Educrat IAS
ACADEMY

Environment – Ch 1

① → Environment
- Abiotic
- Biotic

→ Interaction (X)

② → Ecosystem
- Biotic [eg. tree]
- Abiotic [eg. land, soil, atmosphere] → component of interaction/relationship → Behave as functional unit

→ Interaction
- Food cycle
- energy cycle

③ → Environment
- Biotic
  - Biological
    - Human
    - Animals
    - Plants
    - Microbes
- Abiotic
  - Physical → Atmosphere, Lithosphere, soil, Hydrosphere } Natural
  - Cultural → Man made.

④ Env. (vs) ecosystem

Env.

(i) Anything that surrounds us.

(ii) The term does not include the relationship b/w living things and their surroundings.

Eco

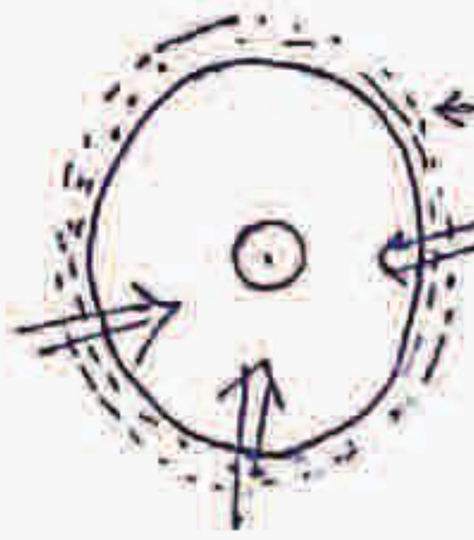
(i) Refers to communities that function as a whole/unit.

(ii) Includes ecological relationships b/w all the organisms and their env. (interaction)

→ 

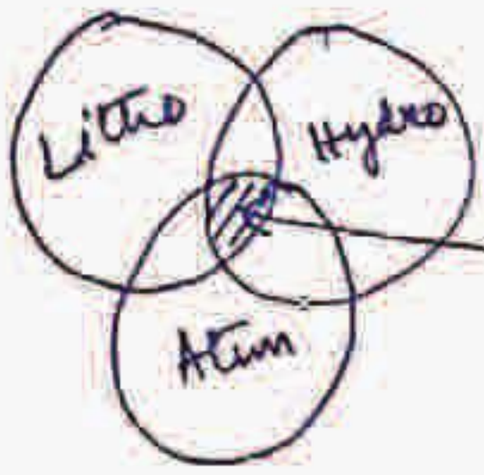
ocean floor → diversity : ocean floor > land

→ irregular surface - mts, trenches

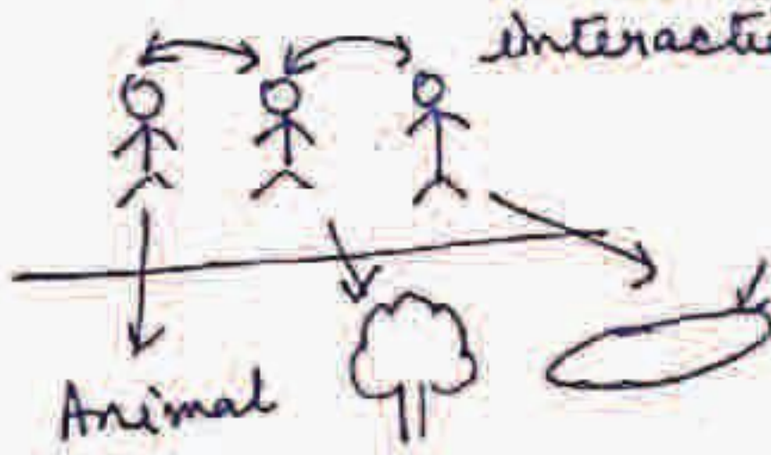
→ 

← atmosphere held by g. force

← pull entire thing towards it - gravitational force.

→ 

Biosphere.

→ 

Biotic → Abiotic
Biotic → Biotic

⑤ Hydro ← Environment → Man (eg: rice + fish : WB)
Litho Atm
→ climate → food Habit
→ impacts us (environment impacts us)
↓
economic activities → agri (50% of population)
→ forest.
→ fishing (not all areas conducive of fishing)
→ mining
→ destiny in hands of env.

① Env. limits man's choice, decision making power
eg. Rice can't be grown at desert.

② Climate is important determinant of env.

→ Man → Env

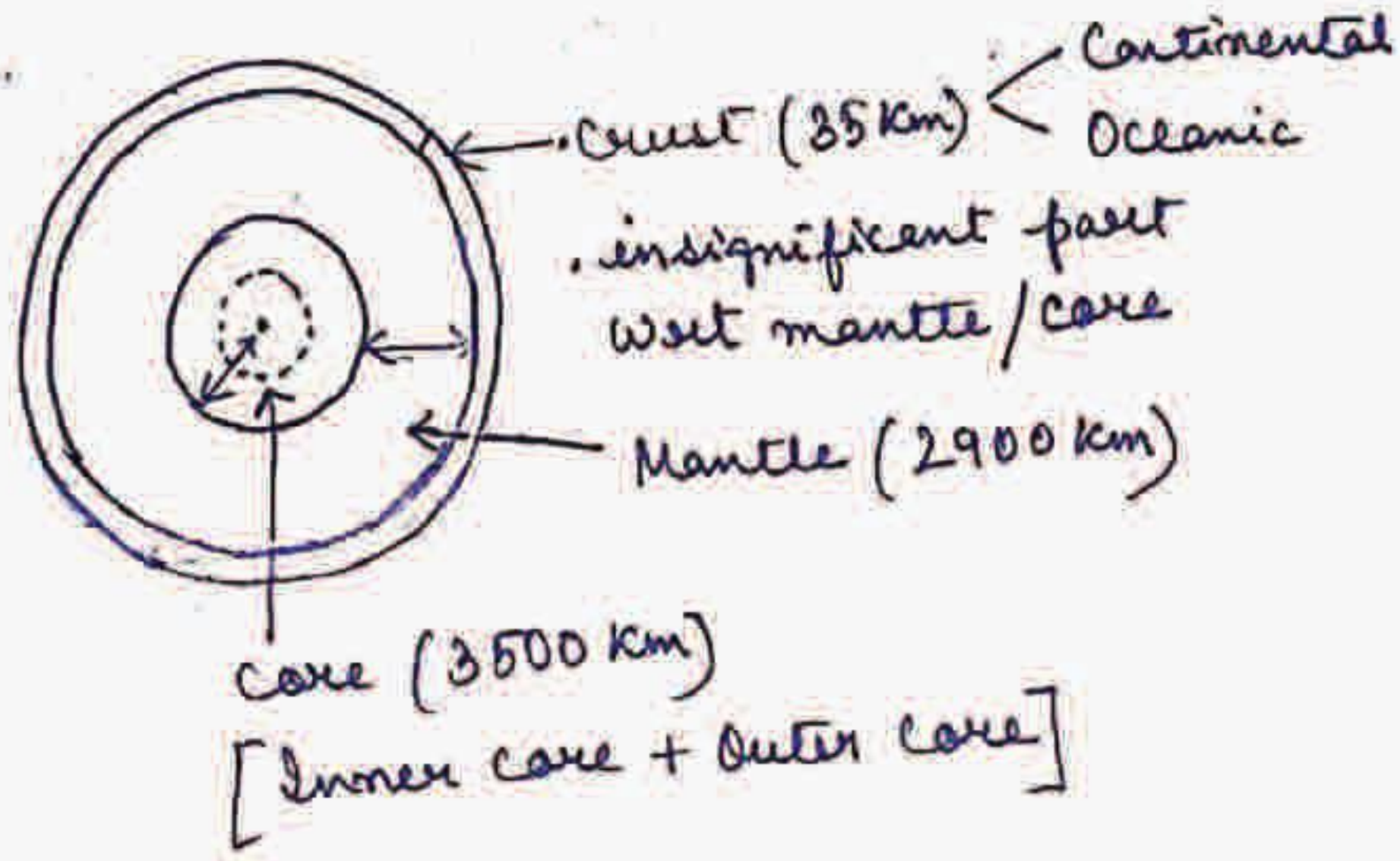
Plantation Agriculture ← Man → agent of change

- → Tech
- → Industrial Revolution (air pollution)
- → Pollution

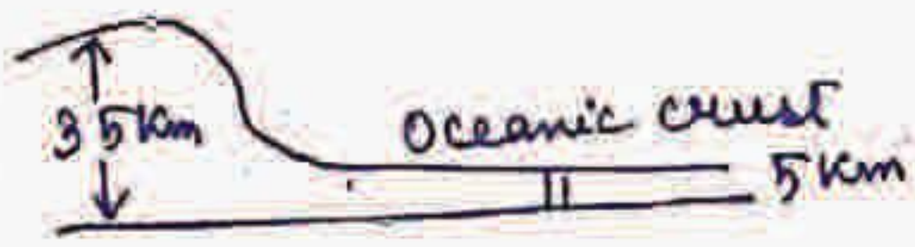
Previously nature was the limiting factor.

Inside our Earth - Ch-2

① Earth
- → not monolithic.
- → layered / stratification



Interior of earth

② 

(Thickness decreases).

③ Crust

Oceanic (Silicon + Magnesium)
→ SiMa
↓
Soft (Basalt)
↓
denser
↓
thinner

Continental (Silicon + Aluminium)
→ SiAl
↓
Brittle
↓
Thick
↓
less dense.

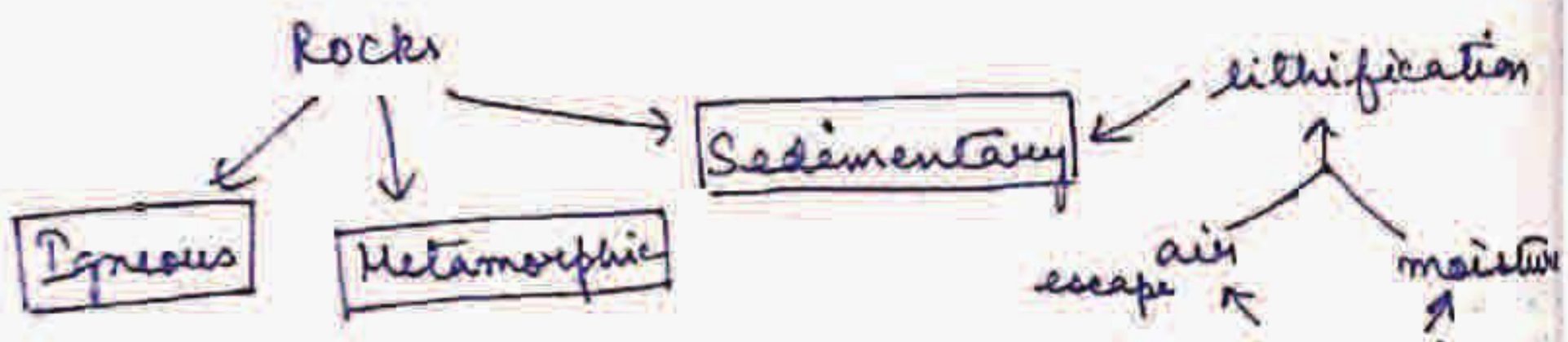
(4) Minerals

(i) They are compounds
(ii) They have definite composition
(iii) Building blocks of Rocks.
eg. quartz, amphibole, Pyroxyn

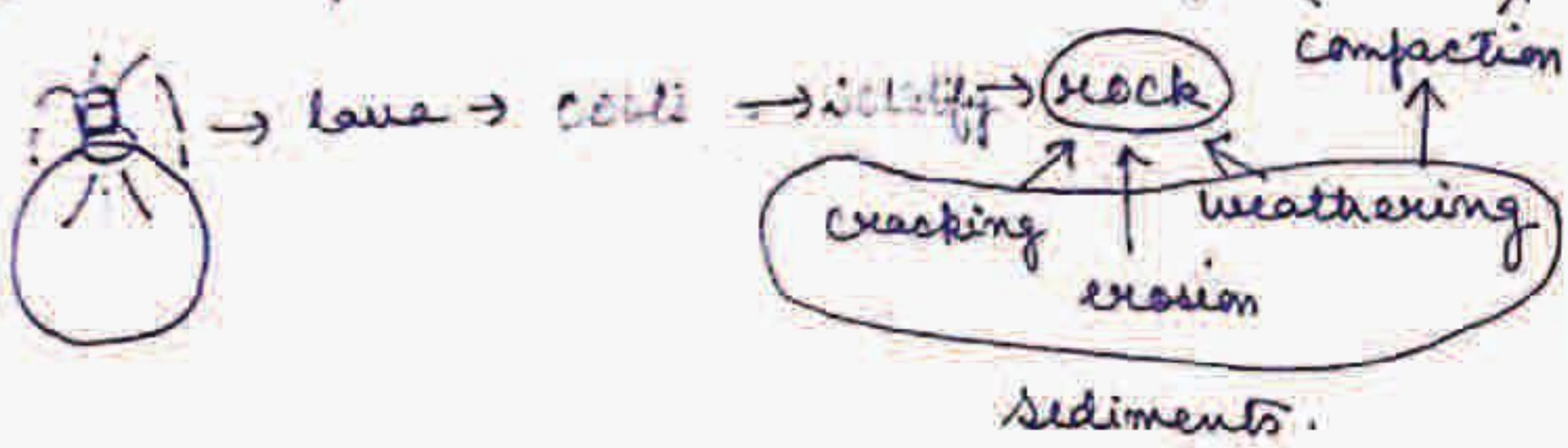
(5) Rocks

(i) mechanical aggregate of minerals (not chemical)
(ii) They are mixtures (not compounds)
(iii) They have no definite physical / chemical properties.

(b)



(a)



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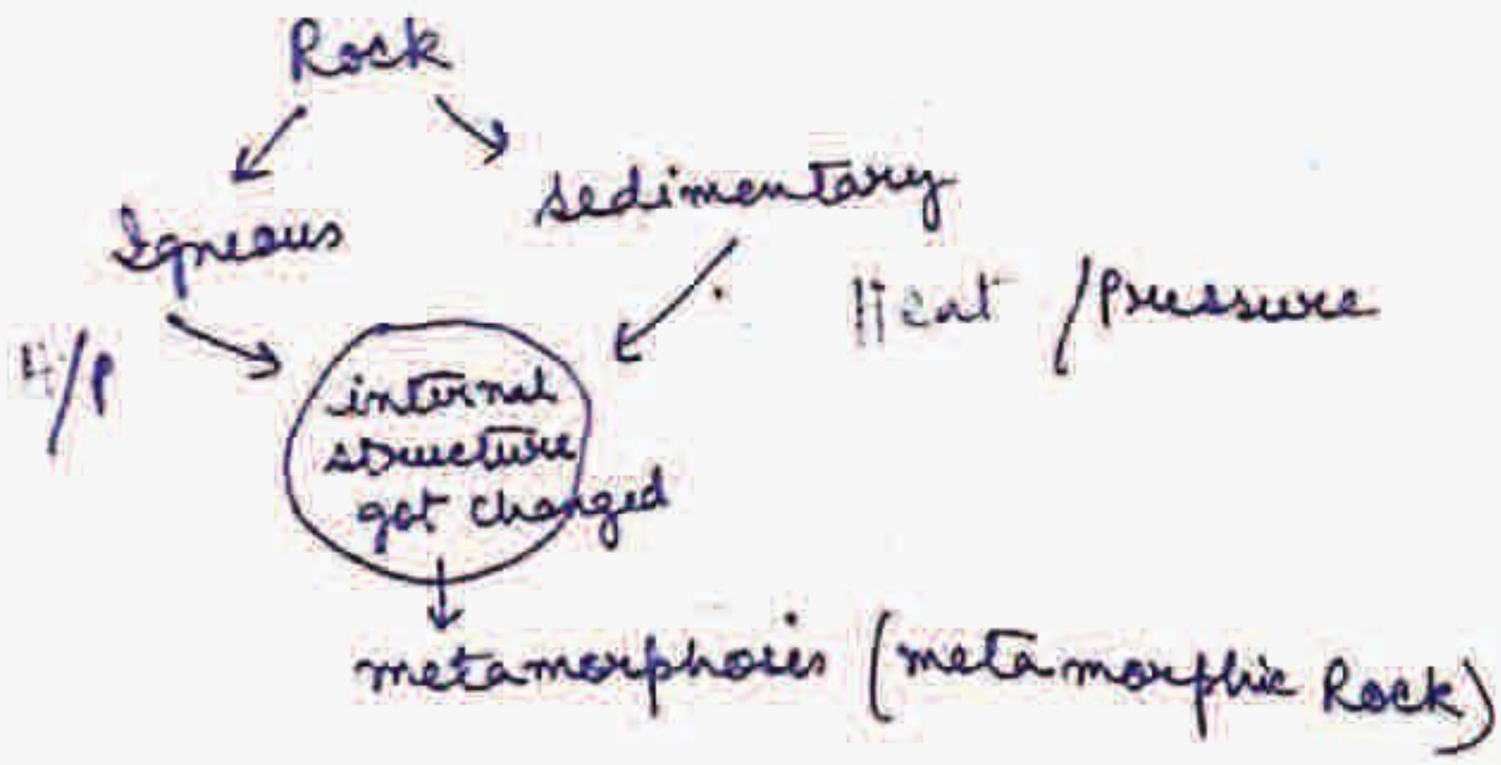


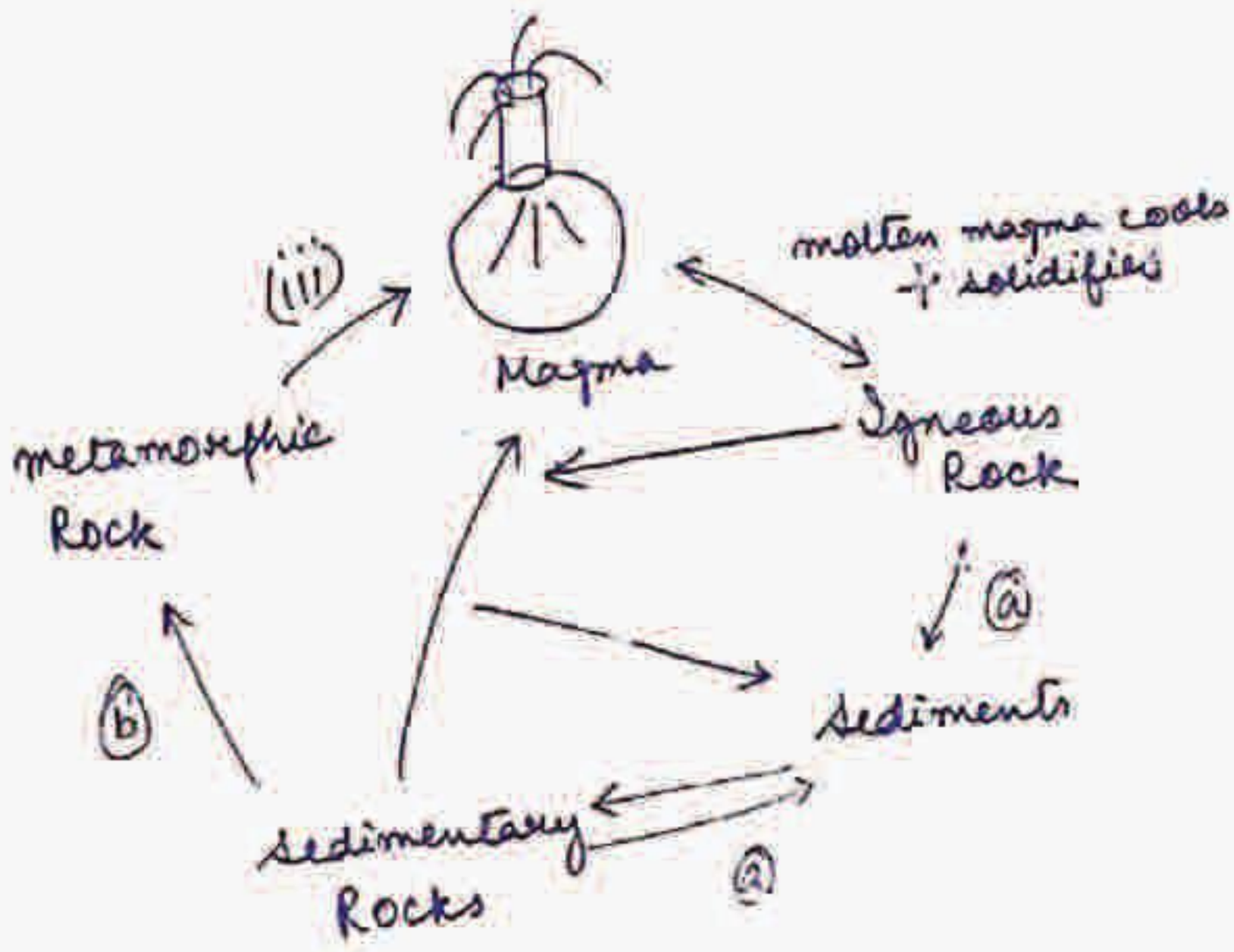
→ (i) Igneous → sedimentary
↓
metamorphic.

