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Q99

Consider the following statements: DNA Barcoding can be a tool to: 1. assess the age of a plant or animal. 2. distinguish among species that look alike. 3. identify undesirable animal or plant materials in processed foods. Which of the statements given above is/are correct? (a) 1 only (b) 3 only (c) 1 and 2 (d) 2 and 3
Official key: D.

UPSC Civil Services Prelims 2022 · General Studies · 2 marks · Current Affairs and GK
Current events, government schemes, miscellaneous GK - Prelims GS Paper I.

Explanation

(a)

1 only. Barcoding does not date an organism the way rings or radiocarbon do.

(b)

3 only. Look-alike species ID is also a core use.

(c)

1 and 2. Statement 1 fails.

(d) Official key

2 and 3. DNA barcodes separate cryptic species and can flag undeclared animal/plant matter in foods. Not an ageing tool.

Summary

Official key is (d) 2 and 3. DNA barcoding (COI and other loci) distinguishes similar-looking species and can detect adulteration in processed foods. It does not measure age.

Related possible facts

These can be asked in a future Prelims paper.

DNA barcode

Short standardised gene region; Hebert's COI for animals.

CBOL

Consortium for the Barcode of Life.

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