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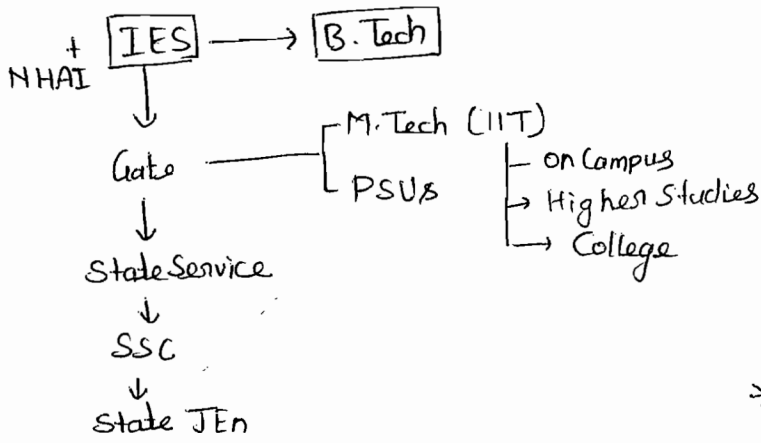
Best Quality Classroom Topper Hand Written Notes to Crack GATE, IES, PSU's & Other Government Competitive/ Entrance Exams

MADE EASY CIVIL ENGINEERING Soil Mechanics BY-Ram Sir

- Theory
- Explanation
- Derivation
- Example
- Shortcuts
- Previous Years Question With Solution

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Gate - 15-10 marks
100 Ques.

IES — { Pre - 16-21 Ques
 150
 } Mains - 100-110
 300 marks

Books

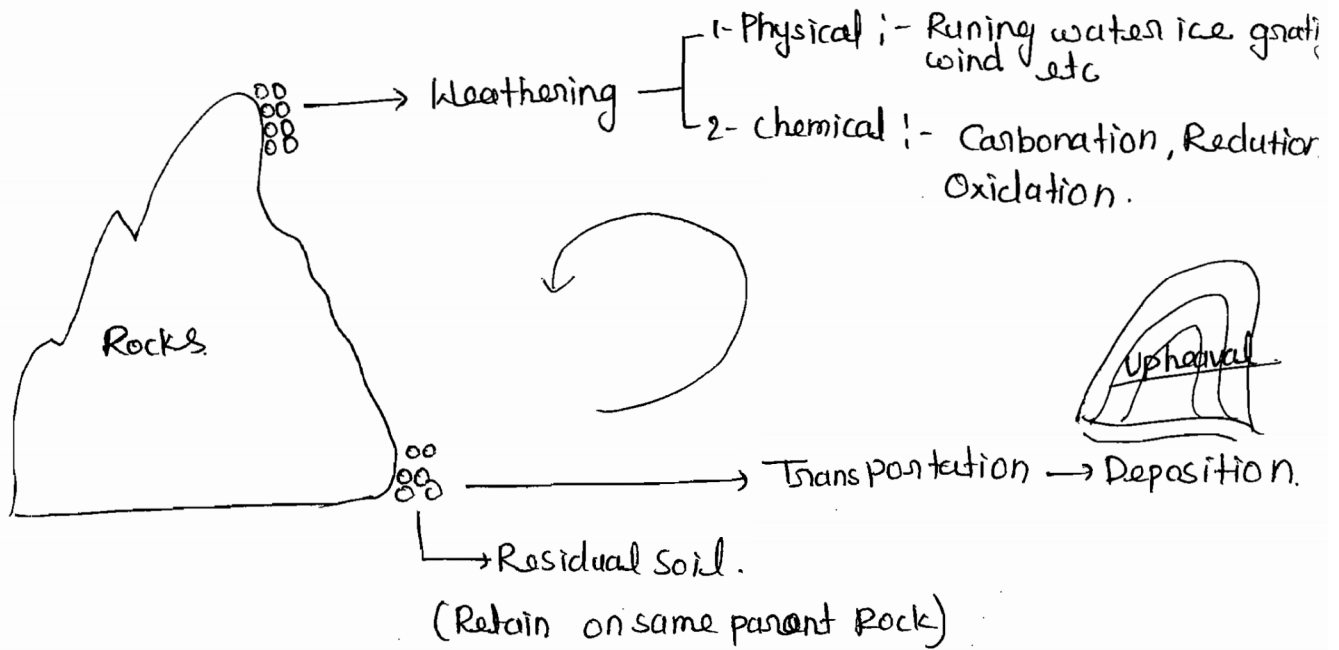
- * Gopal Raj & Rao
- * K.R. Anand
- * Craig
- * B.C.P.

