

Questão 30

Scientists have long touted DNA's potential as an ideal storage medium; it's dense, easy to replicate, and stable over millennia. But in order to replace existing silicon-chip or magnetic-tape storage technologies, DNA will have to get a lot cheaper to predictably read, write, and package.

That's where scientists like Hyunjun Park come in. He and the other cofounders of Catalog, an MIT DNA-storage spinoff emerging out of stealth on Tuesday, are building a machine that will write a terabyte of data a day, using 500 trillion molecules of DNA.

If successful, DNA storage could be the answer to a uniquely 21st-century problem: information overload. Five years ago humans had produced 4.4 zettabytes of data; that's set to explode to 160 zettabytes (each year!) by 2025. Current infrastructure can handle only a fraction of the coming data deluge, which is expected to consume all the world's microchip-grade silicon by 2040.

"Today's technology is already close to the physical limits of scaling," says Victor Zhirnov, chief scientist of the Semiconductor Research Corporation. "DNA has an information-storage density several orders of magnitude higher than any other known storage technology."

How dense exactly? Imagine formatting every movie ever made into DNA; it would be smaller than the size of a sugar cube. And it would last for 10,000 years.

Wired, June, 2018. Disponível em <https://www.wired.com/>. Adaptado.

Conforme o texto, cientistas preveem que, em pouco mais de 20 anos,

- (A) a geração de dados pela humanidade chegará à marca de 160 zettabytes.
- (B) a armazenagem de todos os dados produzidos esgotará o estoque mundial de microchips de silício.
- (C) a densidade das moléculas de DNA terá aumentado exponencialmente.
- (D) o custo para gravação de dados digitais será maior que hoje.
- (E) as novas tecnologias de informação serão bem mais duradouras que as atuais.

RESPOSTA

Alternativa: B

O terceiro parágrafo diz que a atual infraestrutura “is expected to consume all the worlds microchip-grade silicone by 2040”. Essa afirmação está associada à ideia do texto sobre a possível solução para o problema de dados digitais.