
4	0	
5	0	
6	0	
7	1	1
8	0	
9	0	
10	0	
11	1	0
12	1	3
13	0	
14	0	
15	0	

1-(3) [표 3]

	Valid	PPN
0		
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		

3-(1) [표 5] Initial state of the data cache

	V	Tag	Data		V	Tag	Data
0	1	0000			1	1001	
1	1	0000			0	1100	
2	1	0100			1	1000	
3	1	1111			0	0010	

3-(2) [표 6] Program

Instructions	Tag (이진수)	Index (십진수)	H/M
lw $1, 0x068($0)			
lw $2, 0x114($0)			
lw $3, 0x030($0)			
lw $4, 0x120($0)			
lw $5, 0x00C($0)			
lw $6, 0x024($0)			

3-(3) [표 7] Final state of the data cache

	V	Tag	Data		V	Tag	Data
0							
1							
2							
3							

4.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

	IF	ID	EX	MEM	WB
6-(1)					or
6-(2)					lw
6-(3)					add
6-(4)					slt

7-(1)	ForwardA =	ForwardB =
7-(2)	ForwardA =	ForwardB =