Assignment 7

The due date for submitting this assignment has passed. As per our records you have not submitted this assignment.

1. Which of the following are naive architectural attacks?
   a) Reuse-attack
   b) Meltdown and Spectre
   c) Cache Timing Attack
      i) a and b
      ii) b and c
      iii) a and c
      iv) All of the above

      No, the answer is incorrect. Score: 0

      Accepted Answers:
      All of the above

2. State True or False
   Cache memory is implemented using DRAM chips, which are fast and expensive.
   True
   False

      No, the answer is incorrect. Score: 0

      Accepted Answers:
      False

3. Which of the following is true for out-of-order execution?
   i) Exploits instruction level parallelism and hides latencies
   ii) Hardware required is complex
   iii) Used to reduce latencies
   iv) Hardware required is simple compared to in-order processors

      True
      False

      No, the answer is incorrect. Score: 0

      Accepted Answers:
      i, iii, iv

4. State True or False
   In the probe phase of probe + probe attack, the time taken to access the cache sets that have victim data is more due to cache hits.
   True
   False

      No, the answer is incorrect. Score: 0

      Accepted Answers:
      True

5. Rowhammer attack, which is strong enough to give named access permissions to the user process, can be prevented by partitioning the OOMd and separating the sensitive and non-sensitive information.
   True
   False

      No, the answer is incorrect. Score: 0

      Accepted Answers:
      True

6. State True or False
   i) All the parent and the child processes share the same page table. Does this mean they share the same page frames in the RAM?
      ii) CPU creates a copy of the shared pages if it changes. All further changes are made in this new page.

      True
      False

      No, the answer is incorrect. Score: 0

      Accepted Answers:
      True, True

7. State True or False
   Meltdown and Spectre attacks exploit on-out-of-order execution of the processor.
   True
   False

      No, the answer is incorrect. Score: 0

      Accepted Answers:
      True

8. State True or False
   One of the countermeasures to prevent Flush+Flush attack is to permit off-chip access only through system calls.
   True
   False

      No, the answer is incorrect. Score: 0

      Accepted Answers:
      True

9. Which of the following is a keylogger?
   i) Hardware based Keyboard
   ii) Software based Keyboard
   iii) Kernel based Keyboard
   iv) All of the above

      No, the answer is incorrect. Score: 0

      Accepted Answers:
      All of the above

10. Which of the following are prevents cache covert channel?
    i) Process P1 and Process P0 should be separated on the operating system level,
    ii) Process P1 and Process P0 can share the same cache memory once after the other
    iii) Process P1 and Process P0 can never be allowed to share the same cache memory
    iv) Process P1 and Process P0 can have restricted access to the same cache memory

      No, the answer is incorrect. Score: 0

      Accepted Answers:
      Process P1 and Process P0 can never be allowed to share the same cache memory.