

1. **Answer:**

a)

- Each sector can hold $\lfloor 512/120 \rfloor = 4$ records.
- Number of sectors required = $300,000 / 4 = 75,000$ sectors
- Number of tracks required = $\lceil 75,000 / 96 \rceil = 782$ tracks
- Number of surfaces required = $\lceil 782/110 \rceil = 8$ surfaces

b)

- 7200 rpm = 120 rotations per second
- a full rotation takes 8.33 ms
- average rotational delay (a half rotation) takes 4.167 ms

c)

- transfer time to read one sector = $8.33 / 96 = 0.0868$ ms

2. **Answer:**

SSTF	110	120	129	147	186	64	41	10
SCAN	110	120	129	147	186	64	41	10
C-SCAN	110	120	129	147	186	10	41	64