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Question-13:

As per the given data

Number of cylinders in a disk = 10000

Number tracks per cylinders = 4

Number of sectors per track = 2048

According to given information

Rotation time between cylinders = 10 msec

Seeking time between cylinders = 1 msec.

Worst Case time = 20 msec

Total Seek time = Number of cylinders (Seek time cylinder) - 1

= 10000 - 1 = 9999 msec.

Total Rotational time given as = 20msec

In Worst Case = rotation time between cylinders * no. of cylinders * tracks per cylinders

= (10 * 1000 x 4) + 20

Therefore, the total time to read 10,000 cylinders

= (10000 - 1) + (10 x 10000 x 4) + 20)

Total time to read 10,000 Cylinders

= 9999 + 400000 + 20

= 410019 msec.