(ii) metamorphic → sedimentary

(iii) Metamorphic + sedimentary → under ground
↓
Igneous Rock ← Volcanic eruption ← molten lava

eg - limestone (sedimentary) → marble (metamorphic)

Rock cycle: The process of changing of one type of rock to another type under certain conditions in a cyclic manner is called rock cycle.



Rock cycle

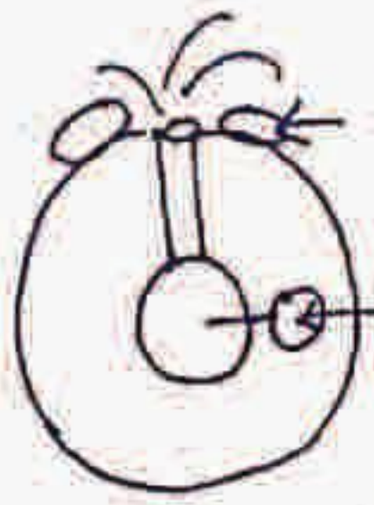
(7) Igneous Rocks:

a) They are formed from solidification of molten magma or molten lava.

b) Therefore they are azoic (without life) and unfossiliferous (no trace of life)

c) No layering (unstratified)

d) 2 types: intrusive igneous rocks
extrusive igneous rocks



lava → solidify (cools faster) → extrusive/ig rocks (formed on crust) fine grained structure) eg. basalt

cools deep down inside earth's crust (at slow rate) → intrusive ig. rocks

⑧ Sedimentary Rocks

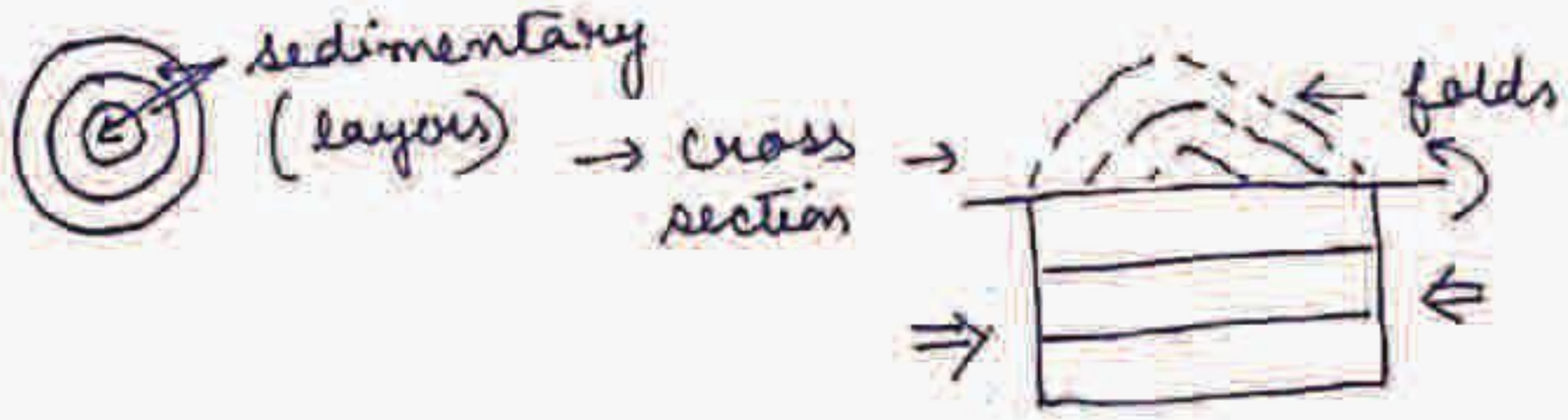
(i) They are formed by accumulation and deposition of weathered sediments – it can be from any rocks. Such accumulation undergo compaction and lithification to form sedimentary rocks.

(ii) Sedimentary rocks may be fossiliferous (trace of life)

(iii) They have layers/stratification.

(iv) Always softer, can be eroded and deformed.

→ fold mts → generally have sedimentary rocks as basic constituents.

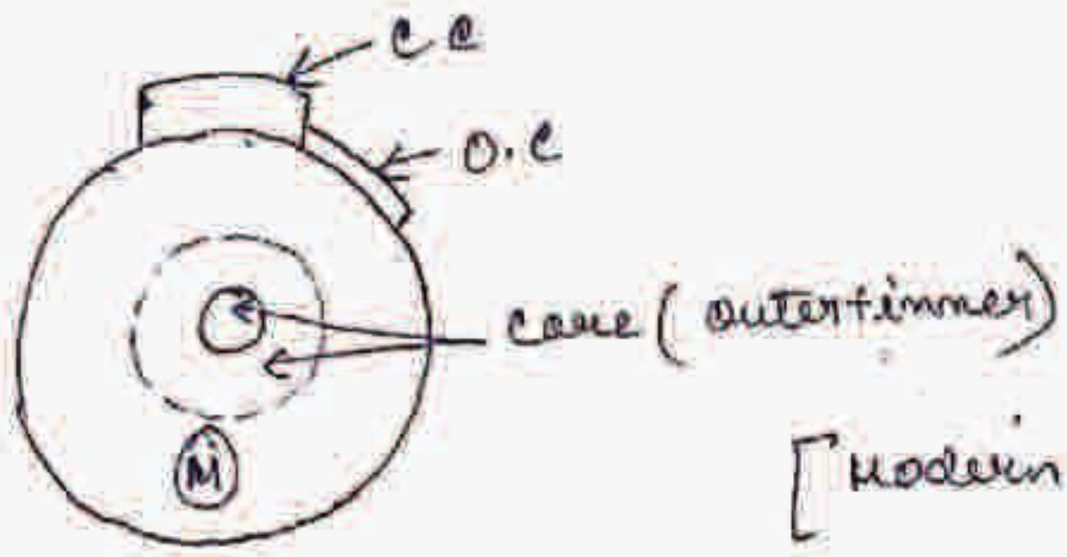


⑨ Metamorphic Rocks

(i) Formed due to metamorphosis of previous igneous, sedimentary or metamorphic rocks

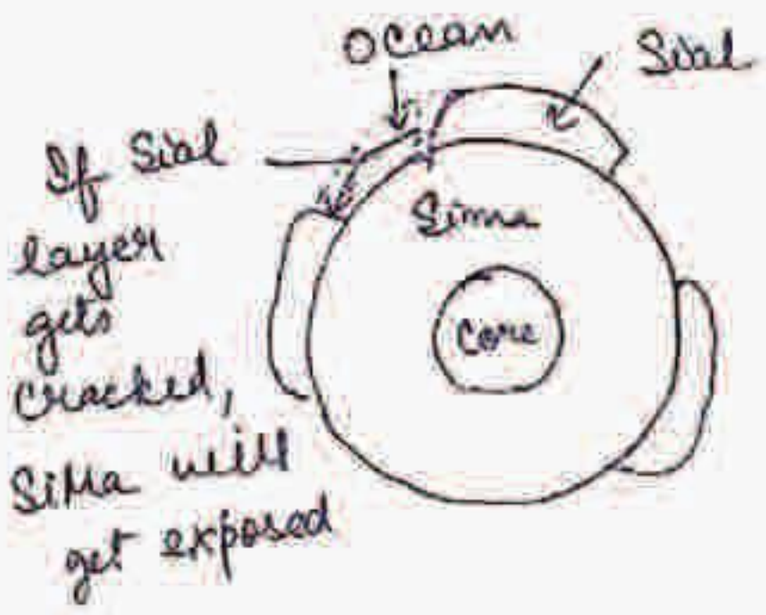
eg: Limestone $\xrightarrow{Heat/P}$ marble
granite $\xrightarrow{H/P}$ gneiss rock
shale $\xrightarrow{H/P}$ schist/slate

Interior of Earth

① 

[modern Interpretation]

② → Edward Suess:



① SiAl layer: forms the part of continental crust
500-300 Km
↓
② SiMa layer: thickness 1000 Km
Ocean floors are exposed to SiMa layer
↓
③ core: Nickel + Iron
- densest layer
- Radius of core 3000 km (approx)

④ Outer layer - Outer layer over SiAL
- thin layer consists of rock debris, sediments, fragments of rocks etc.

③ Crust
↙ CC (SiAl) OC (SiMa) ↘

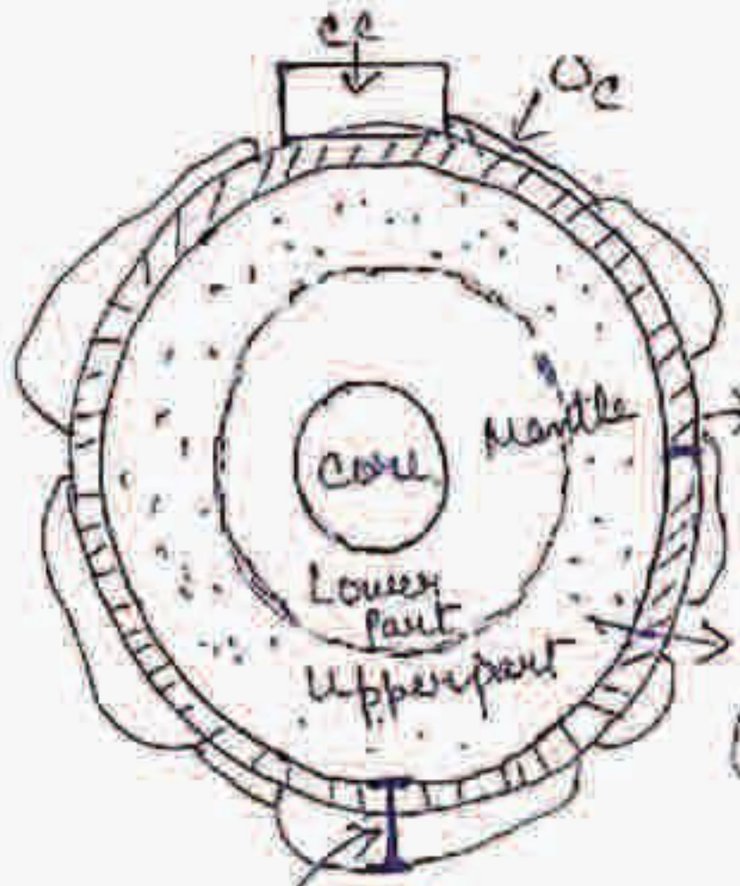
④ Vulcanism → cooling quick (fine particles)
→ cooling slow (large particles)

3: Our Changing Earth

(5) Lithospheric Plates

(I) crust → OC, CC
upper part of upper mantle

→

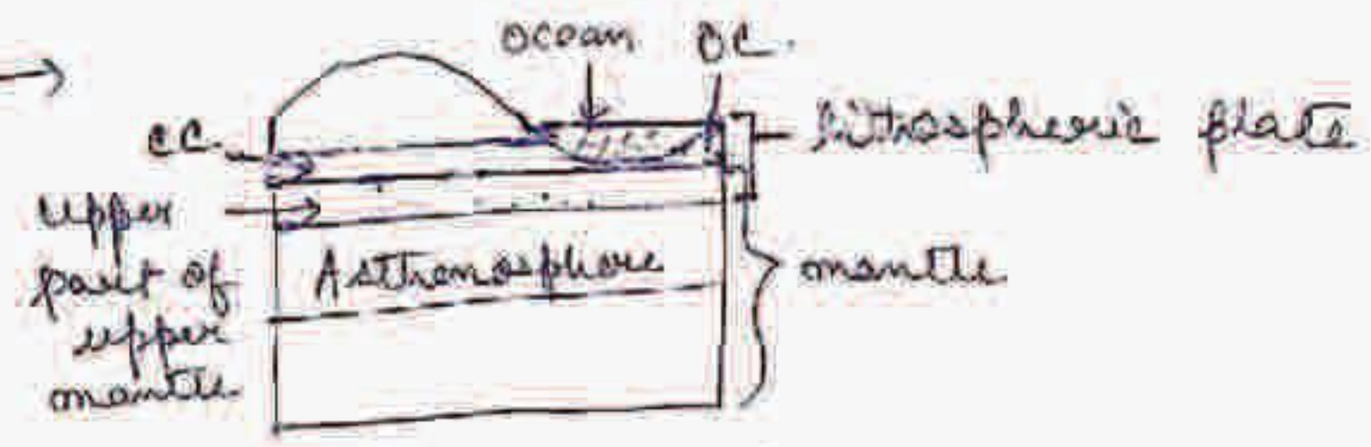


→ upper part of upper mantle.

→ asthenosphere (lower part of upper mantle)
- semi solid,
- plastic like
- flexible

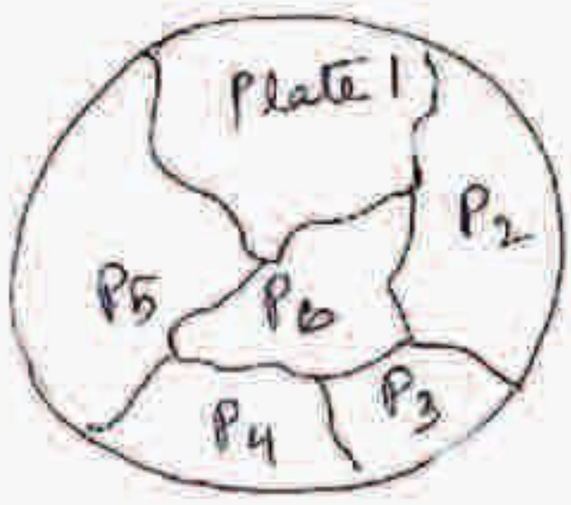
Lithospheric plate
[OC + CC + upper part of upper mantle]

→



cross - section

⇒



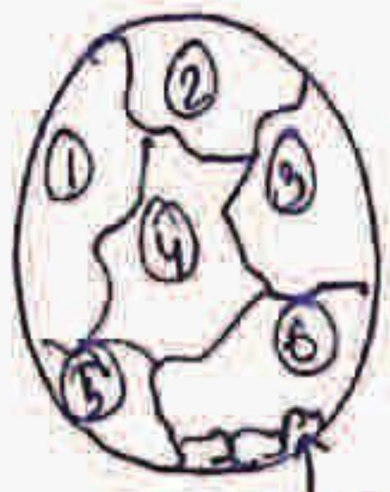
Lithospheric plates –
- Continuous ⊗
- Broken → P_1, P_2, P_3 (individual LP) → lie on asthenosphere (semi-solid → plates glide slowly)

* Entire earth will not have 1 LP, rather these LP → no of plates.

