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Q69

Aerial metagenomics' best refers to which one of the following situations? (a) Collecting DNA samples from air in a habitat at one go (b) Understanding the genetic makeup of avian species of a habitat (c) Using air-borne devices to collect blood samples from moving animals (d) Sending drones to inaccessible areas to collect plant and animal samples from land surfaces and water bodies Official key: A.

UPSC Civil Services Prelims 2023 · General Studies · 2 marks · Current Affairs and GK
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Explanation**(a) Official key**

Collecting DNA from air in a habitat in one go. That is aerial **metagenomics**.

(b)

Genetic makeup of birds. Ornithology, not this term.

(c)

Airborne blood sampling. Not the method.

(d)

Drones collecting bulk samples. Field logistics, not **metagenomics** of air.

Summary

Official key is (a). Aerial **metagenomics** samples environmental DNA/RNA from air - a snapshot of the organisms shedding genetic material in that habitat. It is not a bird genome project, dart-sampling, or drone fieldwork as such.

Related possible facts

These can be asked in a future Prelims paper.

eDNA

Environmental DNA; also used in water and soil.

Metagenomics

Sequencing mixed genetic material without culturing.

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