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Q8(b)

Describe the genetics and inheritance patterns of the ABO and Rh blood groups in man.

UPSC Civil Services Mains 2024 · Anthropology GS 1 · 15 marks · Mendelian genetics in man-family study, single factor, multifactor, lethal, sub-lethal and polygenic inheritance in man.

9.2 Mendelian genetics in man-family study, single factor, multifactor, lethal, sub-lethal and polygenic inheritance in man.

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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Karl Landsteiner

Discovered the ABO blood-group system and established the immunological basis of safer transfusion.

Bombay phenotype

The hh genotype prevents H antigen formation, so A or B transferases have no substrate; first recognised in Mumbai.

ABO codominance

I^AI^B individuals express both A and B antigens; this is codominance, not blending.

Anti-D prophylaxis

Rh immunoglobulin given to an unsensitised Rh-negative mother prevents immune response to foetal D-positive cells.

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