So each block contains $\frac{16384}{512} = 32$ sectors and 31 gaps. And given 20% of each track is used for gaps.

~~⇒ So transfer time =~~

And there are 1000 gaps per track.

⇒ Transfer time $= \left(\frac{31}{1000} \times \frac{20}{100} + \frac{32}{1000} \times \frac{80}{100} \right) \times 6 \text{ ms}$

$= 0.1908 \text{ ms}$

Average seek time

~~If head is at cylinder 1 or cylinder 10000, then the average number of tracks to move is~~

$$\frac{1+2+3+\cdots+9999}{10000} \approx 5000.$$

The average distance travelled by the head is one third of the way across the disk, i.e; $\frac{9999}{3}$

$= 3333$ cylinders.

⇒ Average seek time $= 1 + 0.001 \times 3333$

$= 4.333 \text{ ms}$

⇒ Average Time taken for I/O between disk and main memory

$= 3 + 0.1908 + 4.333$

$= 7.5238 \text{ ms}$