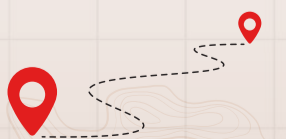





Solar Radiation, Heat Balance & Temperature

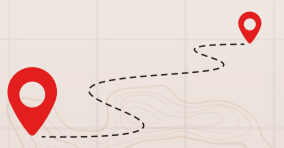
- Insolation means incoming solar radiation.
- Solar constant is about 1.94 calories per sq. cm per minute.
- Aphelion occurs on 4 July; Perihelion occurs on 3 January.
- Maximum insolation is received over subtropical deserts due to minimum cloudiness.
- Atmosphere is largely transparent to shortwave solar radiation.
- Blue sky and red sunrise/sunset are caused by scattering of light.
- Normal lapse rate is 6.5°C per 1000 m.
- DALR is about 9.8°C per 1000 m.
- MALR is about 4°C to 6°C per 1000 m.
- ELR controls atmospheric stability.
- Terrestrial radiation is longwave radiation emitted by Earth.
- Heat budget balances incoming solar radiation and outgoing terrestrial radiation.
- Out of 100 units, 35 are reflected and 65 are absorbed.
- Earth's average albedo is about 0.3.



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- Temperature is controlled by latitude, altitude, distance from sea, air masses and ocean currents.
 - Isotherms join places of equal temperature.
 - Temperature inversion means temperature increases with altitude.
 - Long winter nights, clear sky, dry air and calm stable air favour inversion.



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The image displays the OGCDDA website interface across three devices: a laptop, a tablet, and a smartphone. The laptop screen shows the main page with the heading "Your Knowledge Base For Defence Exams" and a search bar. Below the search bar, there is a "Subject Knowledge" section with a grid of subject buttons: English, Physics, Chemistry, Biology, Maths, History, Geography, Polity, and Economics. The tablet screen shows the "Exam Guides" section, which provides a complete roadmap to defence exams, including eligibility, exam pattern, syllabus, cut-offs, and selection process. The smartphone screen shows the "Popular Topics" section, which lists curated topics based on frequently asked questions and official defence exam trends, including Structure of Atom, Noun, Carbon and its Compounds, Vocabulary, Metals and Non-Metals, Determiner, Current Electricity, X-Rays, and Voice. The OGCDDA logo is visible in the top right corner of the laptop screen.