⇒ Lithospheric Scheme :

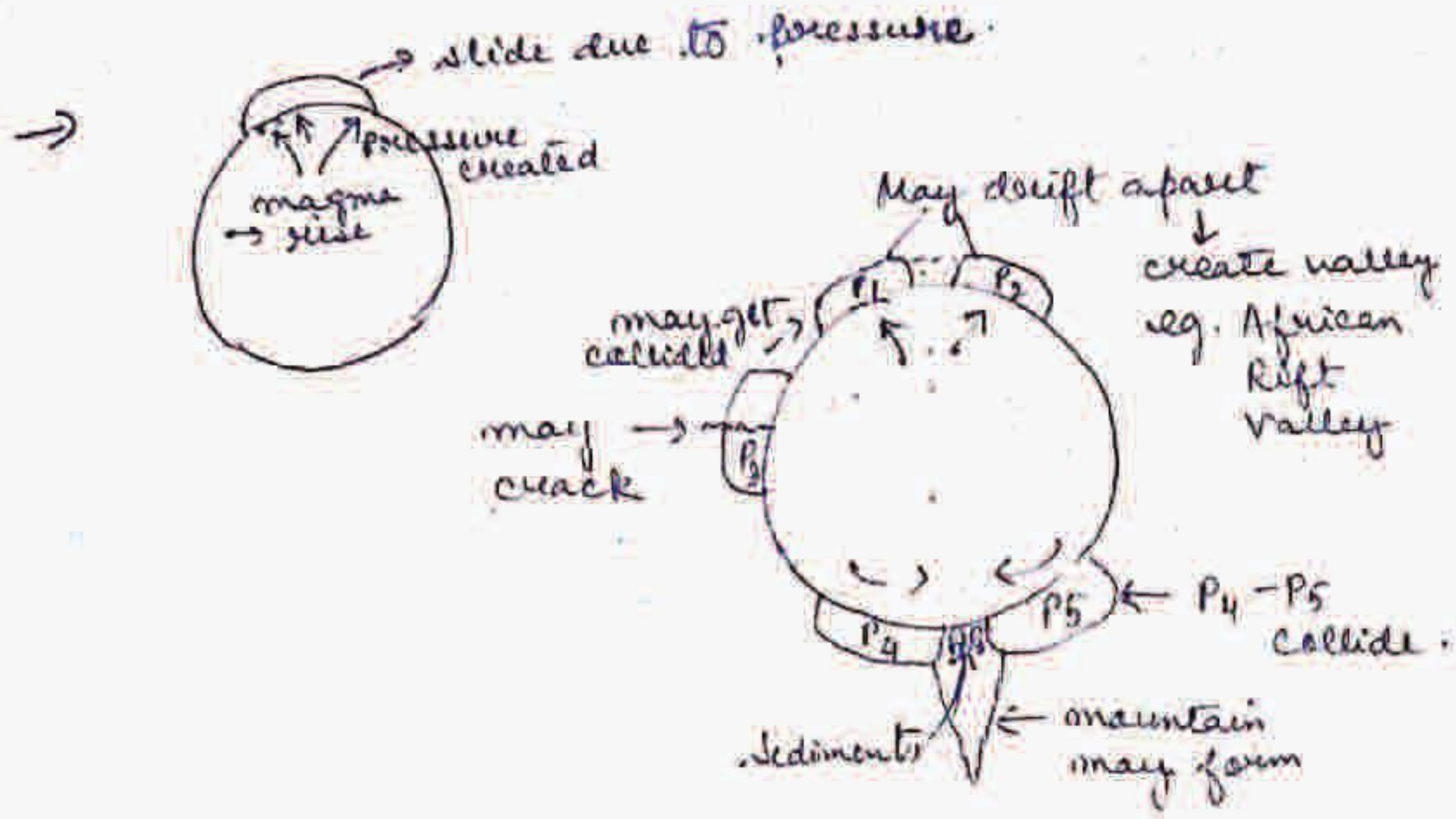
crust (land, ocean)	+ upper part of upper mantle	= lithosphere

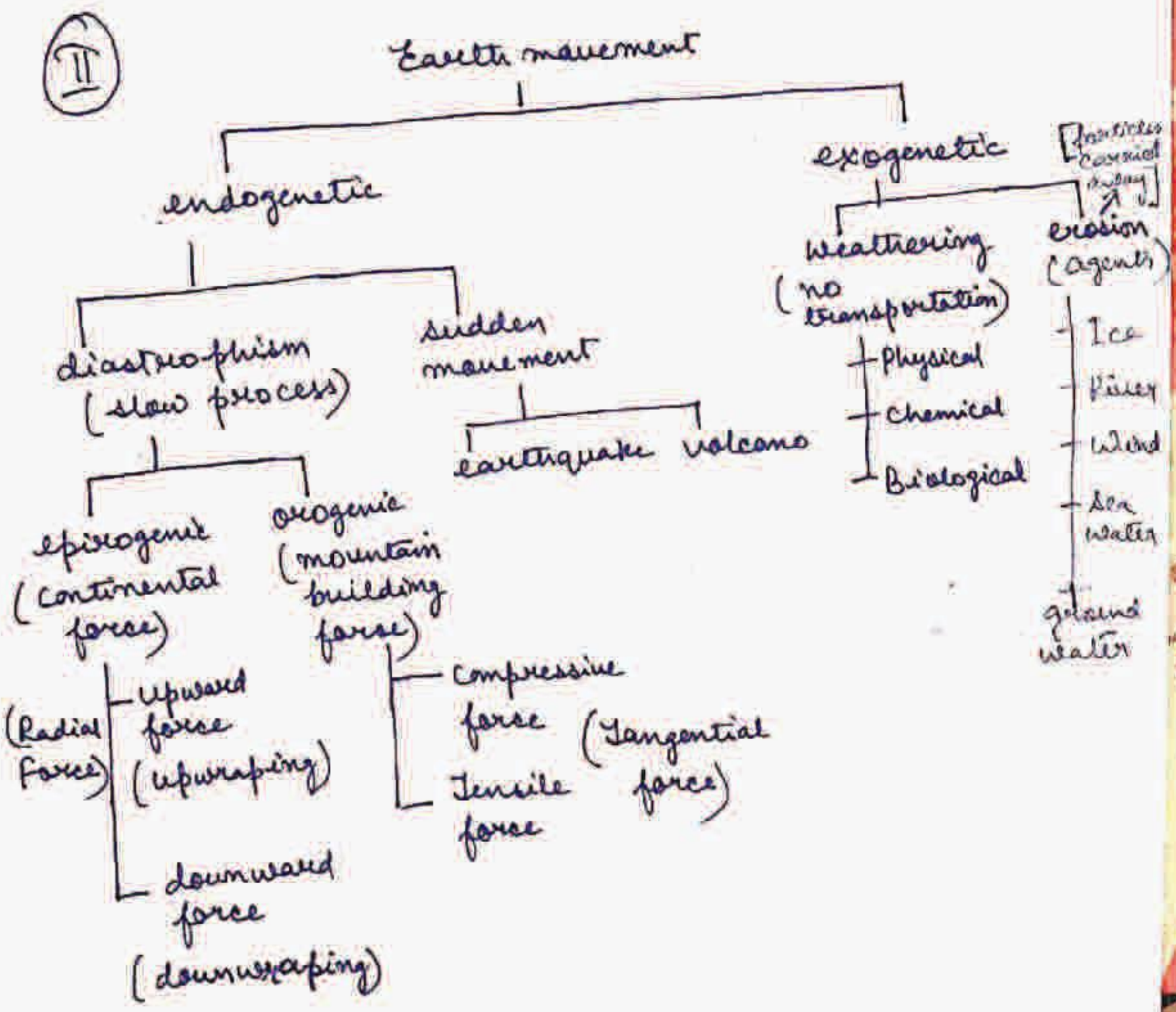
This lithosphere is not continious, it is broken like 'cracked eggs'. Each segment is called LP. We have around 6 major plates and about 6 - 10 minor plates and numerous micro plates.



microplates. (eg. Mediterranean Sea)

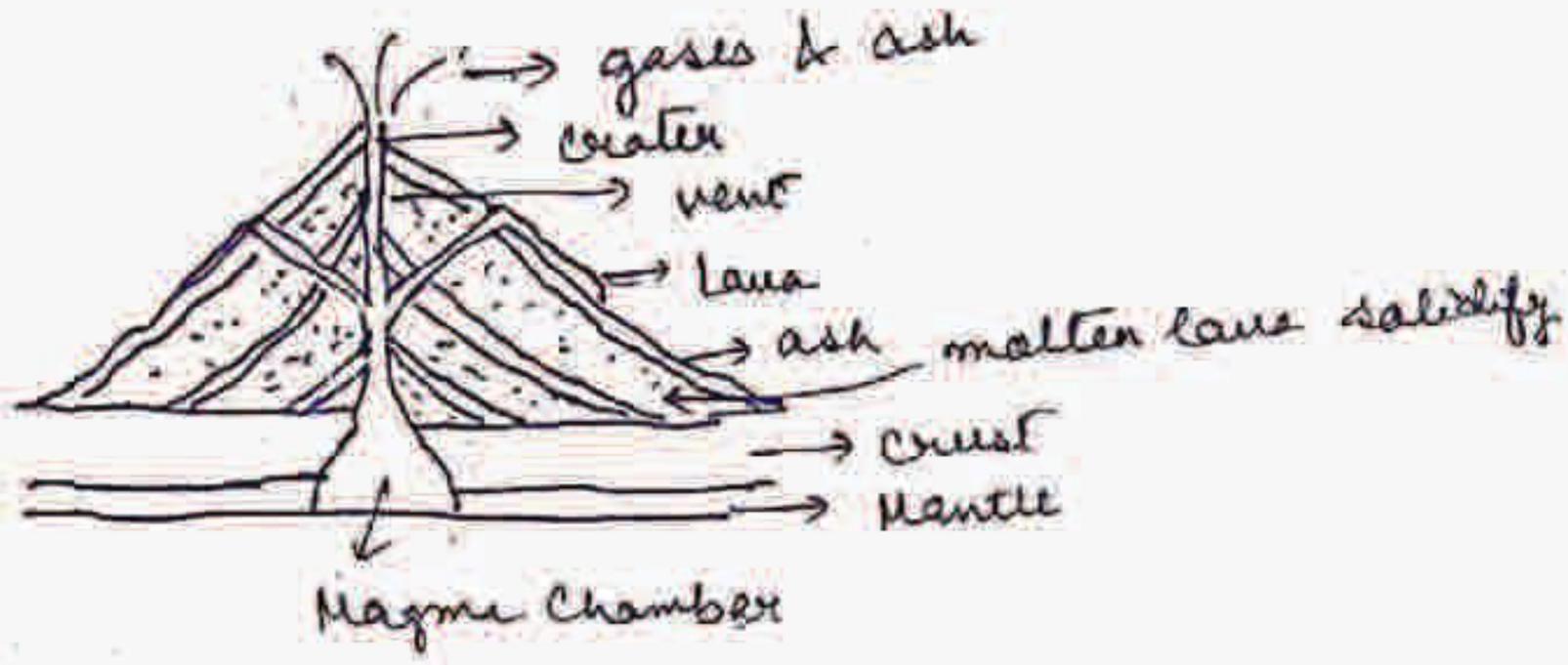
The lower part of upper mantle is asthenosphere. Asth. because of olivine have semimolten plastic nature. LP can be visualized as floating over asth. and such dynamism is responsible for most of geophysical processes - Vulcanism, mountain building, rifting etc.


slide due to pressure
pressure created
magma rise
May drift apart
create valley
eg. African Rift Valley
may get collide
may crack
P1
P2
P3
P4
P5
P4 - P5 collide.
sediments
mountain may form


II
Earth movement
endogenetic
exogenetic
diastrophism (slow process)
sudden movement
earthquake
volcano
epirogenic (continental force)
orogenic (mountain building force)
(Radial Force)
upward force (upwarping)
downward force (downwarping)
compressive force
Tensile force
(Tangential force)
weathering (no transportation)
physical
chemical
Biological
erosion (agents)
Ice
River
Wind
Sea water
ground water
[mostly carried along]

① Volcano-

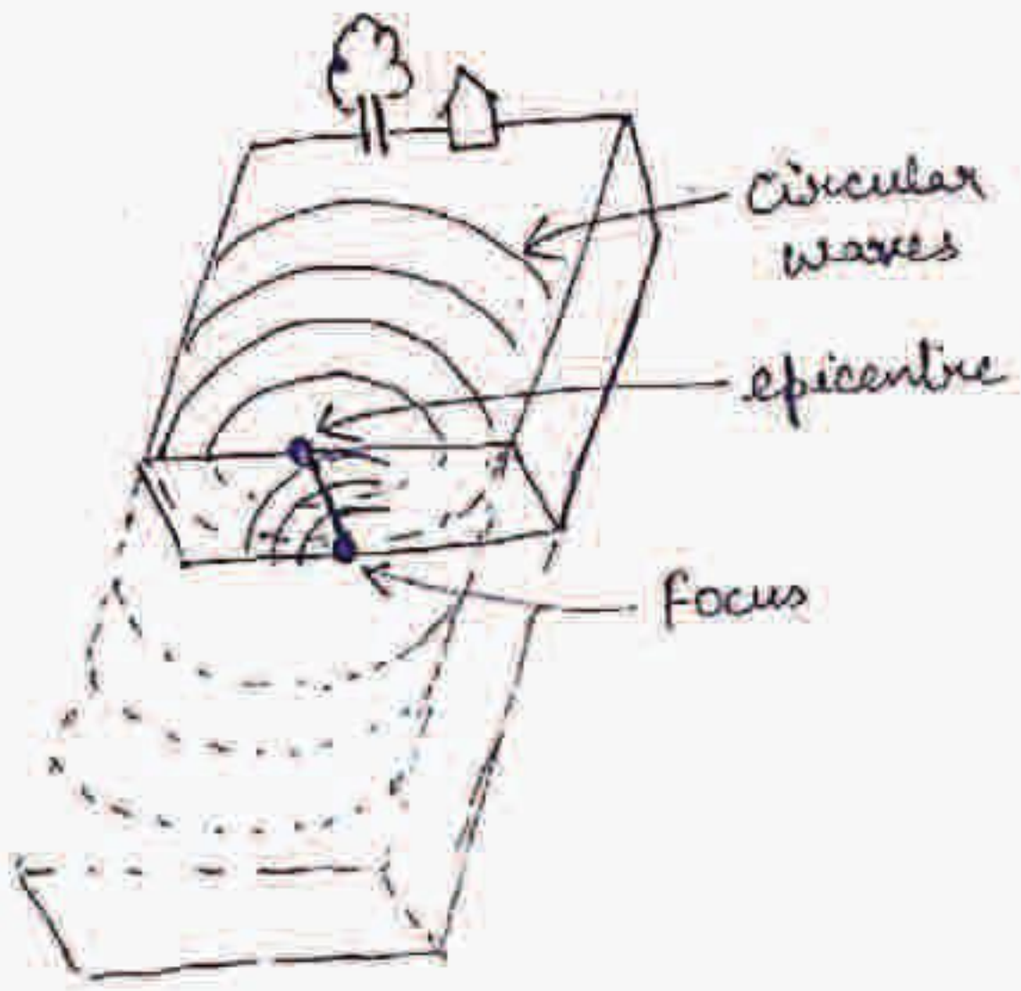
A vent in the earth's crust through which molten materials erupt suddenly.



① Earthquake

→

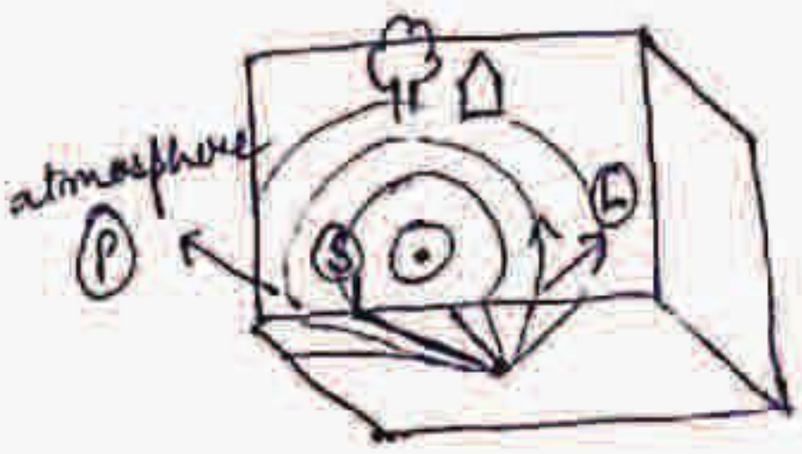
friction during sliding → vibration → earthquake



Focus: source region of seismic waves
→ travels every direction.

Epicentre:
- pt. traced on earth's surface right above focus
- circular waves
- energy of waves go on dissipating with distance from centre
- more close to epicentre
↓
more energy
↓
more damage.

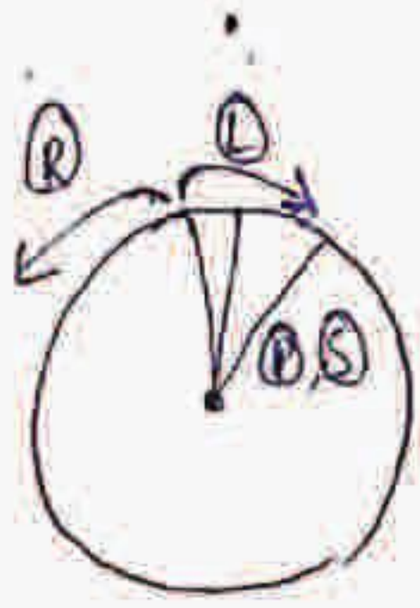
→ Earthquake waves:
P, S, L, R waves.



Earthquake waves
- Body waves
- Surface waves.

⇒ Body waves
- Primary waves (Push and pull waves/ Longitudinal waves)
  - ① → these are fastest wave
  - Ⓟ → reach earth's surface first
  - ② → can travel through solid, liquid, gas
- Secondary waves.
  - ① Lesser speed than Ⓟ waves
  - ② Can pass only through solid

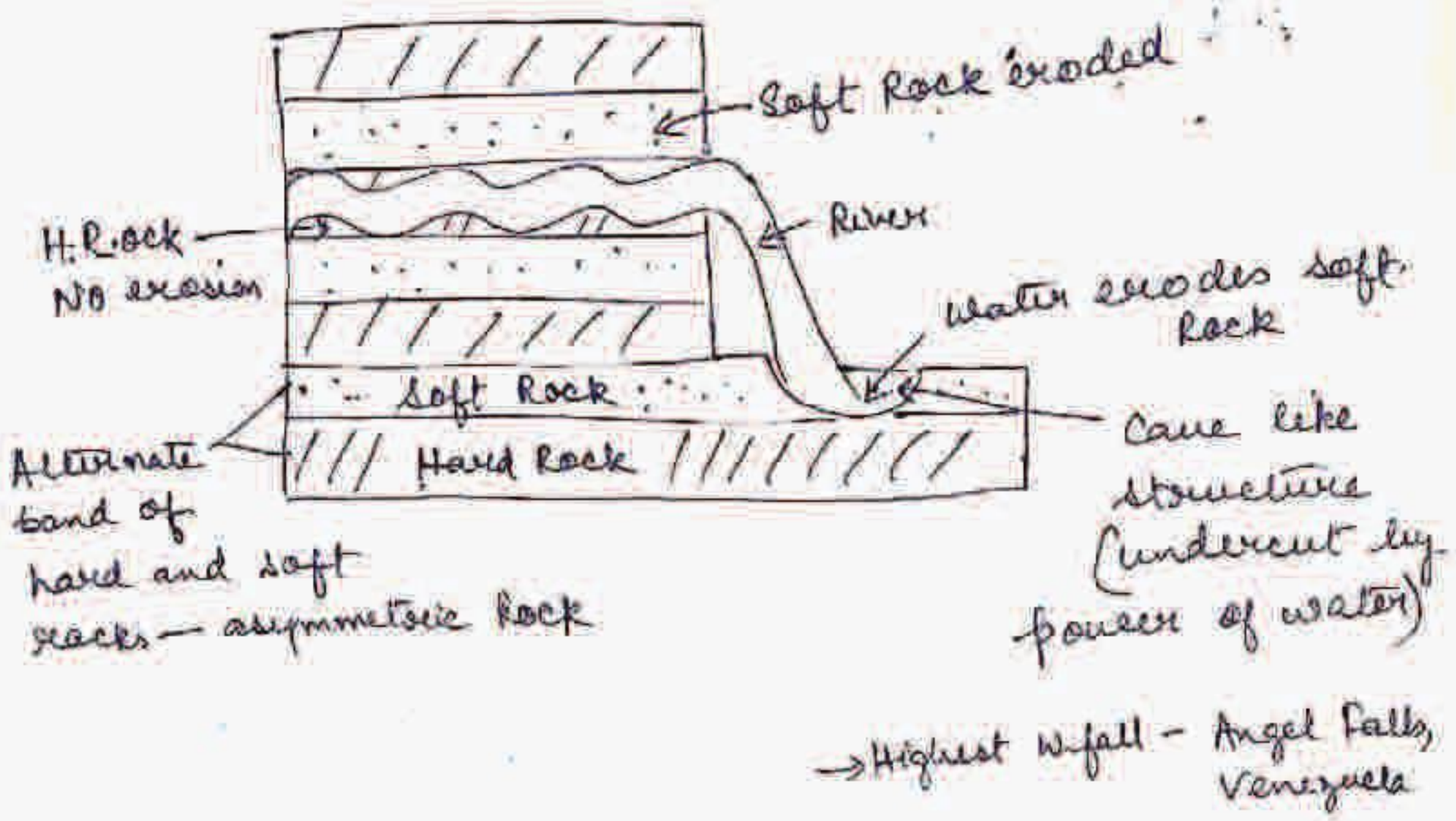
⇒ Surface waves
- L-waves (Love-waves)
  - most destructive
  - runs on surface
- R-waves Rayleigh waves



