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# IMPORTANT TOPIC



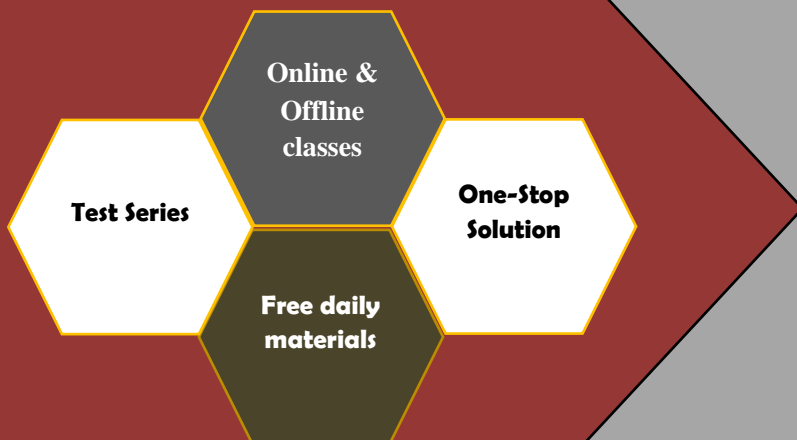
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## Most Promising Astronomical Site: Hanle

Notes for civil services preparation



UPSC

General Studies

## Most Promising Astronomical Site: Hanle

### Why in News

- According to a recent study, the Indian Astronomical Observatory (IAO) located at Hanle near Leh in Ladakh is becoming one of the promising observatory sites globally.
- The Indian Astronomical Observatory has one of the world's highest sites for optical, infrared and gamma-ray telescopes.

### Key Points

#### About:

- Hanle site is as dry as the Atacama Desert in Chile and much drier than Devasthal (Uttarakhand) and has around 270 clear nights in a year and is also one of the emerging sites for infrared and sub-mm optical astronomy.
- This is because water vapour absorbs electromagnetic signals and reduces their strength.
- It has advantages of more clear nights, minimal light pollution, background aerosol concentration, extremely dry atmospheric conditions, and uninterrupted monsoon.
- Such conditions are considered crucial for astronomers to build huge telescopes and plan for future observatories and predict how they will vary with time.

#### Other Promising Sites:

- Merak observatories in Ladakh.
- Devasthal in Nainital, Ali Observatory in the Tibet Autonomous Region in China.
- South African Large Telescope in South Africa.
- University of Tokyo Atacama Observatory and Paranal in Chile.
- Mexico's National Astronomical Observatory.

#### Trans- Himalayan Region:

- The Trans-Himalayas Mountain Region or Tibet Himalayan Region is located to the north of the Great Himalayas which consists of Karakoram, Ladakh, Zaskar and Kailash mountain ranges.

- It is also called the Tibet Himalayan Region because most of the part of these ranges lies in Tibet.
- They are the eastward continuation of the most northerly ranges of the Himalayas.
- It consists of an ill-defined mountain area about 600 miles long and 140 miles wide in the centre, narrowing to a 20-mile width at the eastern and western ends.
- It is mainly composed of granites and volcanic rocks of the Neogene and Paleogene age.

