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

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Q5(d)

Mitochondrial DNA and human evolution.

UPSC Civil Services Mains 2025 · Anthropology GS 1 · 10 marks · The biological basis of Life

1.7 The biological basis of Life: The Cell, DNA structure and replication, Protein Synthesis, Gene, Mutation, Chromosomes, and Cell Division.

Facts & figures for this PYQ only.

Numbers move. Confirm the latest Budget, Economic Survey or census round. This sheet is for revision, not a substitute for the model answer.

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Cann, Stoneking and Wilson

Their 1987 mitochondrial DNA study argued that the maternal ancestor of living humans lived in Africa and that living diversity is structured by a recent African origin.

Mitochondrial Eve

The most recent common maternal ancestor of living humans' mtDNA. Other women lived at the same time; their mtDNA lines did not survive.

Maternal inheritance

Children receive mtDNA from the mother. Affected fathers do not transmit their mtDNA lineage.

Haplogroups

Named branches of the human mtDNA tree used to study migration. They are genealogical labels, not biological races.

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