Major Landforms

(1) Works of river

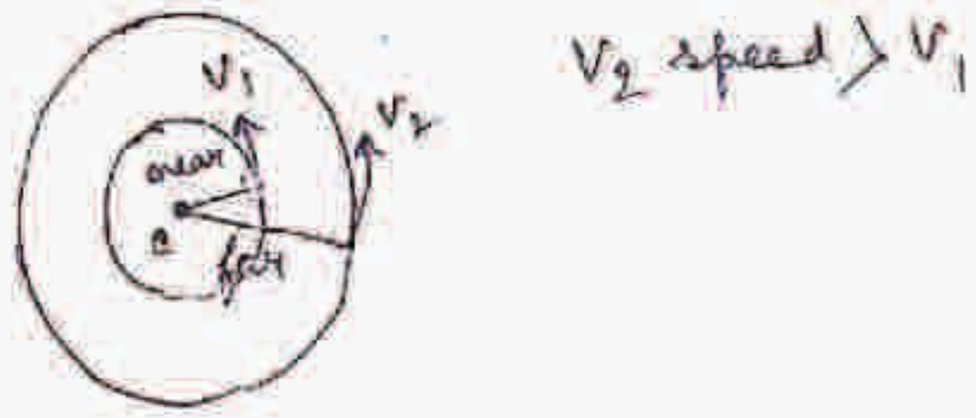
(i) Waterfall



→ Highest W.fall - Angel Falls, Venezuela

(ii) Meanders/Ox-bow lakes

→



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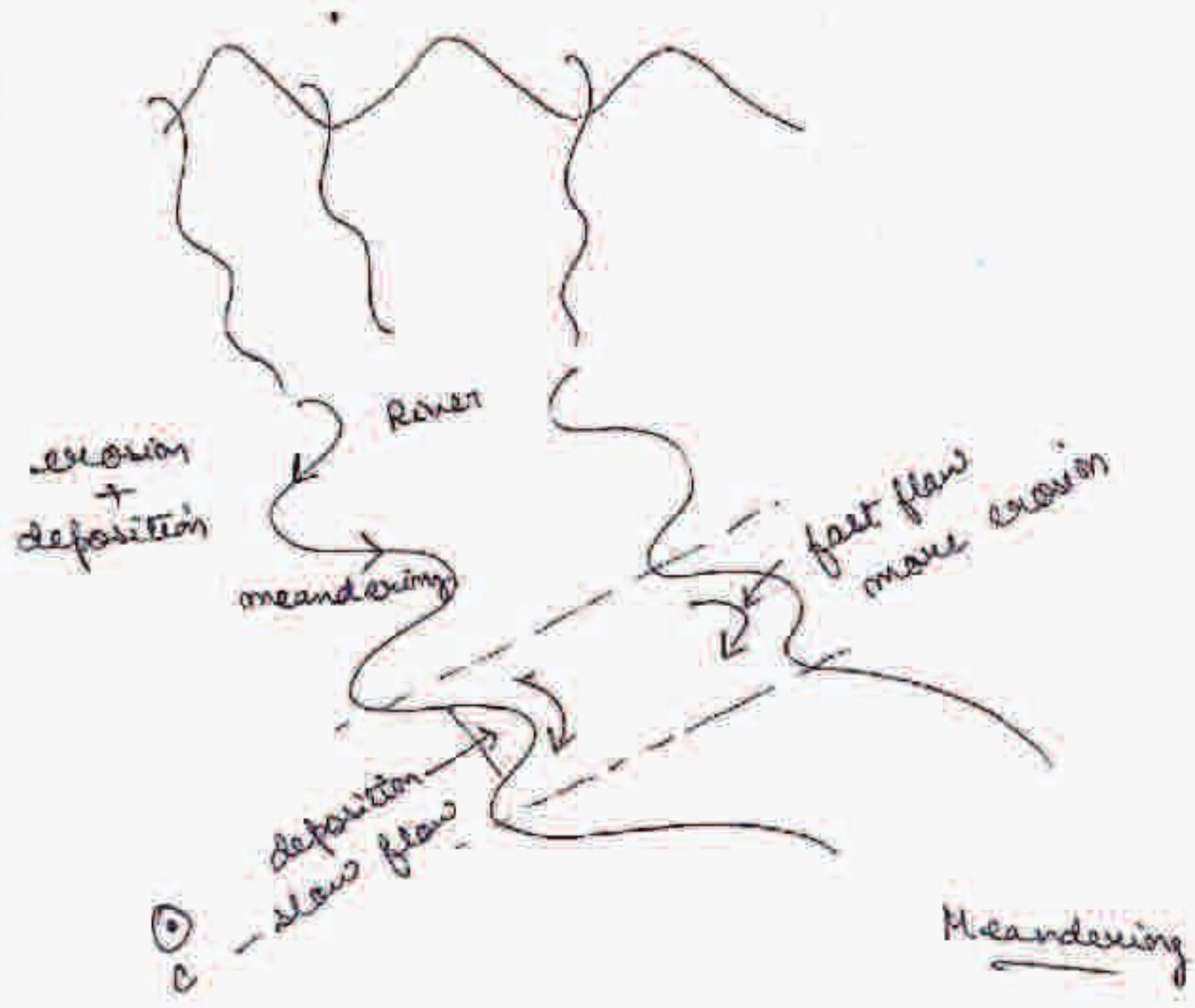
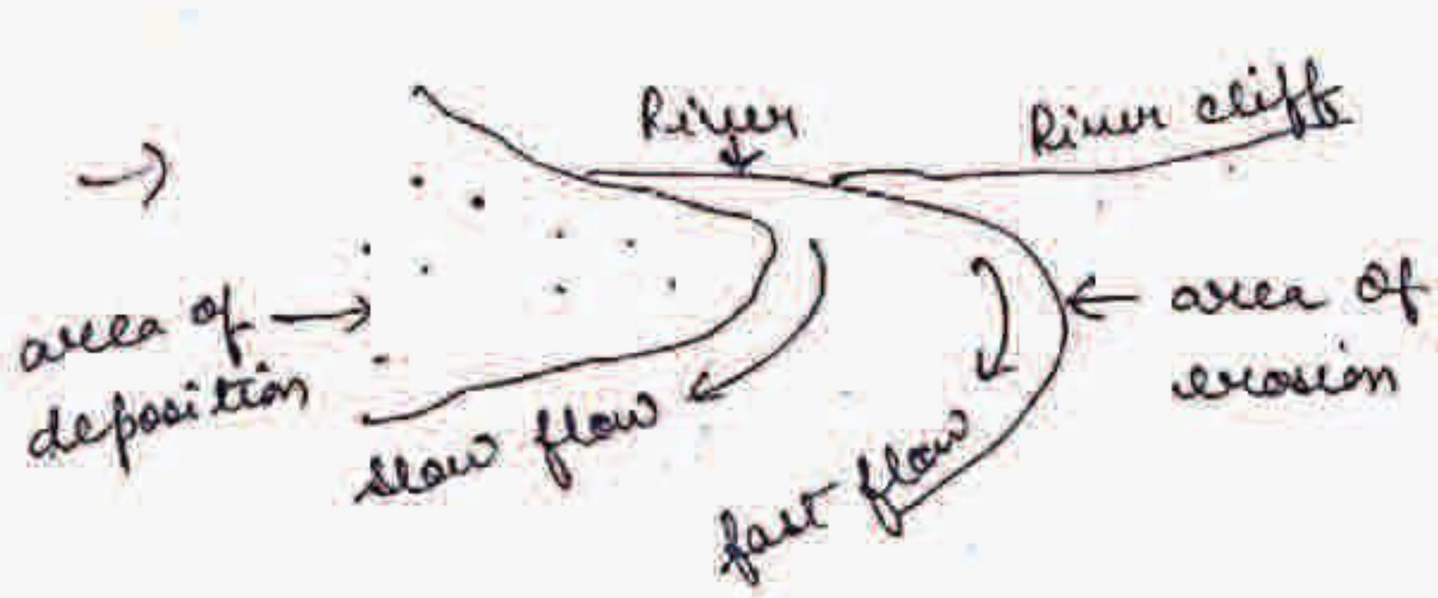
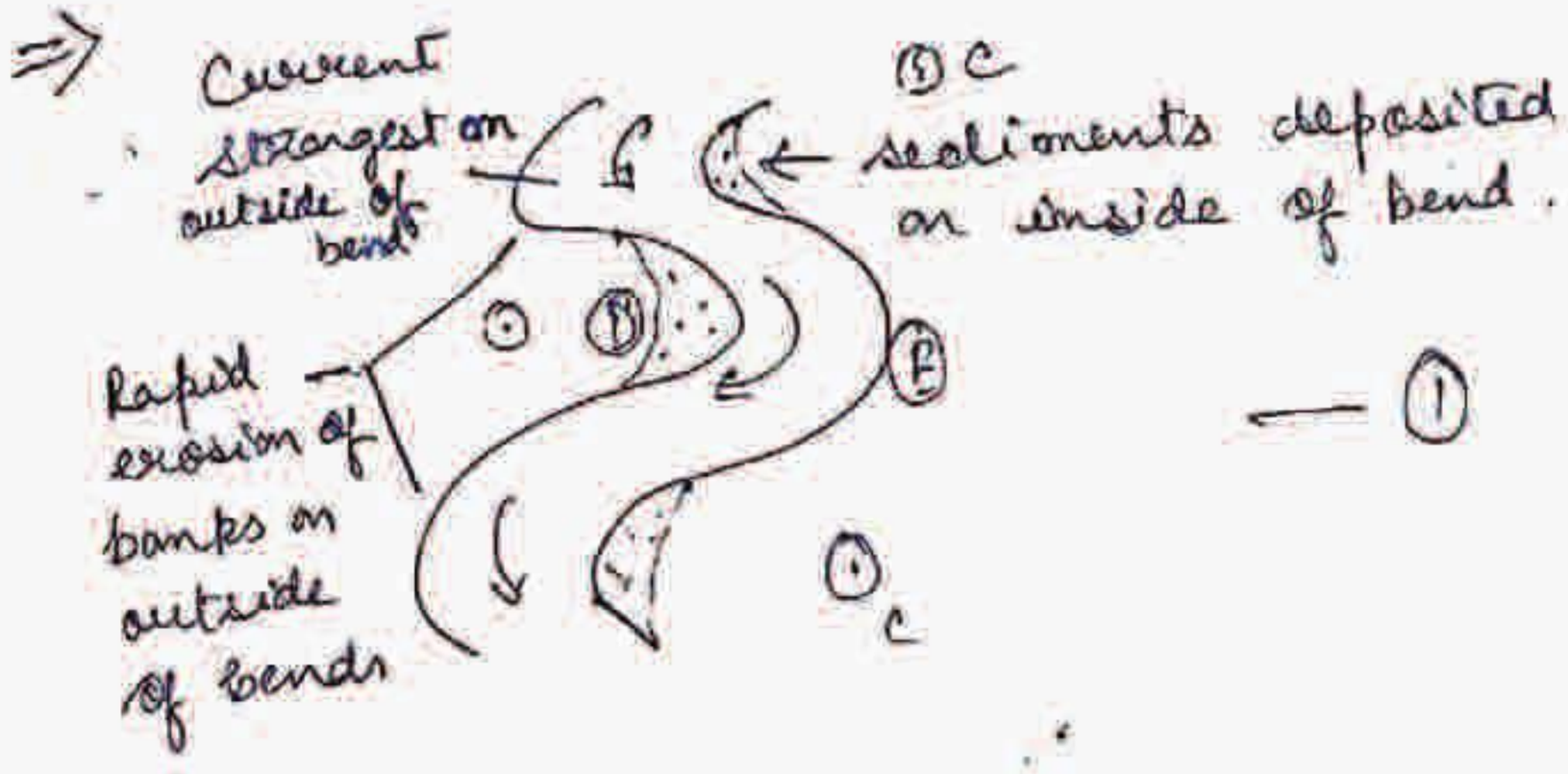
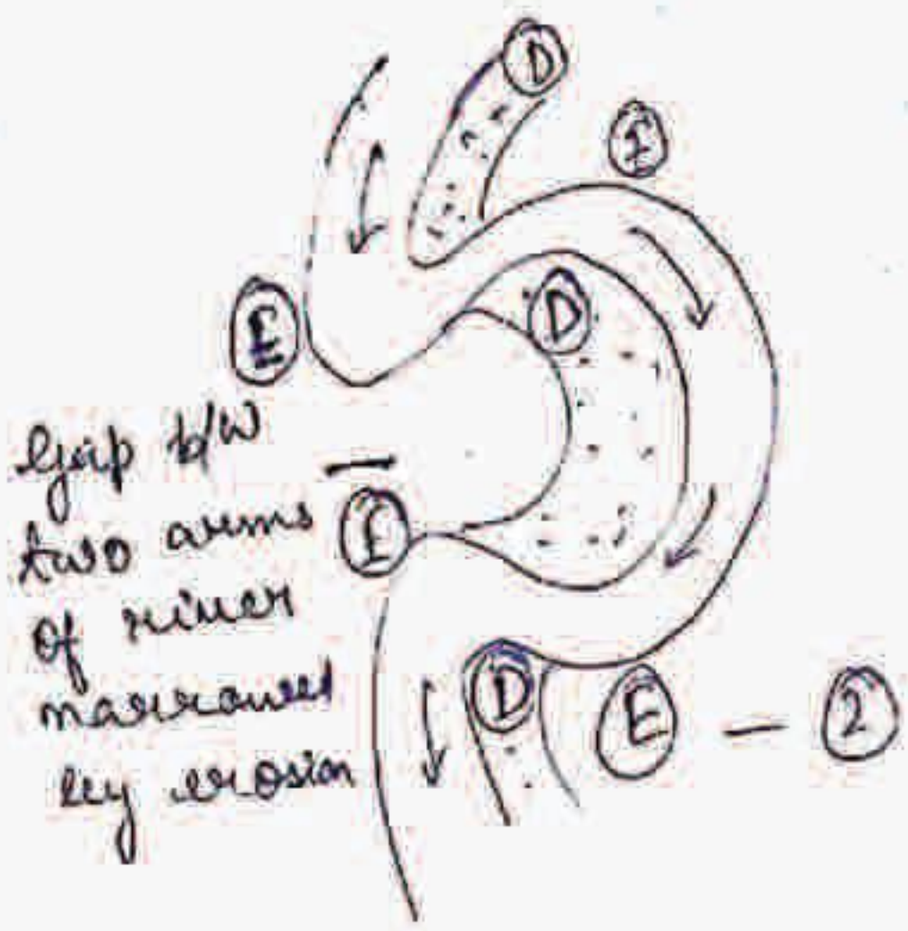
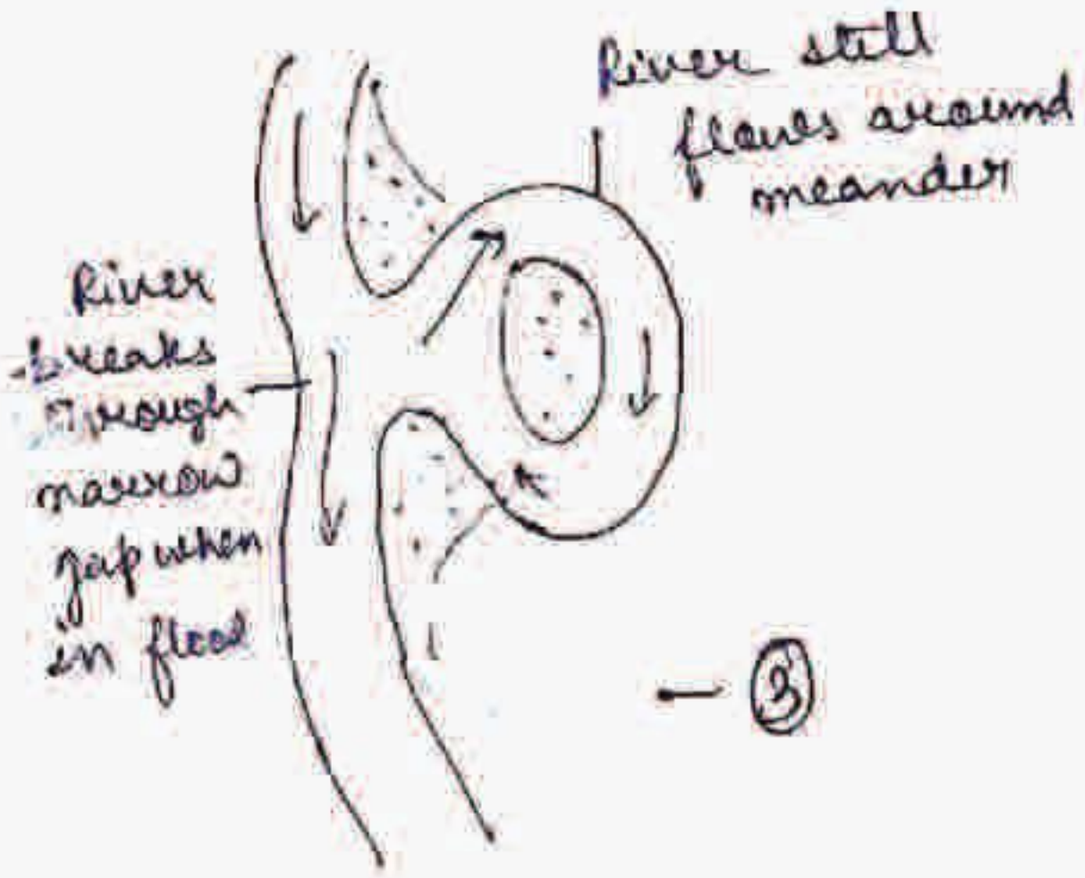
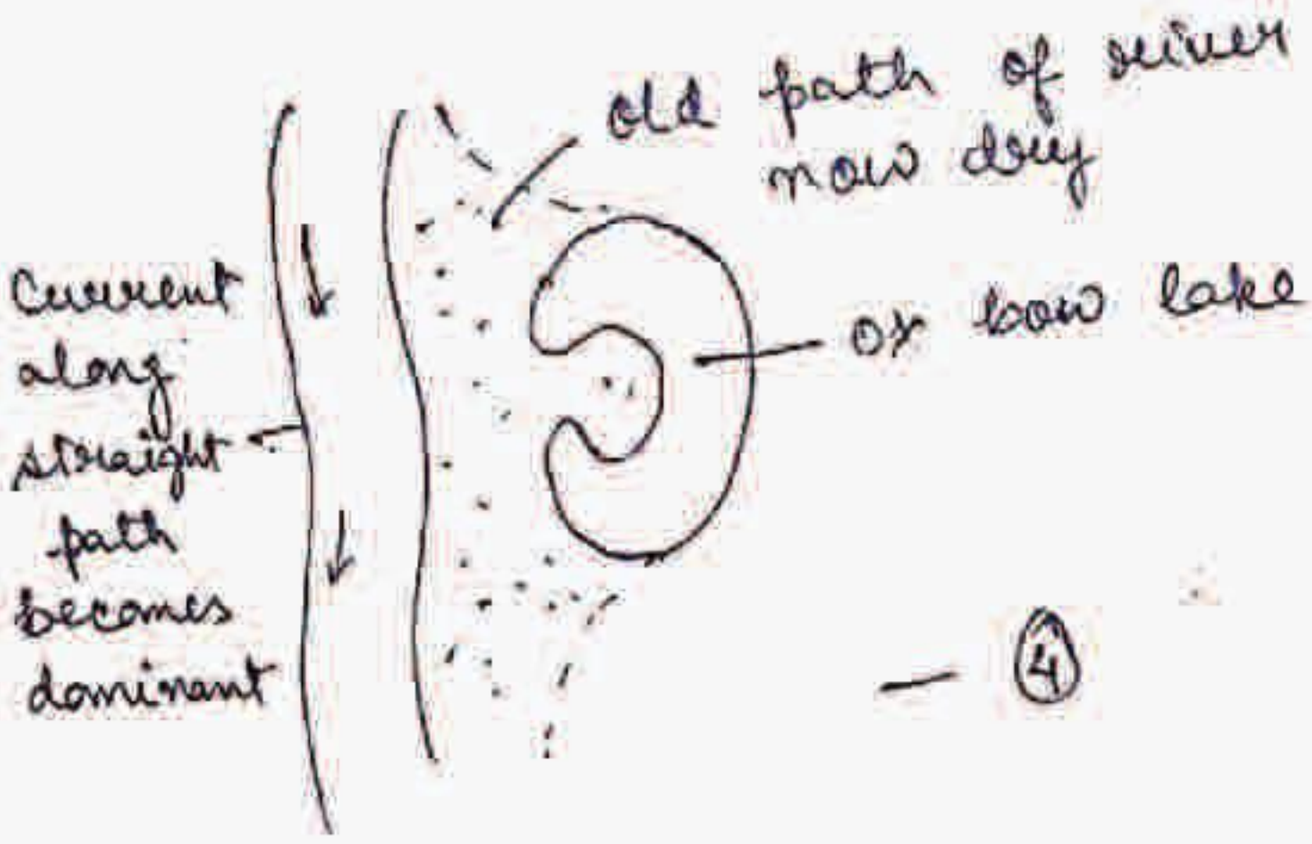










