Q4.

Consider a disk with the following parameters:

Block size (B):	**128 bytes**
Interblock gap size G:	**32 bytes**
Number of blocks per track:	**10**
Total number of cylinders:	**200**
Total number of platters:	**8**
Block Transfer Time (btt):	**0.8 msec.**
Average seek time:	**30 msec.**
Average rotational time:	**2.99 msec.**

Hint: Assume that the topmost-upper and the bottommost surfaces are not used.
Answer the following questions. ***You must show your computation for iii through vii***.

i.   How many tracks per recording surface are there?   **Ans:**

ii.   How many recording surfaces are there?   **Ans**:

iii. What is the **total capacity** of a track and what is its **useful capacity** in bytes? Show your computation.

    Ans: Total capacity =   **Useful capacity =**

iv.   What is the **total capacity** and the **useful capacity** of a cylinder in bytes?

    Ans: Total capacity =   **Useful capacity =**

v.   What is the **total capacity** and the **useful capacity** of the entire disk in bytes?

  Ans: Total capacity =   **Useful capacity =**

vi.   **Total time** in msec. to transfer 5 blocks to RAM sequentially?

  Ans: Total time =

vii. **Total time** in msec. to transfer 5 blocks to RAM randomly?

  Ans: Total time =

viii. Compare transfer times of **(vi)** and **(vii)** and explain the reasons for any difference.

Ans: