Name: Harsh Mohan Sason

5.
Solution:

Rotation time (1/ (5400/60))/ 2 = 11ms/rot = 5.5ms
Average seek: 12 + 5.5 = 17.5 ms per request.
Total = **175s.**

6.
Solution:

Seek time = 12.0 ms
Rotation time = 5.5 ms 850 Mbit/s - 106 MB/s
Transfer time = 10000 * (512 bytes / 106 MB/ sec)
= **48 m s**

Chapter 13 Problem

5.
a.)

Solution: With 12 direct pointers and 6 KB blocks,
the first 75 KB of a file can be accessed through direct pointers.

b.)

Solution:
Each block can index (6 KB / block) / (6 bytes / pointer) = 1024 = 2^10 pointers per block
Thus, a file will have 12 + 2^10 + 2^20 + 2^30 + 2^40 blocks i.e 2^40 blocks approx.
Each block is 6KB, thus giving us a Max size of approximately = 6 * 2^50 bytes (approximately 6 PB).