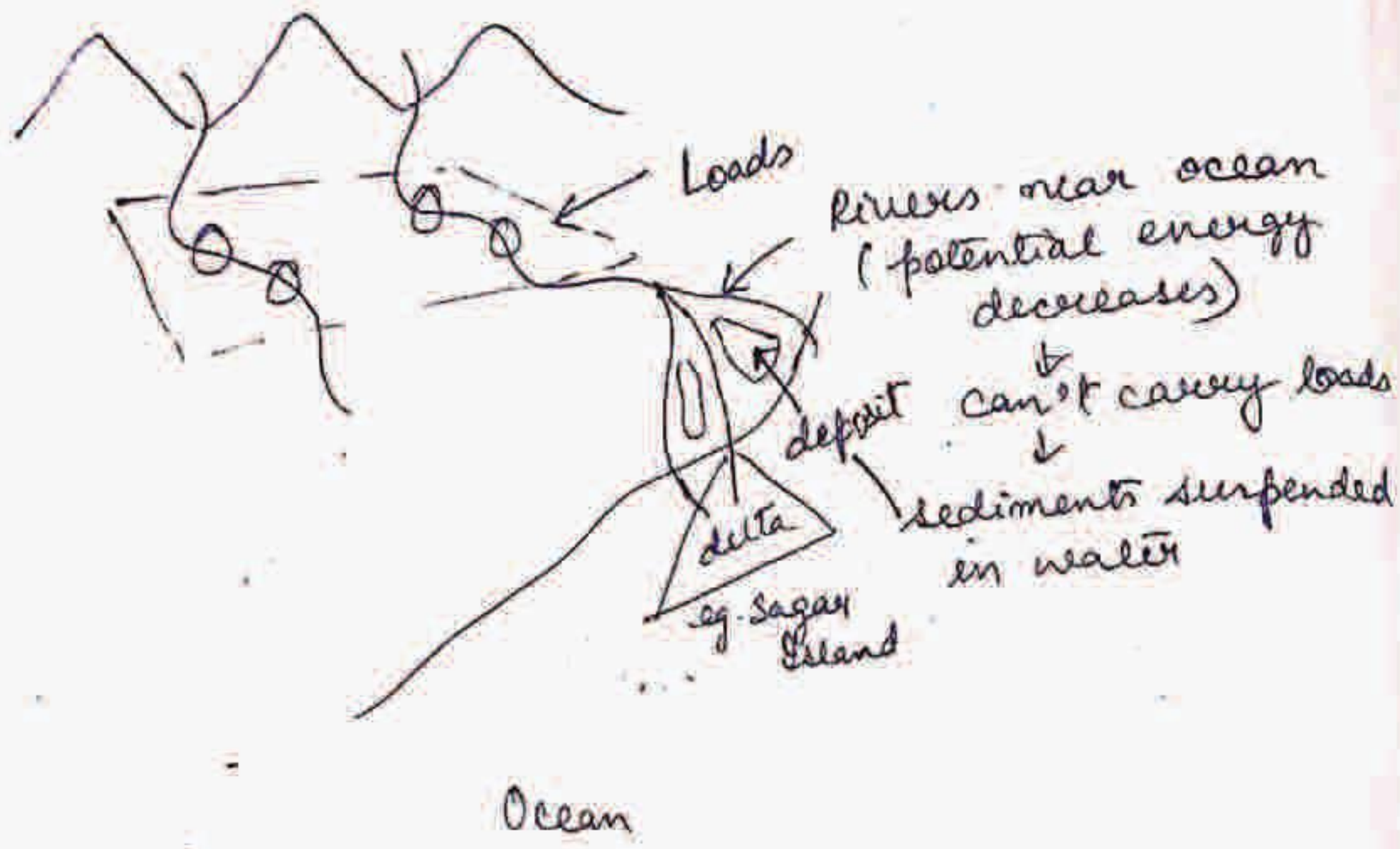


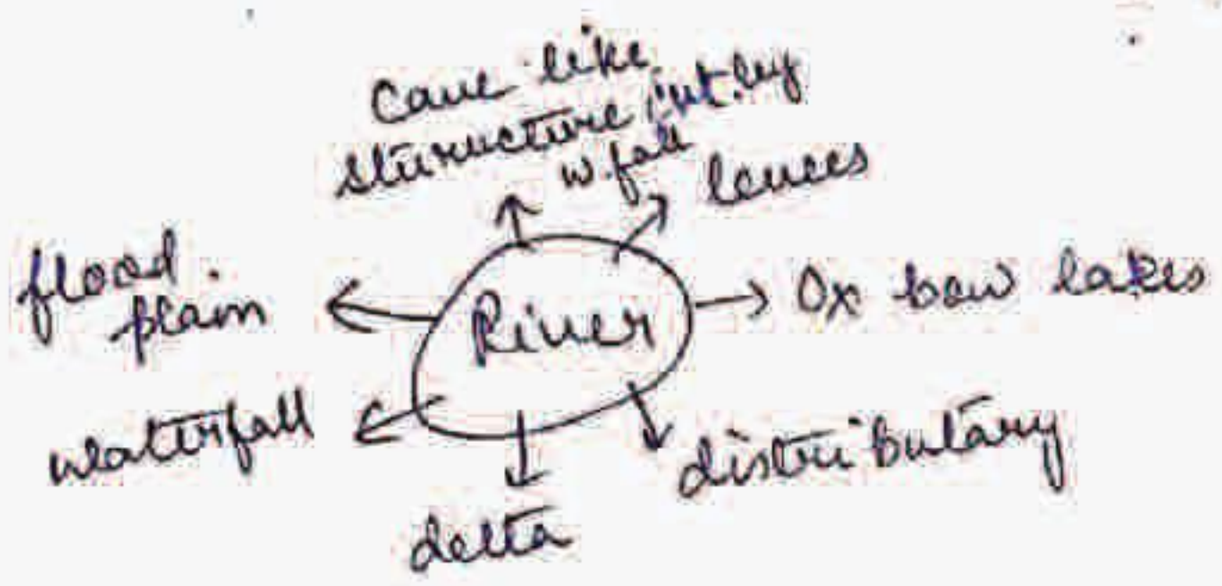
(iii) Flood plain:

- softer
- flood plain (deposition)
- Fertile - huge potential for agriculture.

excess water will overflow,
water speed decreases on flat plain, particles will get deposited on its sides

(v) Distributaries / Deltas

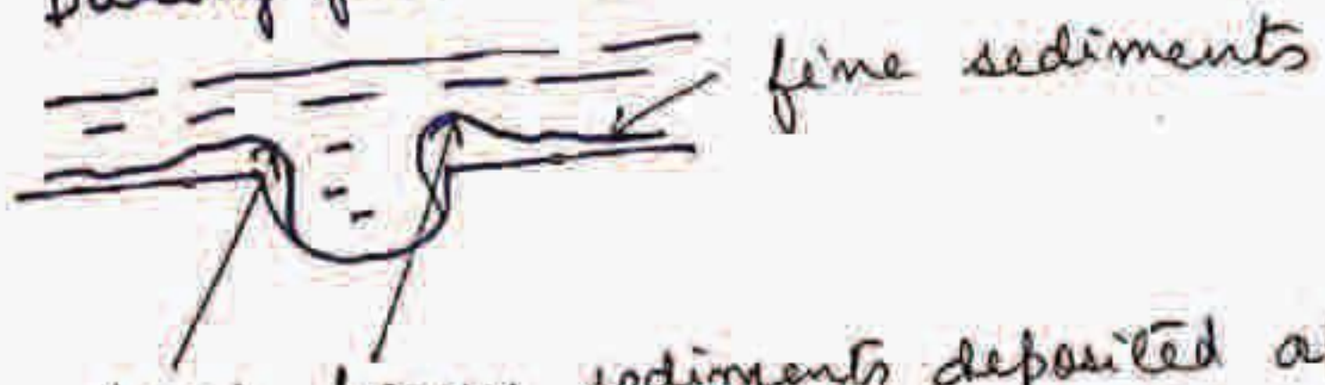




Levees

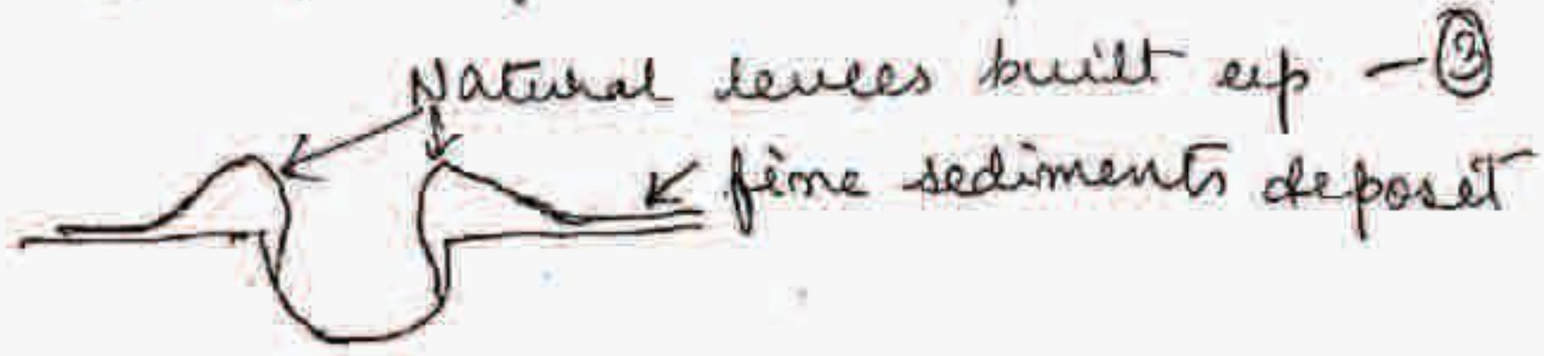
(iv) Before flood – ①

During flood – ②



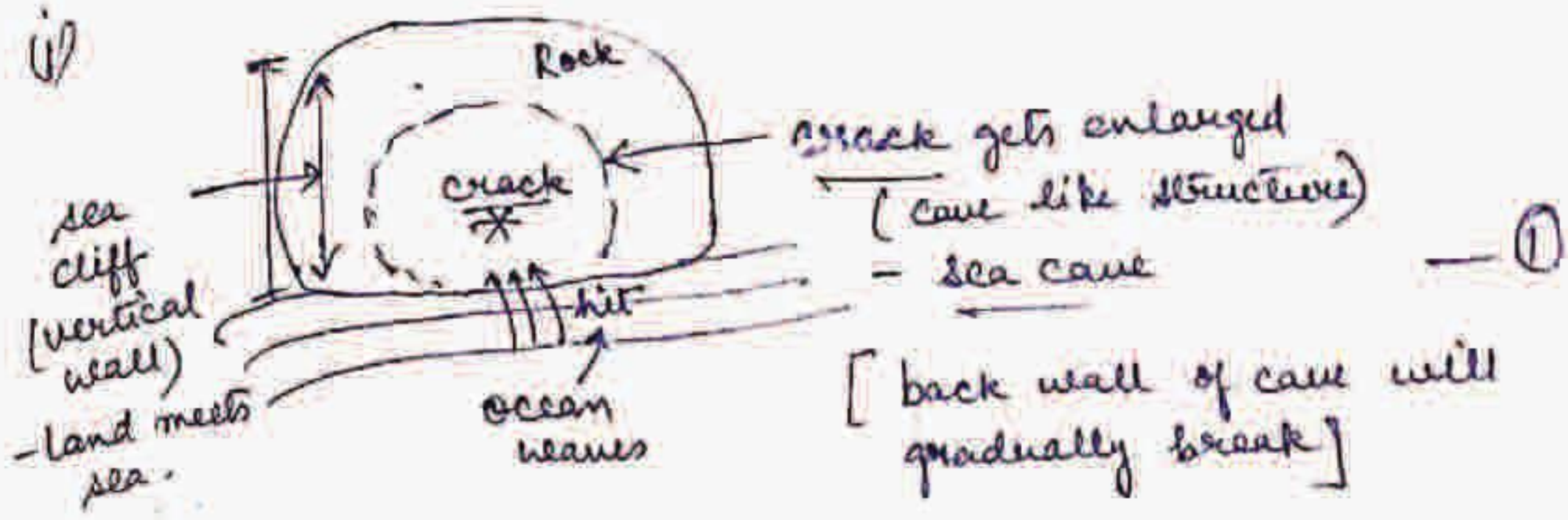
Thick, heavy sediments deposited at channel edge

Natural levees built up – ②



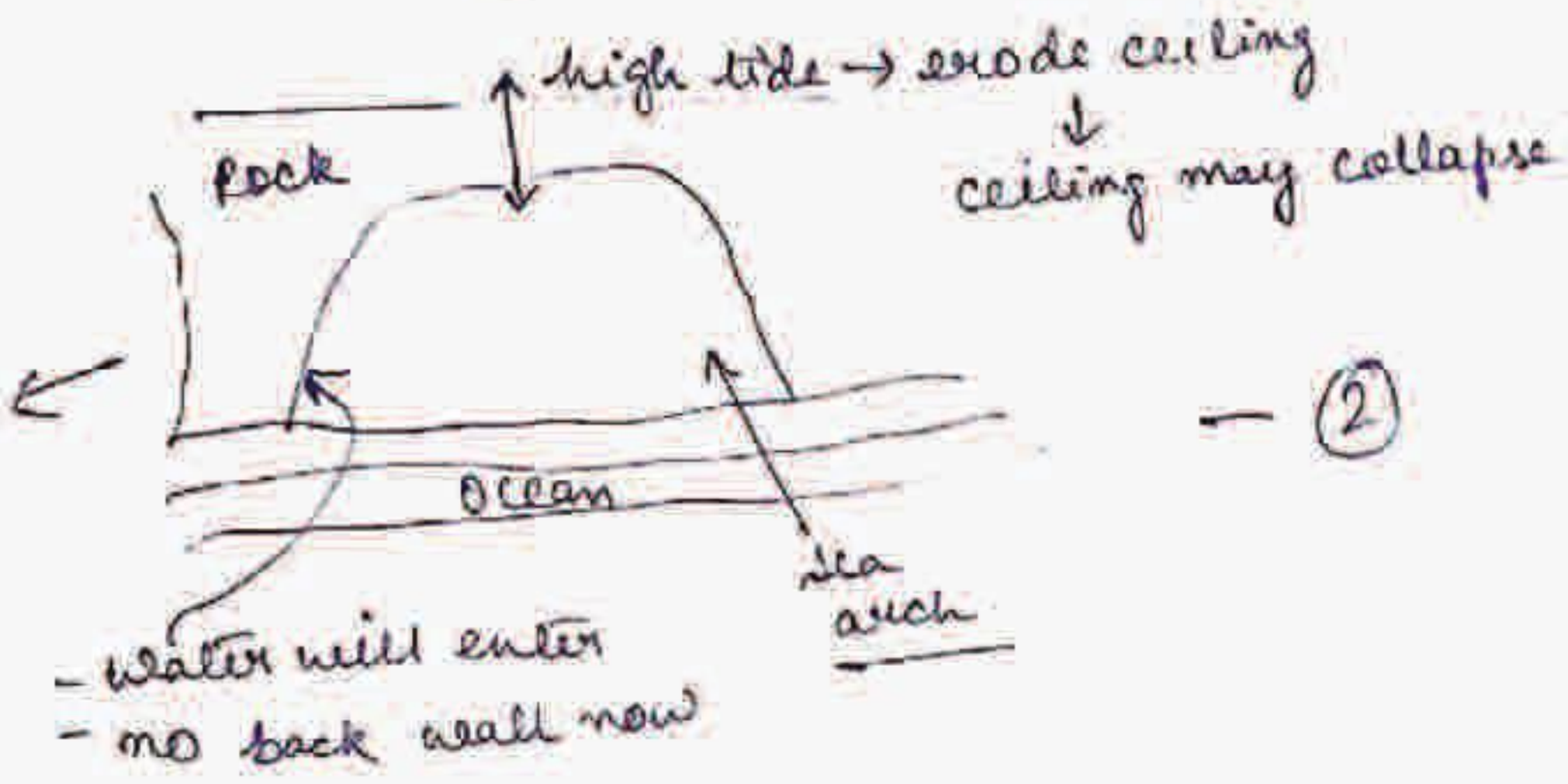
② Works of sea

(i)



