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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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Q15

What are aurora australia and aurora borealis? How are these triggered?

UPSC Civil Services Mains 2024 · GS I · 15 marks · World's Physical Geography

Salient features of world's physical geography.

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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Ionospheric heights

Auroral emission typically occurs from tens of kilometres to a few hundred kilometres above the surface, in the upper atmosphere.

Oxygen green line

The common green aurora is associated with excited atomic oxygen; reds involve oxygen at other transitions; blues often involve nitrogen.

Coronal mass ejection

A large expulsion of solar plasma and field that can drive geomagnetic storms and bright, expanded auroras.

Geomagnetic poles

Auroral ovals circle the magnetic poles, which are offset from the geographic poles, so the lights are not centred on the map's north and south.

Solar cycle

Roughly eleven-year sunspot modulation changes how often strong solar storms, and thus vivid auroras, occur.

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