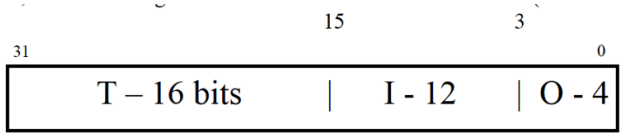
CMPEN331 – Quiz 6 (April 14, 2022)

Section:

Name: **Email:**

1. Draw and label the partitioning of the 32-bit memory address into the segments that are used to access the cache; Label each segment with its name and its width in bits. (shows bit numbers) **(5 points)**

Solution



A. Multiple Choice
For each of the following questions, select the option which is most often true: **(5 points)**

Increases, decrease, doesn't affect

i. Increasing the capacity of a cache__**Increases**__its access time

ii. Decreasing the capacity of a cache_**Increases**__its miss rate

iii. Decreasing the capacity of a cache **_doesn't effect_** its miss penalty

iv. Increasing a cache's hit rate_**decrease**__the effective average memory access time

v. Assuming constant capacity, increasing a cache's block size (cache line size)

_ decrease or doesn't affect __the amount of tag storage required