

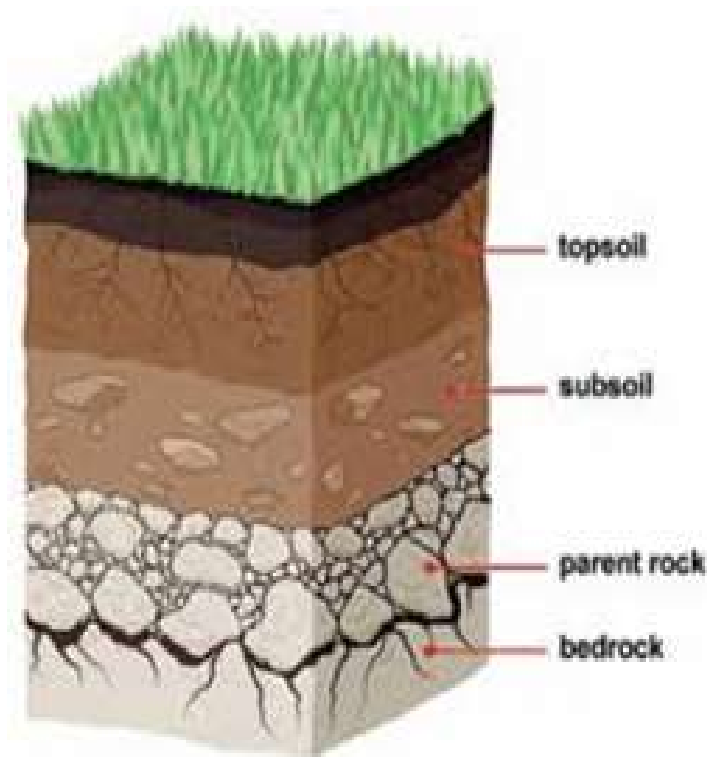
# Geography Hons / Sem IV

# Soil Profile

- *Soil profile* is defined as the vertical section of the soil from the ground surface downwards to where the soil meets the underlying rock

# Soil Profile

*Soil profile* is defined as the vertical section of the soil from the ground surface downwards to where the soil meets the underlying rock



# Soil Horizon

- A **soil horizon** is a layer parallel to the [soil](#) surface, also the decaying matter on it ([plant litter](#)), whose physical, chemical and biological characteristics differ from the layers above and beneath. Horizons are defined in many cases by obvious physical features, mainly colour and texture. These may be described both in absolute terms (particle size distribution for texture, for instance) and in terms relative to the surrounding material, i.e. 'coarser' or 'sandier' than the horizons above and below

# Soil Horizon



**O (humus or organic)**  
**A (topsoil)**

**E (eluviated horizon)**

**B (subsoil)**

**C (parent material)**

**R (bedrock)**

**O HORIZON**  
Surface litter:  
Partially decomposed  
organic matter

**A HORIZON**  
Topsoil: Humus, living  
creatures, inorganic  
minerals

**E HORIZON**  
Zone of leaching, mate-  
rials move downward

**B HORIZON**  
Subsoil: iron, aluminium  
humic compounds are  
accumulated and clay  
leached down from A  
and E horizons

**C HORIZON**  
Weathered parent  
material: Partial break-  
down of inorganic  
minerals

**R HORIZON**  
Bedrock



# Difference between eluviation & illuviation

- In soil science, **eluviation** is the transport of soil material from upper layers of soil to lower levels by downward precipitation of water across soil horizons, and accumulation of this material (**illuvial** deposit) in lower levels is called **illuviation**. ... **Eluviation** occurs when precipitation exceeds evaporation

Thank you

- Madhumita Chakrabarti Goswami