Questions on Fifth Quiz

COSC 6360
Fall 2015
First question

- What is the main reason for partitioning an SMR disk into bands?
Second question

- How is the persistent cache of a SMR disk drive using a set associative STL organized?
Third question

- What can we learn by writing blocks in the first 1GiB of a hard disk in random order and measuring the timings? (two-part answer)
Fourth question

According to the authors of FAWN, where lies the sweet spot in CPU efficiency?
Fifth question

Why does FAWN use a log-structured datastore? (two-part answer)
Sixth question

- According to the authors of Xen, what is the main disadvantage of non-tagged TLBs?
- How does Xen solve this problem?
Seventh question

- Consider a PIROGUE cluster with four servers. What would be the main advantage and disadvantages of replacing its lowest ranked server by a witness?

- *Main advantage:*
  - □

- *Main disadvantage:*
  - □