Syllabus - 90 - 100 hrs

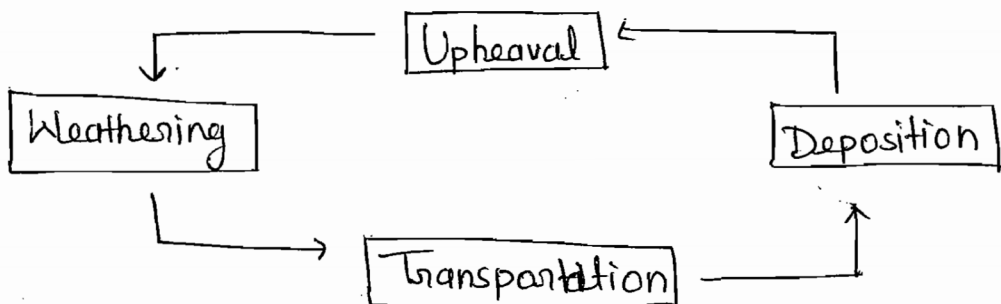
Chapter - 1 properties of soil - 20 hrs.

NAME - Pinki Rathaur

Chapter - 1 properties of Soil



* Geological Cycle of formation of soil -



* Pedogenesis :- Process of formation of soil

* Father of Soil Mechanics :- Karl. Terzaghi (Austria (ME))

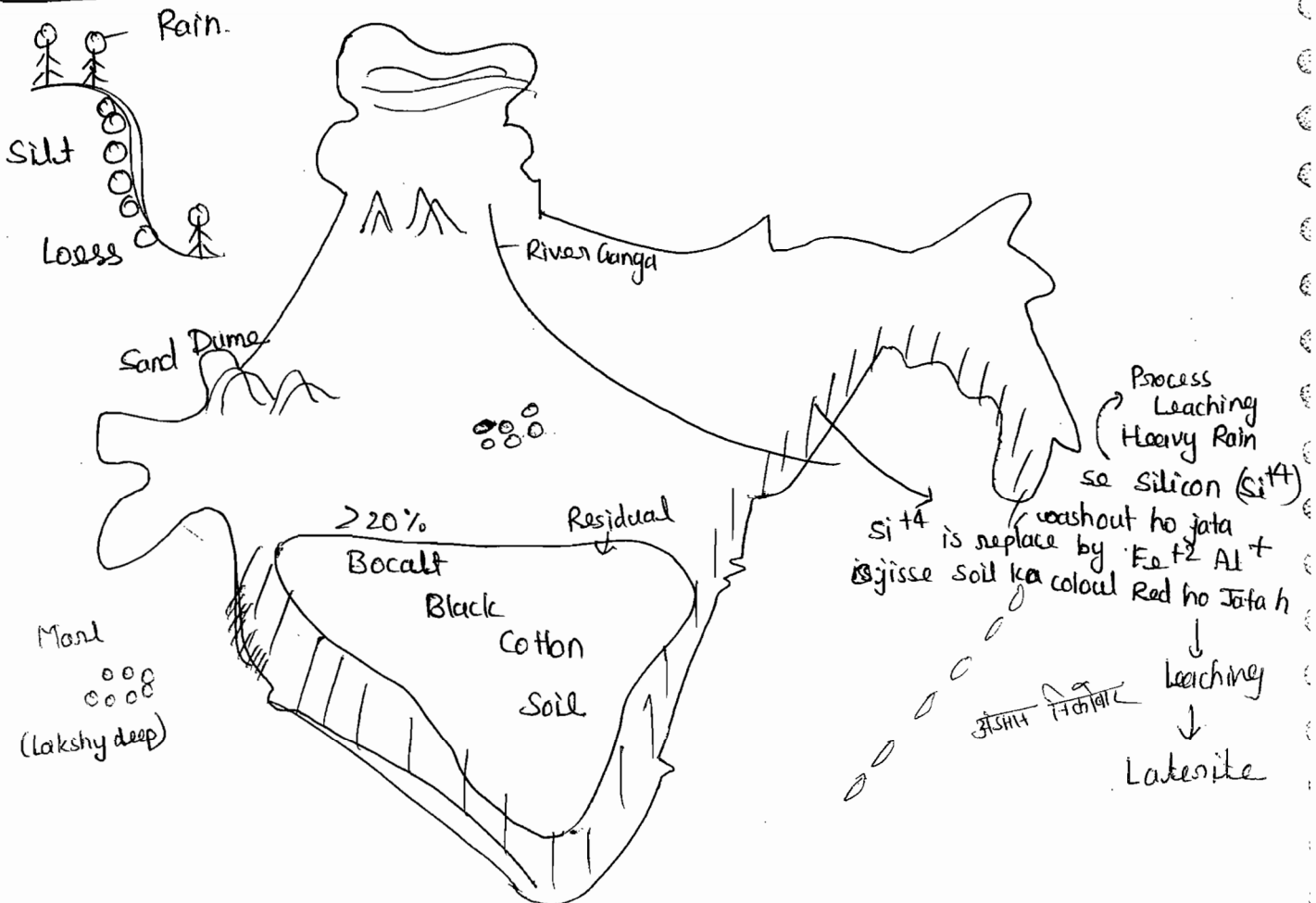
Bopal is lake city
 Mumbai & Chennai - Marine
 Jammu & Kashmir - freezing & thawing
 Shimla & Dehradun - Glaciers (ice)
 → mountain (landslides)
 Urasian & Himalays Plate crushing

