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CS4400 Fall '14

PS8

1. A. C = E*B*S = 128 bytes
   B. CO = b = 2 bits, stored in bits 0 -1
      CI = s = 3 bits, stored in bits 2-4
      CT = m – s – b = 8 bits, stored in 5-12

2. A. 0 0111 0001 1010
   Block offset = 0x2
   Index = 0x6
   CT = 0x38
   Cache Hit? Yes
   Byte Returned = EB

3. A. 1 0110 1110 1000
   Block offset = 0x0
   Index = 0x2
   CT = 0xB6
   Cache Hit? Yes
   Byte Returned = DC

4. The 8 addresses that will hit must contain tag B6 or BC and have index bits set to 010.
   These are 0x16E8, 0x16EA, 0x16E9, 0x16EB, 0x1788, 0x1789, 0x178A, 0x178B

5. The cache setup results in misses ¼ of the time.

dst array

	Col 0	Col 1	Col 2	Col 3
Row 0	M	H	H	H
Row 1	M	H	H	H
Row 2	M	H	H	H
Row 3	M	H	H	H

src array

	Col 0	Col 1	Col 2	Col 3
Row 0	M	H	H	H
Row 1	M	H	H	H
Row 2	M	H	H	H
Row 3	M	H	H	H