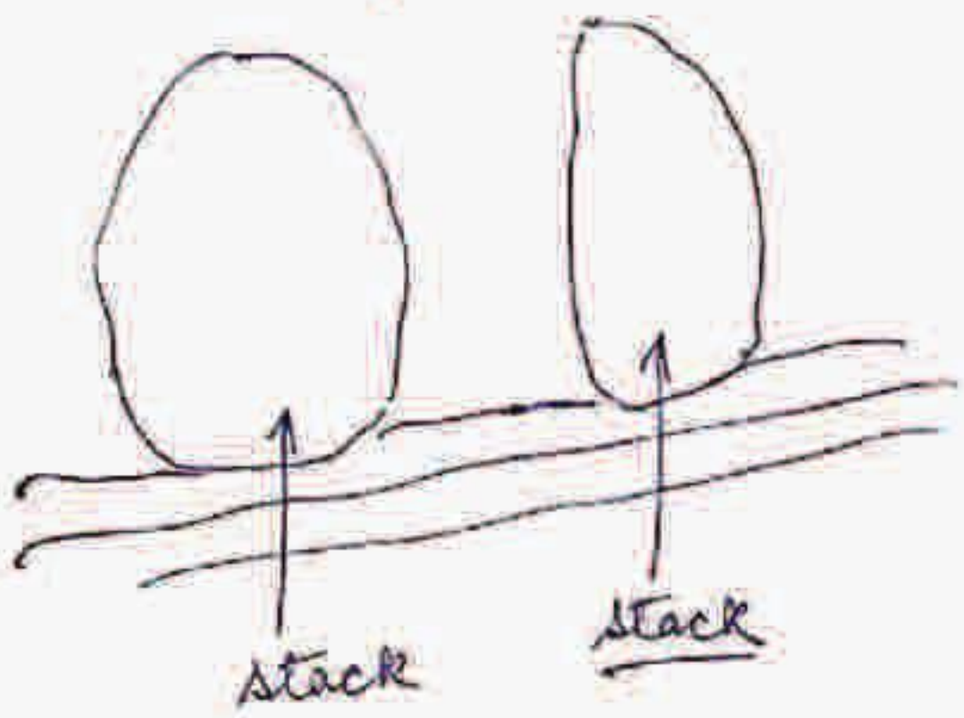
— ①

↓



— ②

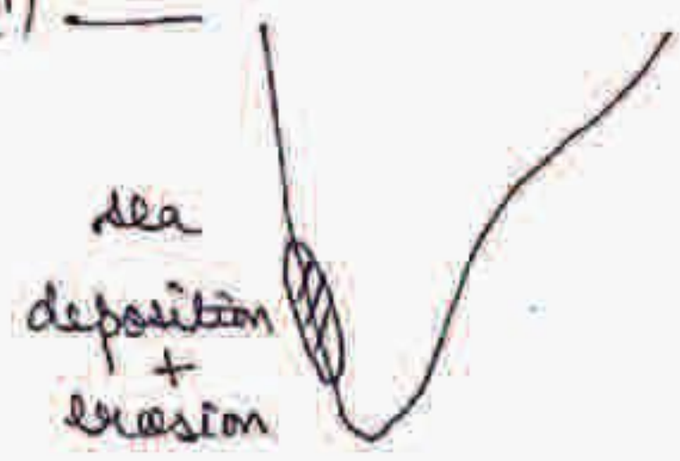
↓



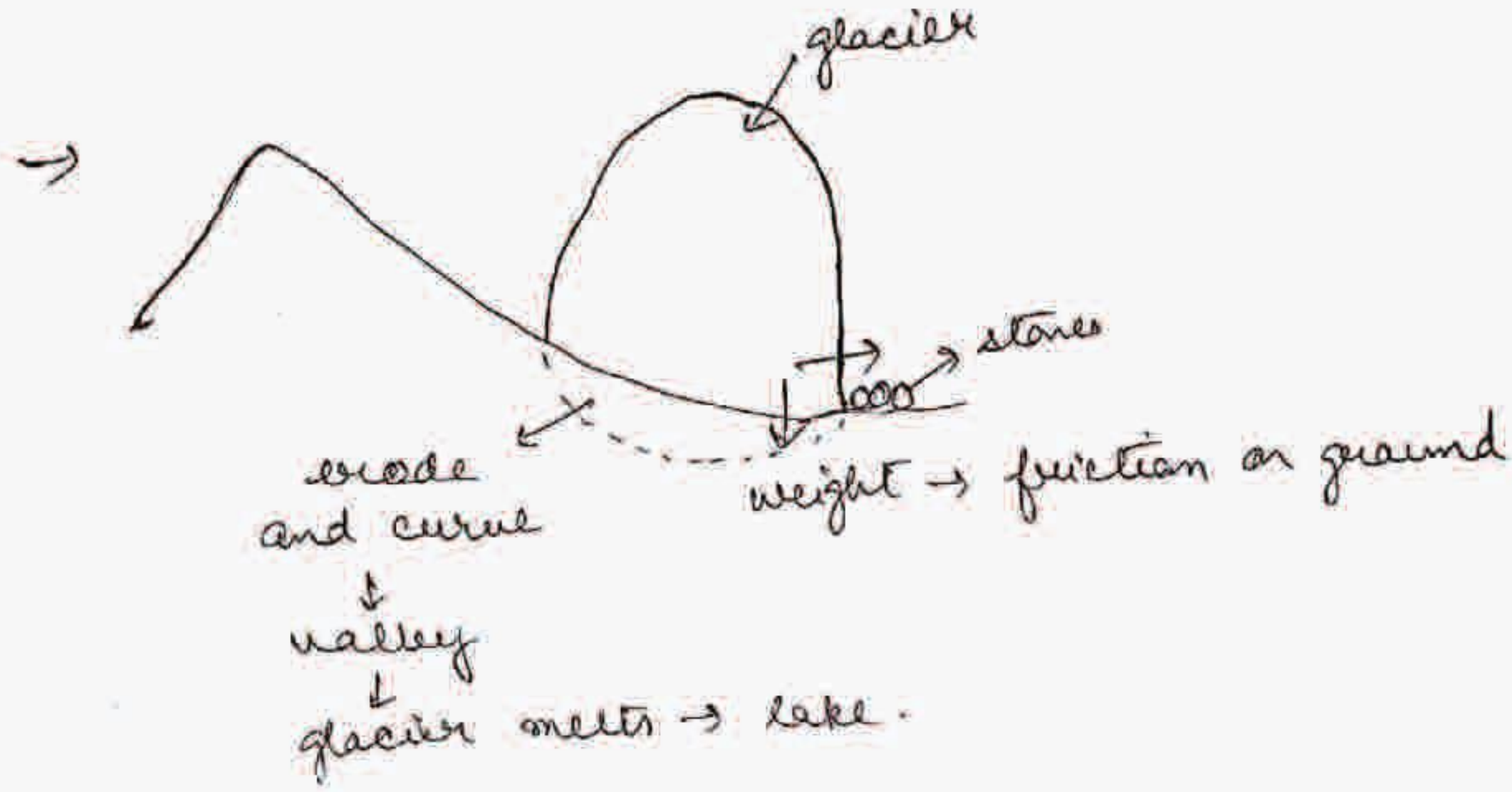
— ③

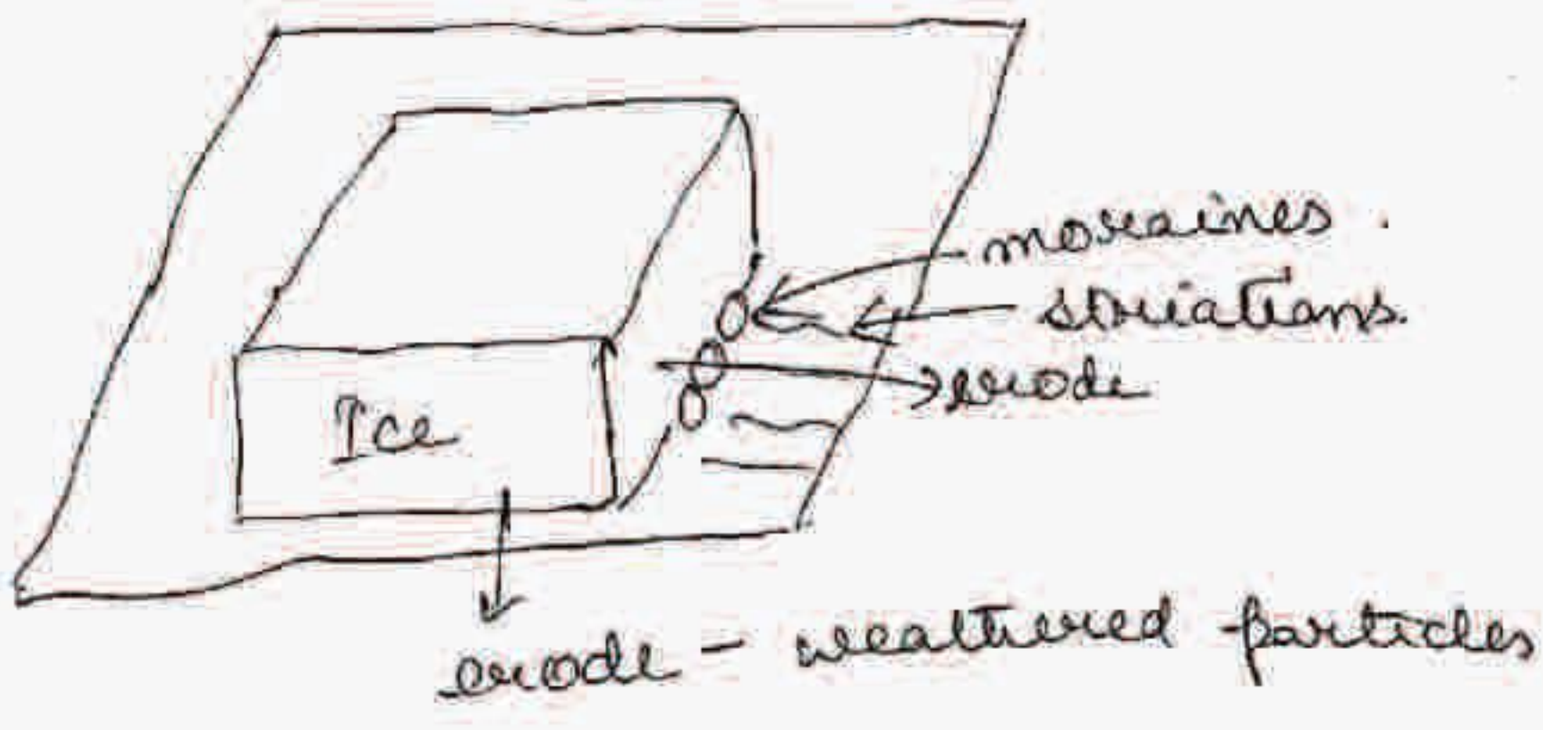
⇒ crack → sea cave → sea arch → stack

(ii) beach



Works of ice

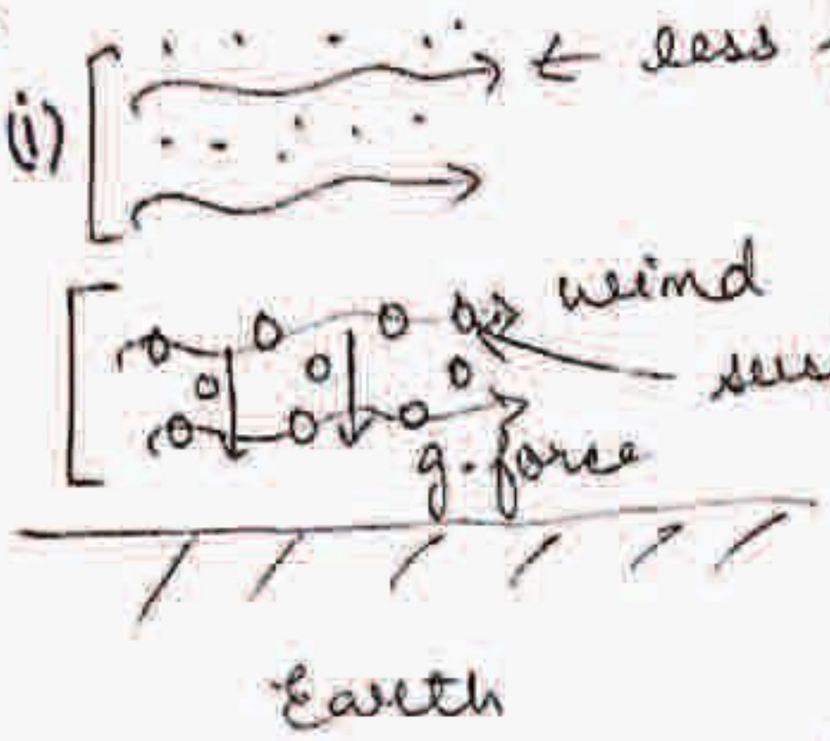




③ Air erosion

Mushroom Rocks

(i)



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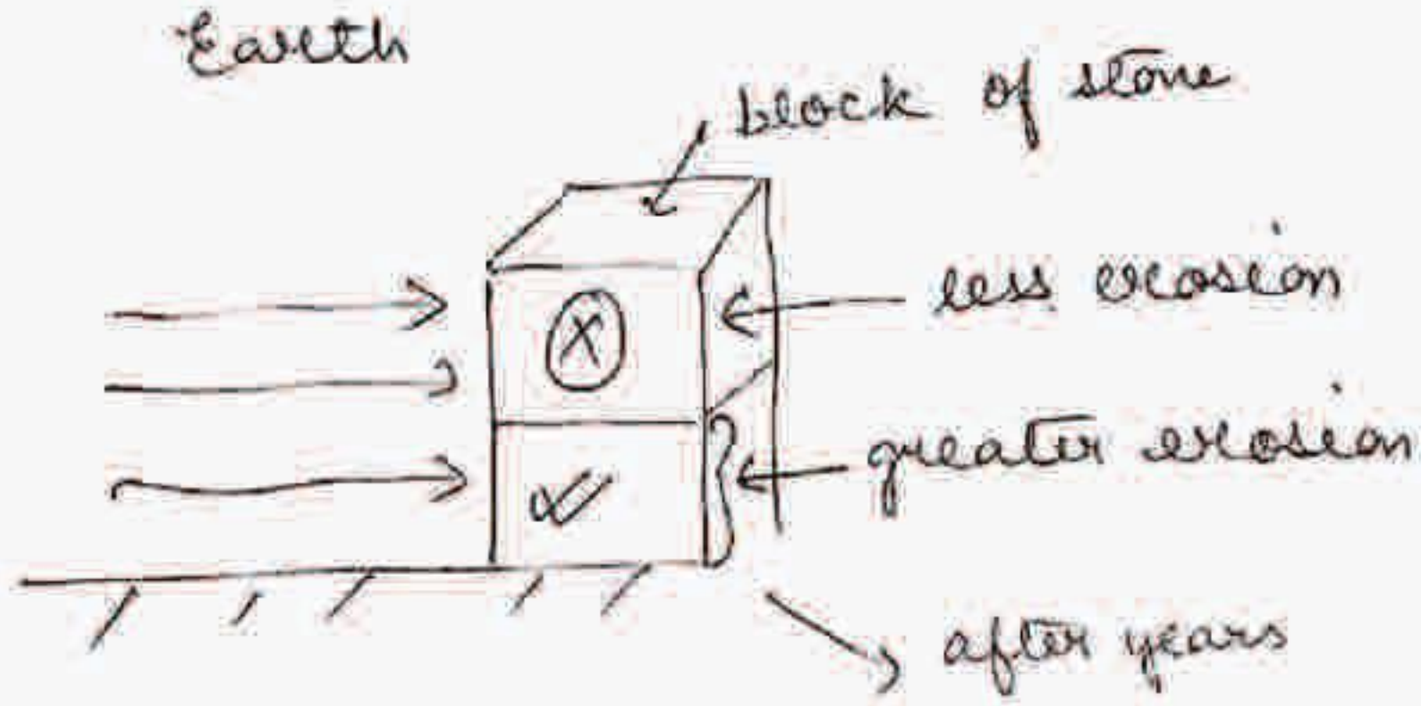

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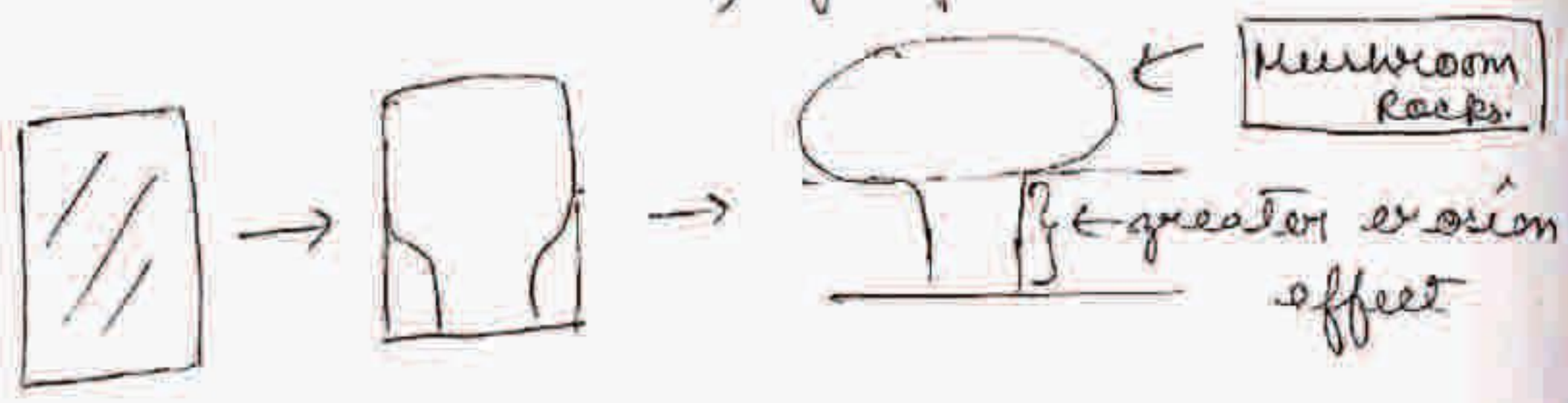
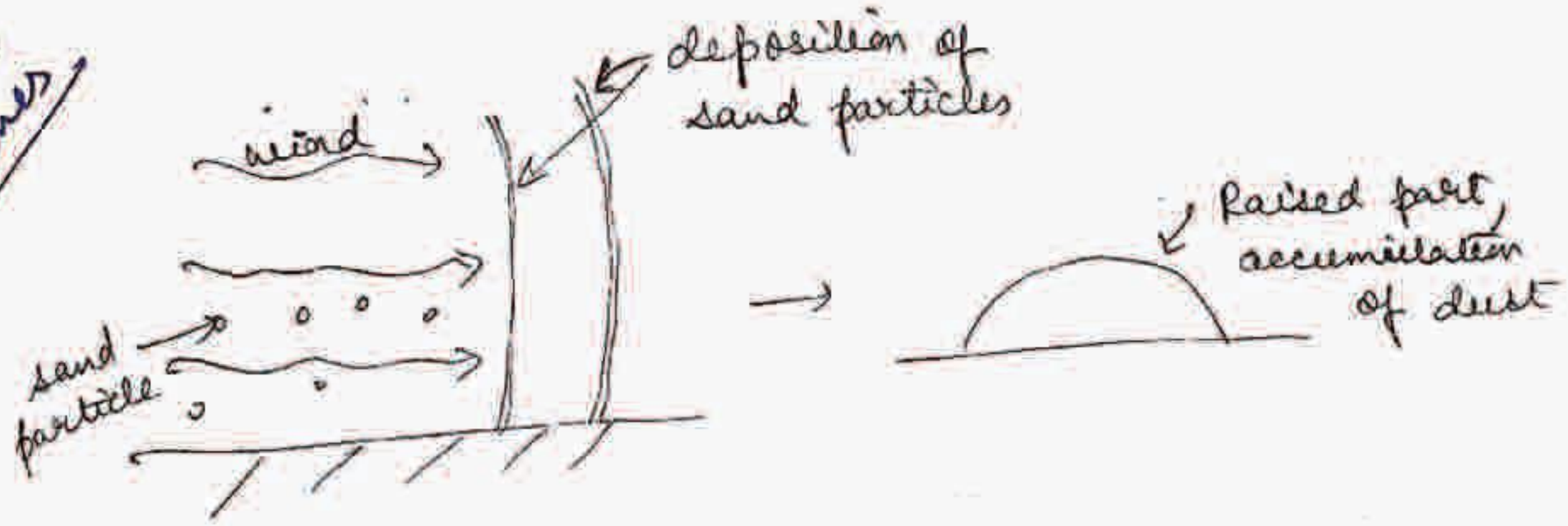


