Assignment questions on 4th unit

1. Explain the cache optimization: Giving Read priority over write priority.

2. Consider the following code sequence.

   STR R3, 512 (R0)

   LDR R1, 1024 (R0)

   LDR R2, 512 (R0)

   Assume Direct mapped: Write –through cache that maps 512 and 1024 to the same block. Four word write buffer that is not checked on a read miss. Will the value in R2 always be equal to the value in R3? Explain with steps.

3. Explain write through cache and write back cache with respect to giving read priority over write priority.

4. Explain virtual address. How it differs with physical address.

5. How virtual address is translated to physical address. Explain with suitable diagram.

6. What are the two tasks in address translation? Explain.