HW 6 Answer Key

1.a. Total capacity of a track = 23040; Useful capacity of a track = 20480
1.b. 43.61 msec
1.c.   average time to transfer 20 random blocks = 872.2msec
        average time to transfer 20 consecutive blocks
                using tr 64.7 msec
                using btr 67.5 msec
2.a. 89
2.b. bfr=11, b=3637
2.c. 523.32 msec
2.d.i.   Using tr 2.03 sec;
        using btr 2.315 sec
2.d.ii. 79.304185 sec
3. 3719
4. a. YES
4. b. NO
5. 40, 1, 11, 3, 4, 14, 6, 16, 22, 43
6. a. 1 + [5**(h-1) -1]/2
6.b. (10**h -1)/9
6.c. 2*(5**(h-1))-1
6.d. 10**h -1
7.a. NO
7.b. NO
7.c. NO
7.d. YES
7.e. NO
7.f. NO
7.g. NO
8.a. CREATE INDEX I on Emp(Job);
8.b. Secondary
8.c. DROP INDEX I;
9. There are two possible correct answer sets to these questions depending whether the index is a single level index or is a multilevel index. Both sets are reported below.

Single level index
9.a. 8
9.b. 11
9.c. 19
9.d. 10

Multilevel index
9.a. 4
9.b. 4
9.c. 14
9.d. 5