

UPSC Civil Services Examination

UPSC Notes [GS-I]

Topic: Evaporation And Condensation (Geography Notes for UPSC)

Evaporation

- Evaporation is a process by which water is converted from liquid to gaseous state.
- Temperature is the main cause for evaporation.
- The temperature at which the water starts evaporating is known as latent heat of vaporisation.
- Rise in temperature escalates water absorption and retention capacity of the given parcel of air.
- Movement of air substitutes the saturated layer with the unsaturated layer.
- Hence, the greater the movement of air, the greater is the evaporation.

Condensation

- The conversion of water vapour into the water.
- Condensation is caused by the loss of heat.
- When moist air is cooled, it may reach a level when its capacity to hold water vapour terminates.
- The surplus water vapour condenses into the liquid stage.
- In free air, condensation results from cooling around very small particles named as hygroscopic condensation nuclei.
- Condensation depends upon the amount of cooling and the relative humidity of the air.
- It is influenced by the volume of air, temperature, pressure and humidity.

Condensation takes place:

- When the temperature of the air is decreased to dew point with its volume remaining constant.
- When both the temperature and the volume are decreased.
- When moisture is added to the air through evaporation. However, the most favourable circumstance for condensation is the reduction in air temperature.