Certain agents of erosion
- water
- ice
- air etc

Mushroom rocks:
① Hot climate
② Desert
③ water, ice absent
④ Air erosion (dominating agent of erosion in desert)

Sand Dunes



Loess Plain

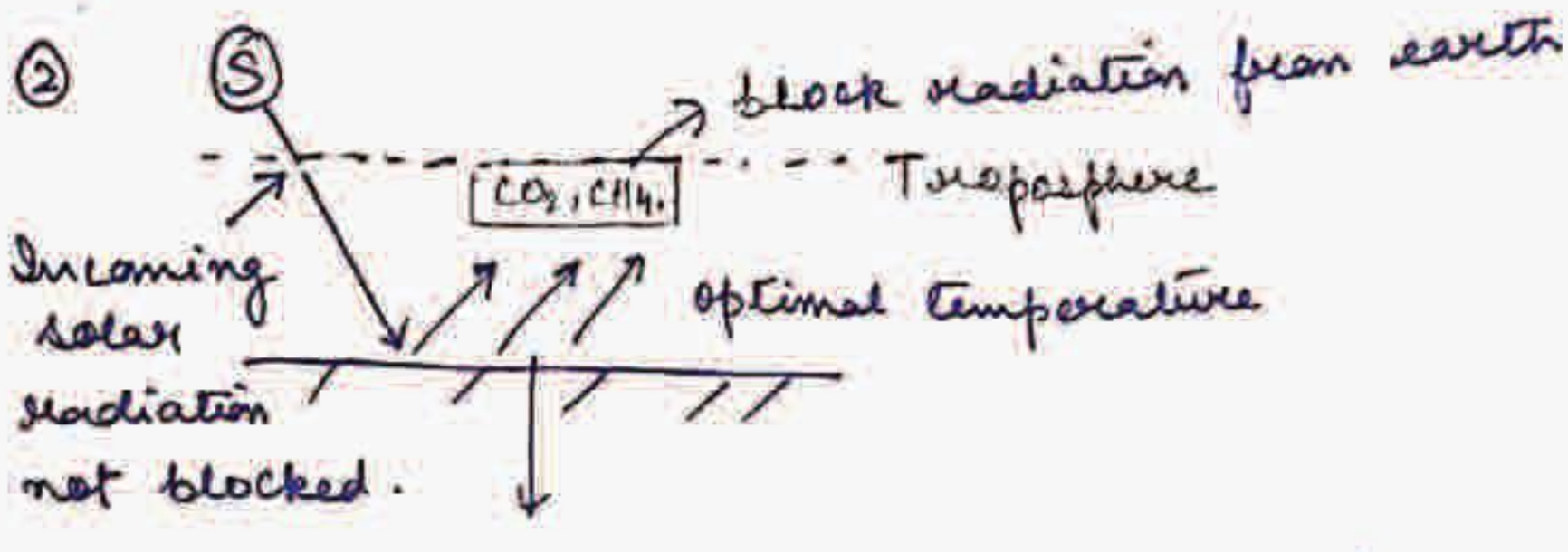
→ carried to a great extent
↓
distribute to a surface at a place (loess plain)

eg. Some parts of Rajasthan, China has a lot of loess plain.

Air – 4

① Atmosphere – Refer Cl. VI.

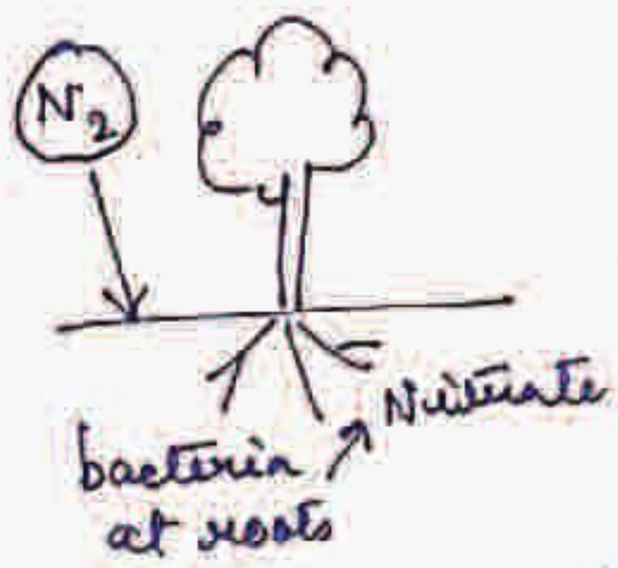
②



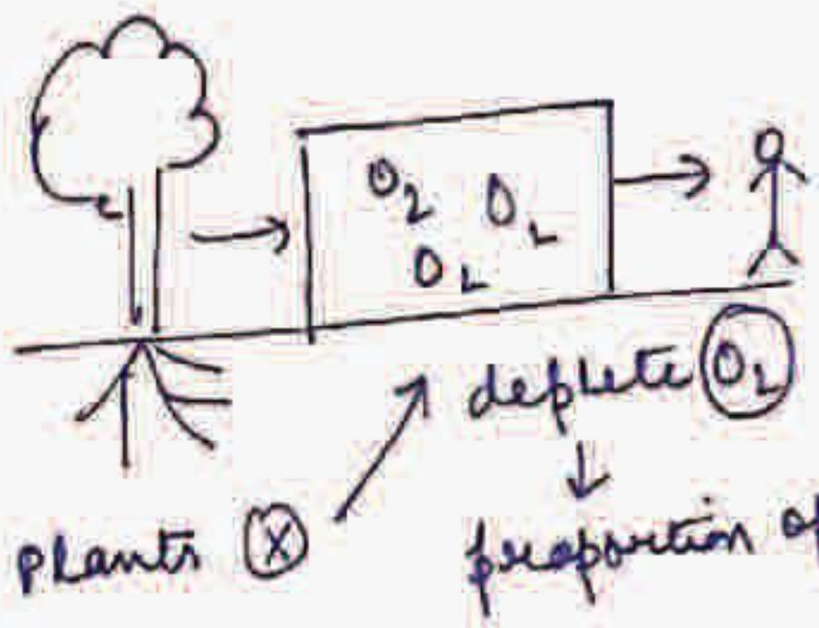
When much more heat is trapped → global warming → ice cap starts melting → sea level rise → coastal life affected (flood)

→ $N_2 > O_2 > Ar > CO_2$

③ N_2



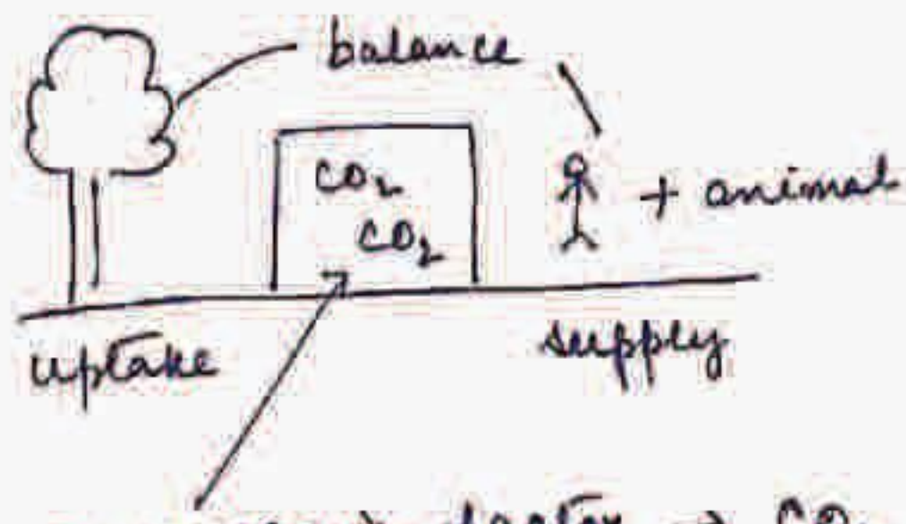
④ O_2



↓ proportion of O_2 comes down → good amt. of trees to support human civilization

[deforestation → impact balance of gases]

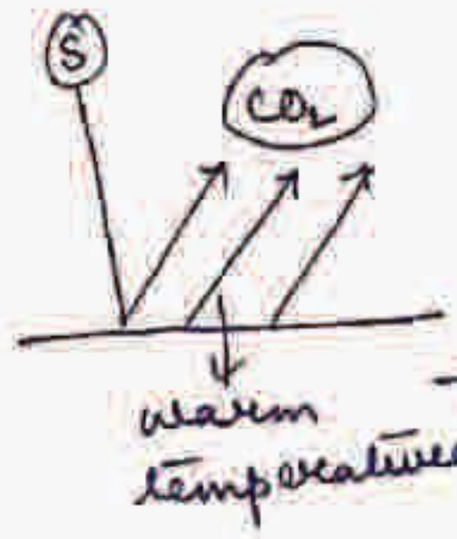
(5)



CO_2 → burning of coal, petroleum, diesel

anthropogenic factor → CO_2 increases → can't used by plants effectively → extra CO_2 → disturbs balance → excess CO_2 in atmosphere

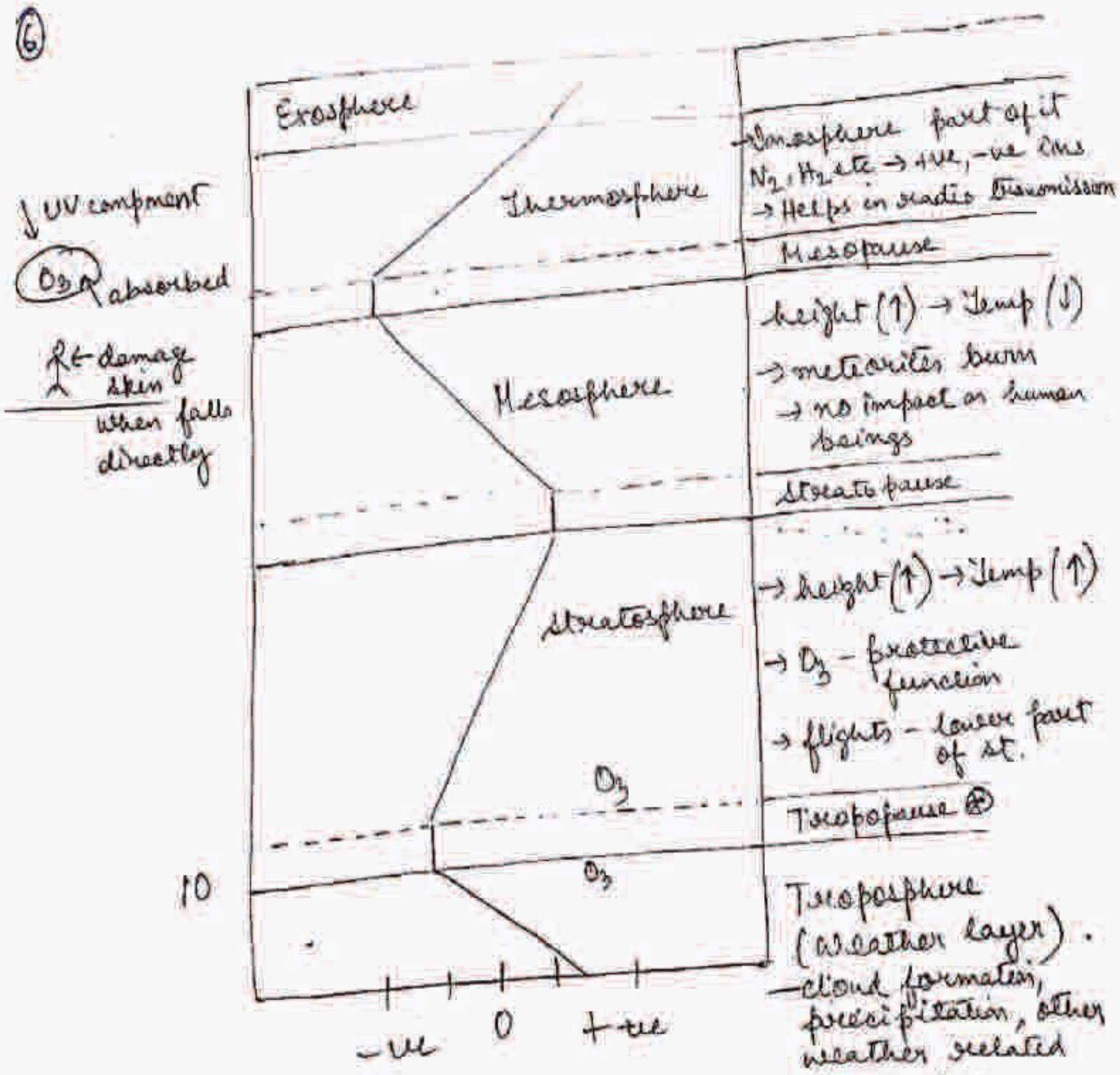
→ trapped more radiation from earth →



→ warm temperature → ice melts → coastal area affected.

global sunscreen – O_3

(6)



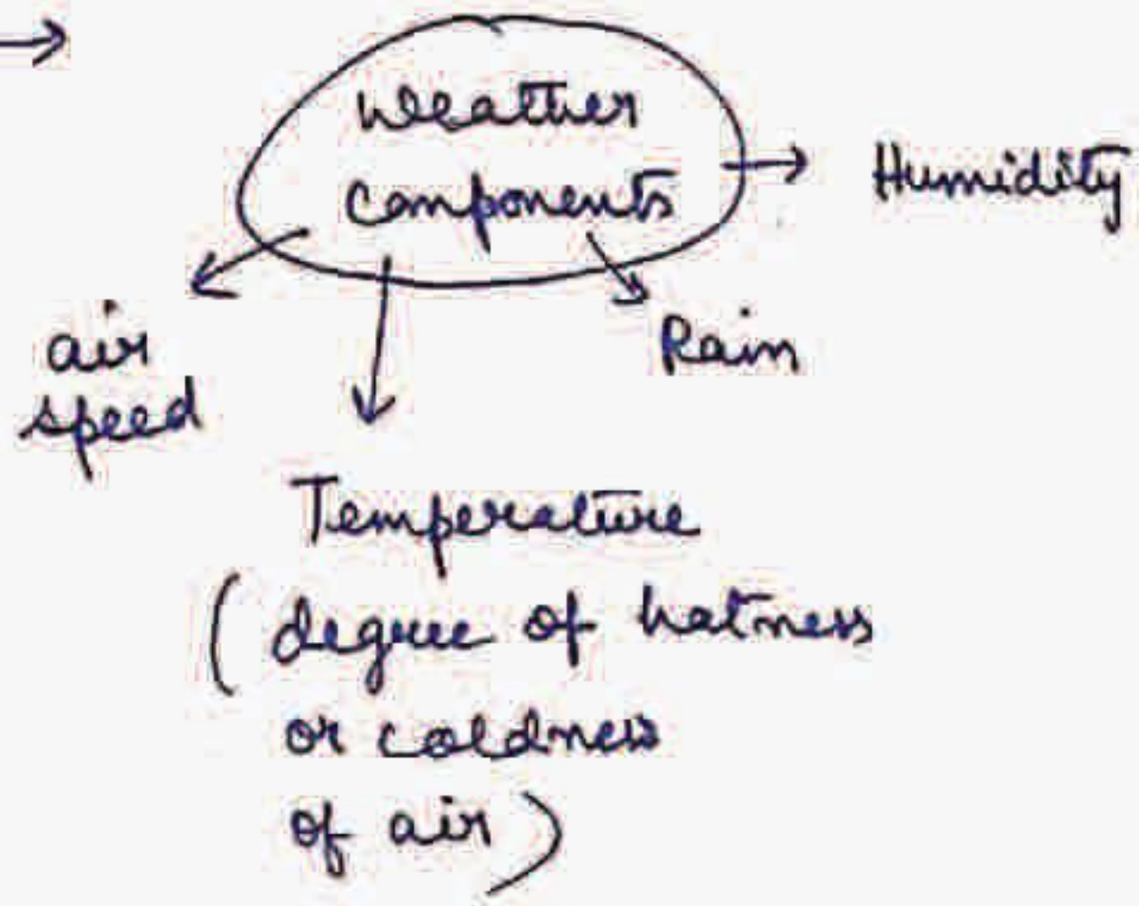
Layers of atmosphere

⊛ Tropopause -

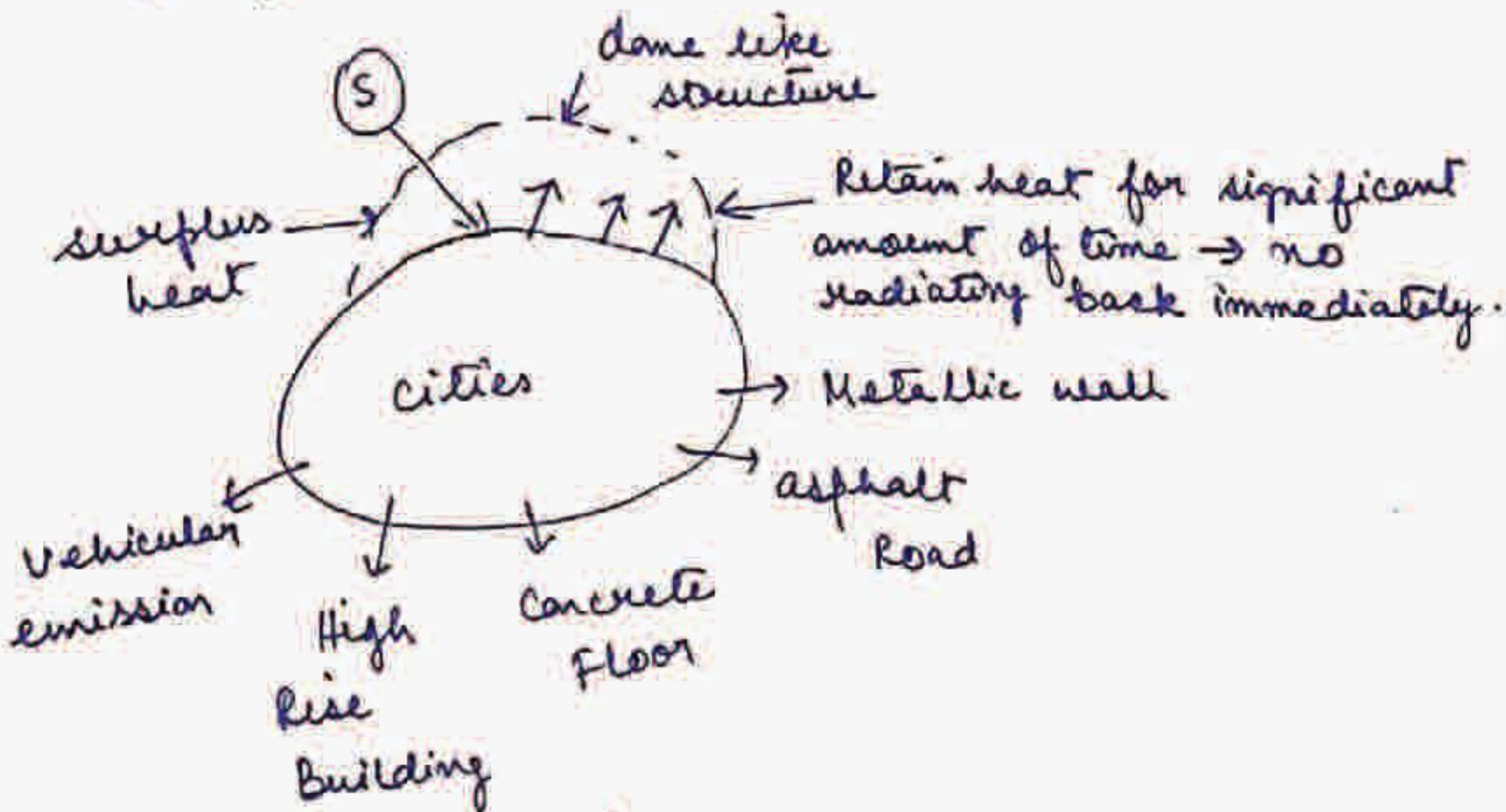
TP is the transition zone b/w troposphere and stratosphere where temperature stops decreasing with altitude and remains nearly constant for a brief period.

