

WRAP Exams · wrapexams.com

Prelims PYQ, Mains model answers, and copy evaluation. Write to the desk for this paper, a doubt, or the AI waitlist.

ask@wrapexams.com · +91 85951 84903 · wrapexams.com

Q70

Microsatellite DNA' is used in the case of which one of the following? (a) Studying the evolutionary relationships among various species of fauna (b) Stimulating 'stem cells' to transform into diverse functional tissues (c) Promoting clonal propagation of horticultural plants (d) Assessing the efficacy of drugs by conducting series of drug trials in a population Official key: A.

UPSC Civil Services Prelims 2023 · General Studies · 2 marks · Current Affairs and GK
Current events, government schemes, miscellaneous GK - Prelims GS Paper I.

Explanation**(a) Official key**

Studying evolutionary relationships among species. Microsatellites are classic population-genetic and phylogenetic markers.

(b)

Stimulating stem cells. Unrelated.

(c)

Clonal horticulture. Micropropagation, not **microsatellite** DNA as the tool named here.

(d)

Drug-trial efficacy. Clinical, not this marker.

Summary

Official key is (a). **Microsatellite** DNA (SSR / STR) - short tandem repeats - is used to measure relatedness, population structure and evolutionary relationships. It is not a stem-cell stimulus, a cloning protocol, or a drug-trial design.

Related possible facts

These can be asked in a future Prelims paper.

Microsatellite

Short tandem repeat; highly polymorphic nuclear marker.

STR in forensics

The same class of loci used in DNA fingerprinting.

ask@wrapexams.com · wrapexams.com

WRAP Exams