Chapter 4

16. Bits per address space \* number of address spaces

17. If you don’t search the table first, you may not see an updated entry for that i-node that has not been written back yet, which causes problems when writing back any subsequent i-nodes.

21. For UNIX file systems, the compliment of a list of the occupied list will give the free space.

22. His thesis will not be backed because it will be open when it tries to get backed up. Depending on the system, this may cause the entire machine to be missed by backups.

27. h+[(1-h)\*40]

32. pg. 322

Chapter 5

2. No. Scanners transmit at 400KB/s, so the total speed of 802.11g cannot be realized.

4.

5. 34 items to push \* 10 ns + 34 items to pop \* 10 ns = 680 ns

9. Sure! The page take 10secs to print, the I/O only takes 200 ns to process.

14. RAID 2 performs much better in case of fault, as parity checks can be done on the fly and do not significantly affect throughout

15. P(*k*-drive RAID system failing in some hour) = P(2 or more drives crash within that hour)

P(2 or more drives crash) = 1 – P(exactly 1 drive crashes) – P(no drives crash)

P(exactly 1 drive crashes) = k \* p \* (1 – p)k-1

P(no drives crash) = (1 – p)k

Thus, P(failure) = P(2 or more drives crash) = 1 – k \* p \* (1 – p)k-1 – (1 – p)k