**Studytonight – CAO test 6 – Aditya Jain**

1. **The algorithm which replaces the block which has not been referenced for a while is called \_\_\_\_\_  
   a) LRU**b) ORF  
   c) Direct  
   d) Both LRU and ORF

Explanation: In Least Recently Used (LRU) page replacement algorithm, the page that has not been used for the longest amount of time (least recently used) is replaced.

1. **The algorithm which removes the recently used page first is \_\_\_\_\_\_\_\_**a) LRU  
   b) **MRU**  
   c) OFM  
   d) None of the mentioned

Explanation: In Most Recently Used (MRU) is a page replacement algorithm in which it is assumed that the page accessed now is less likely to be accessed again.

1. **The LRU can be improved by providing a little randomness in the access.  
   a) True**  
   b) False
2. **In micro-programmed approach, the signals are generated by \_\_\_\_\_\_  
   a) Machine instructions**  
   b) System programs  
   c) Utility tools  
   d) None of the mentioned
3. **In LRU, the referenced blocks counter is set to ’0′ and that of the previous blocks are incremented by one and others remain same, in case of \_\_\_\_\_\_  
   a) Hit**b) Miss  
   c) Delay  
   d) None of the mentioned

Explanation: In Least Recently Used (LRU) Page replacement algorithm, If the referenced block is already present in the memory, it is called as hit.

1. **The directly mapped cache no replacement algorithm is required.**  
   **a) True**  
   b) False

Explanation: The position of each block is **pre-determined** in the direct mapped cache, hence there is no need for replacement.

1. **The LRU provides very bad performance when it comes to \_\_\_\_\_\_\_\_\_**a) **Blocks being accessed is sequential**b) When the blocks are randomised  
   c) When the consecutive blocks accessed are in the extremes  
   d) None of the mentioned

Explanation: The LRU in case of the sequential blocks as to waste its one cycle just incrementing the counters.

1. **The counter that keeps track of how many times a block is most likely used is \_\_\_\_\_\_\_**a) Count  
   **b) Reference counter**c) Use counter  
   d) Probable counter

Explanation: **Reference Counting** is a technique of storing the number of references, pointers, or handles to a resource such as an object, block of memory, disk space or other resource.

1. **A word whose individual bits represent a control signal is \_\_\_\_\_\_**a) Command word  
   **b) Control word**c) Co-ordination word  
   d) Generation word

Explanation: The **Control Word** is used to get the different types of control signals required.

1. **In associative mapping during LRU, the counter of the new block is set to ‘0’ and all the others are incremented by one, when \_\_\_\_\_ occurs.**a) Delay  
   **b) Miss**c) Hit  
   d) Delayed hit

Explanation:  Miss usually occurs when the memory block required is not present in the cache.

1. **Individual control words of the micro routine are called as \_\_\_\_\_\_**a) Micro task  
   b) Micro operation  
   **c) Micro instruction**d) Micro command
2. **In set associative and associative mapping there exists less flexibility.**a) True  
   **b) False**

Explanation**:**The above two methods of mapping the decision of which block to be removed rests with the **cache controller**.

1. **The surroundings of the recently accessed block is called as \_\_\_\_\_\_**a) Neighbourhood  
   b) Neighbour  
   **c) Locality of reference**d) None of the mentioned

Explanation: The locality of reference is a key factor in many of the replacement algorithms.

1. **To read the control words sequentially \_\_\_\_\_\_\_\_\_ is used.**a) PC  
   b) IR  
   c) **UPC**d) None of the mentioned

Explanation: The UPC stands for Micro program counter.

1. **The special memory used to store the micro routines of a computer is \_\_\_\_\_\_\_\_**a) Control table  
   **b) Control store**c) Control mart  
   d) Control shop

Explanation: The control store is used as a reference to get the required control routine.