Type of soil

Physically weathered soil -

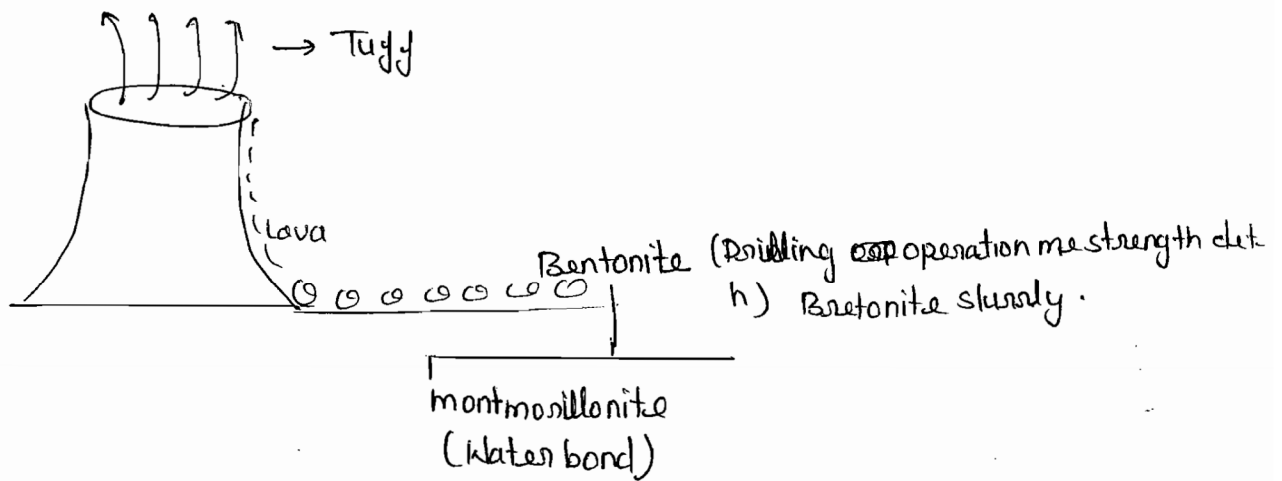
Type of soil	Agent	Region	
1- Alluvial soil	Running water	River basin	} Transported Soil
2- Lacustrine soil	Fresh & still water	Lakes, ponds etc	
3- Marine soil	Sea water	Marine region	
4- Glacial soil (Till)	Ice	Glaciers	
5- Colluvial (Talus)	Gravity	Mountain valleys	
6- Aeolian (Sand dunes)	Wind	Desert	
7- Loess (Wind blown silt)	Wind	Desert	

Note - When loess become wet, it becomes soft & collapsible.



Chemical Weathering Soil

- Marl → It is fine grained Calcium Carbonated soil of marine origin, which is formed by chemical decomposition of aquatic plants & animal bones.
- Bentonite soil - It is chemically weathered Volcanic Ash. Generally used as lubrication in drilling operation. It is clay containing high amount of montmorillonite hence it shows high plasticity & high swelling & shrinkage.
- Tuff soil - It is Volcanic Ash transported by wind & water.



- Black Cotton Soil - It is the residual soil formed from Basalt by chemical weathering. It contains high amount of montmorillonite clay mineral due to which it shows high plasticity, high swelling & shrinkage & Low shear strength.