⑦ Weather — Climate : difference - (V)

→



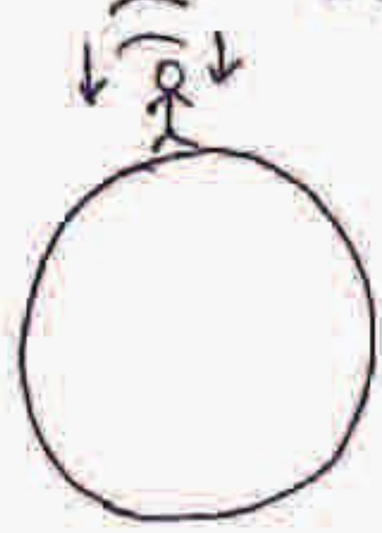
→



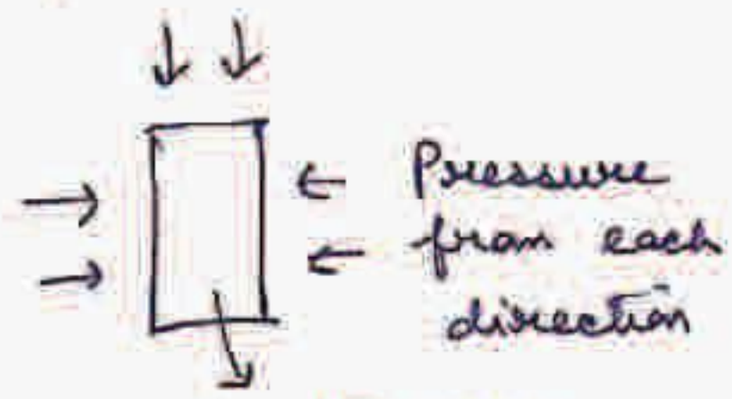
- Heat : Rural $\xleftrightarrow{<<}$ Urban
- outskirt villages temperature may be less.

(8) Air Pressure

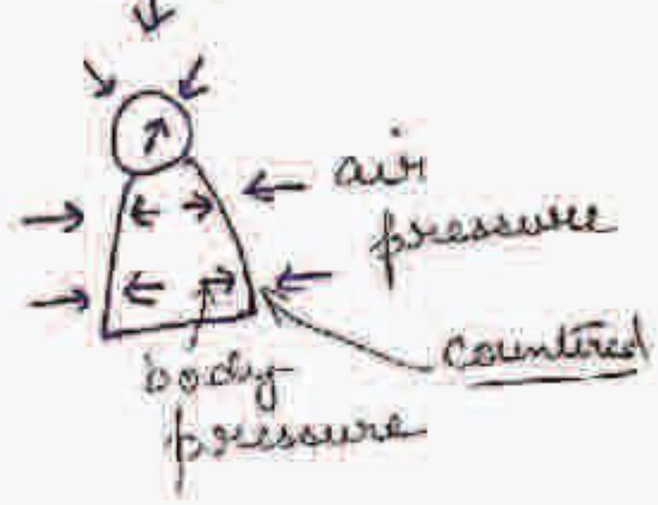
→ air exert pressure on body.



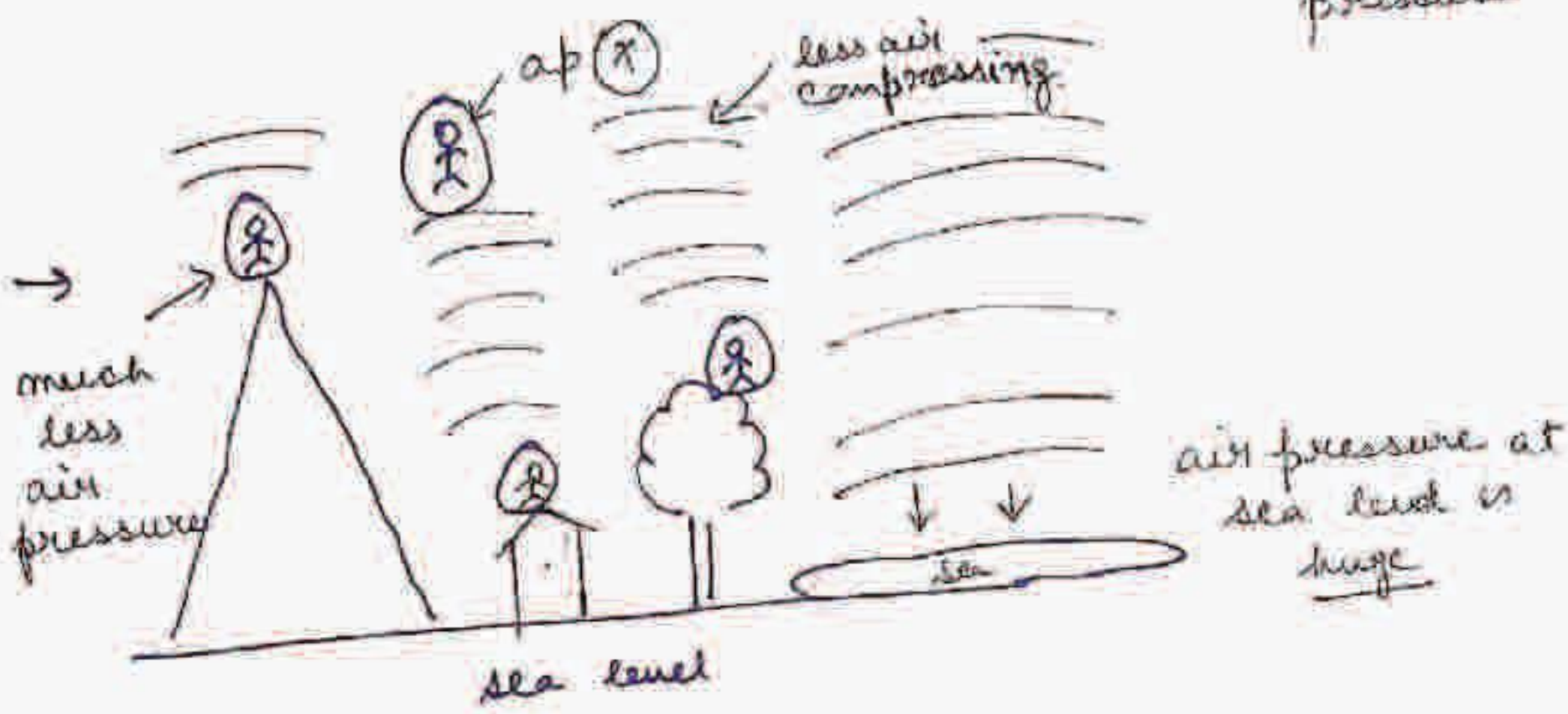
→ We don't feel the pressure.



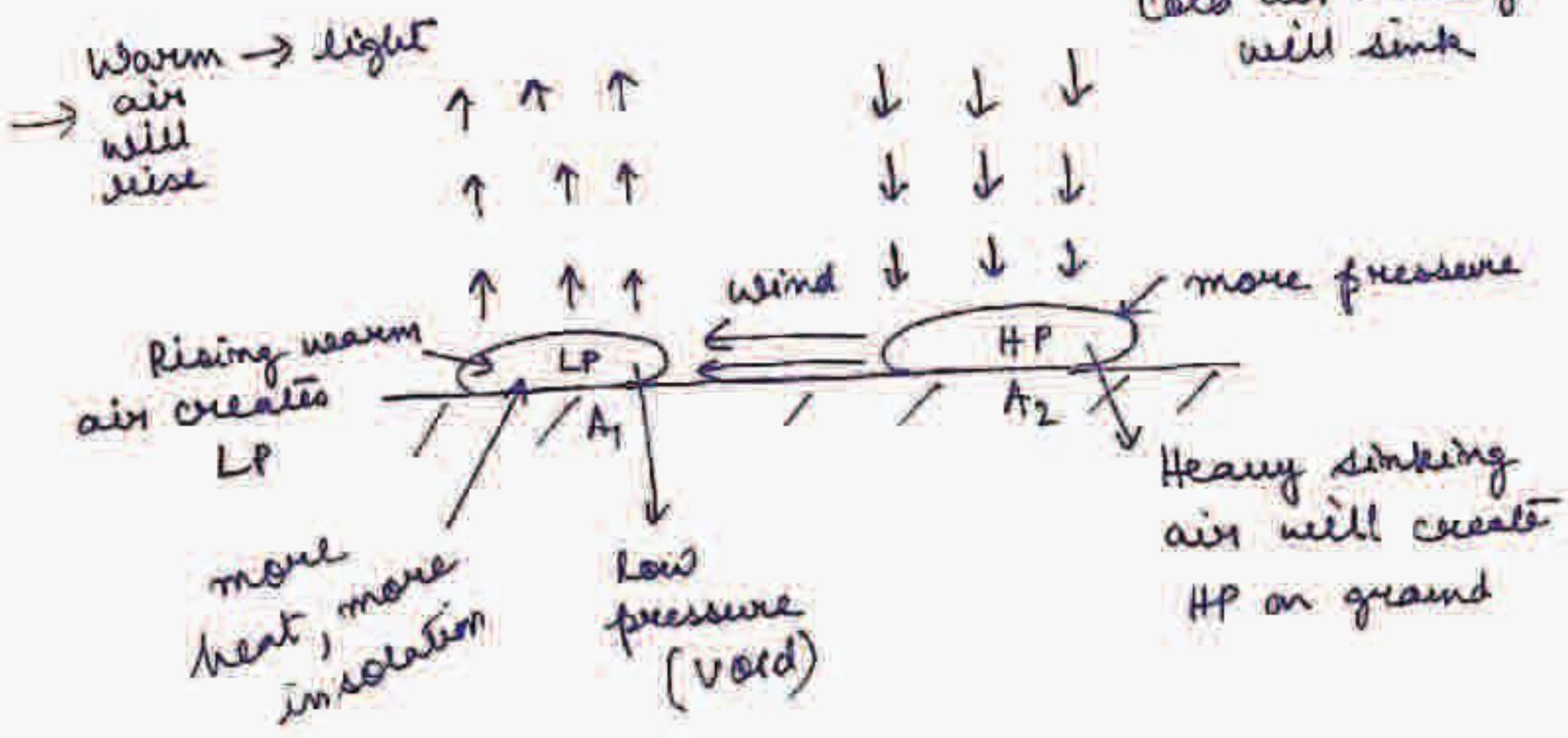
Countered by body pressure



→ If air pressure removed, body pressure will tear arteries, veins → burst



Cold air – heavy will sink



moving air — wind.

① Warm air being light will rise.

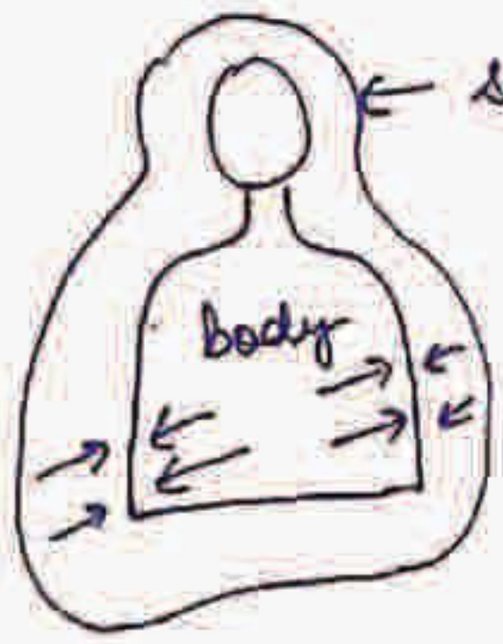
② air will always flow from HP → LP

③ Warm rising air is associated with cloud formation.

④ Sinking air is associated with clear sky and weather.

⑤ Heavy sinking air will create HP on ground.

ON MOON



← suit → air filled → counterbalanced body pressure.

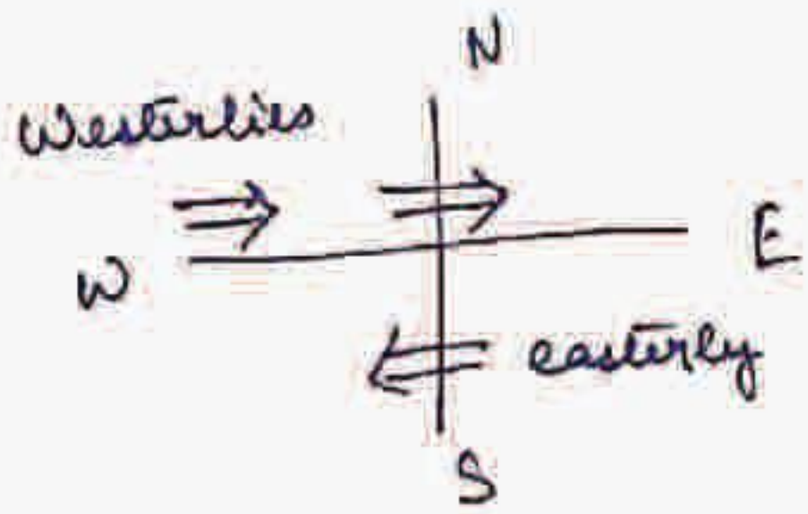
↓

no suit

↳ blood vessels burst.

moon → no air pressure

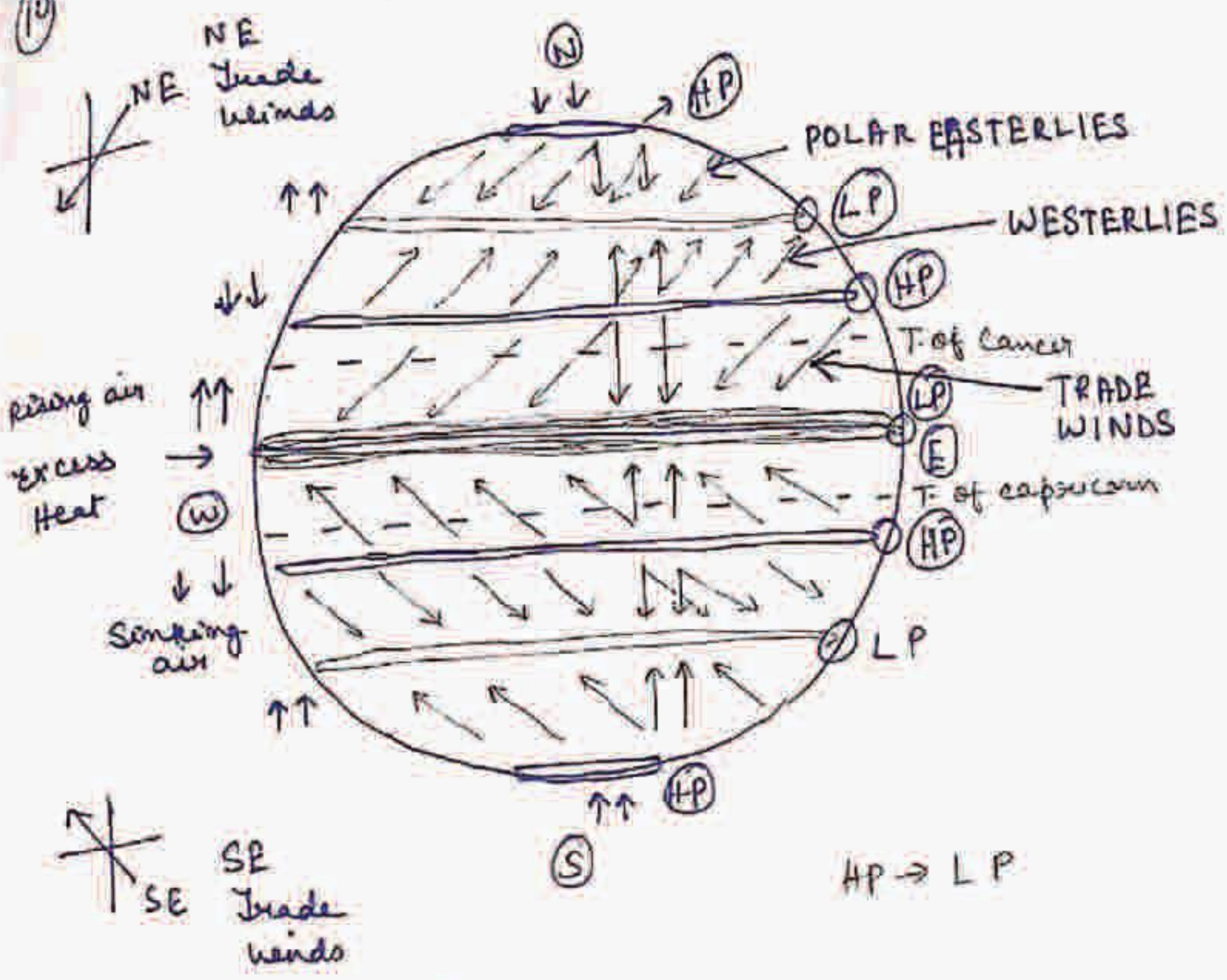
⑦



↑ southerly wind.

Wind is named after the direction from which it blows.

(10)

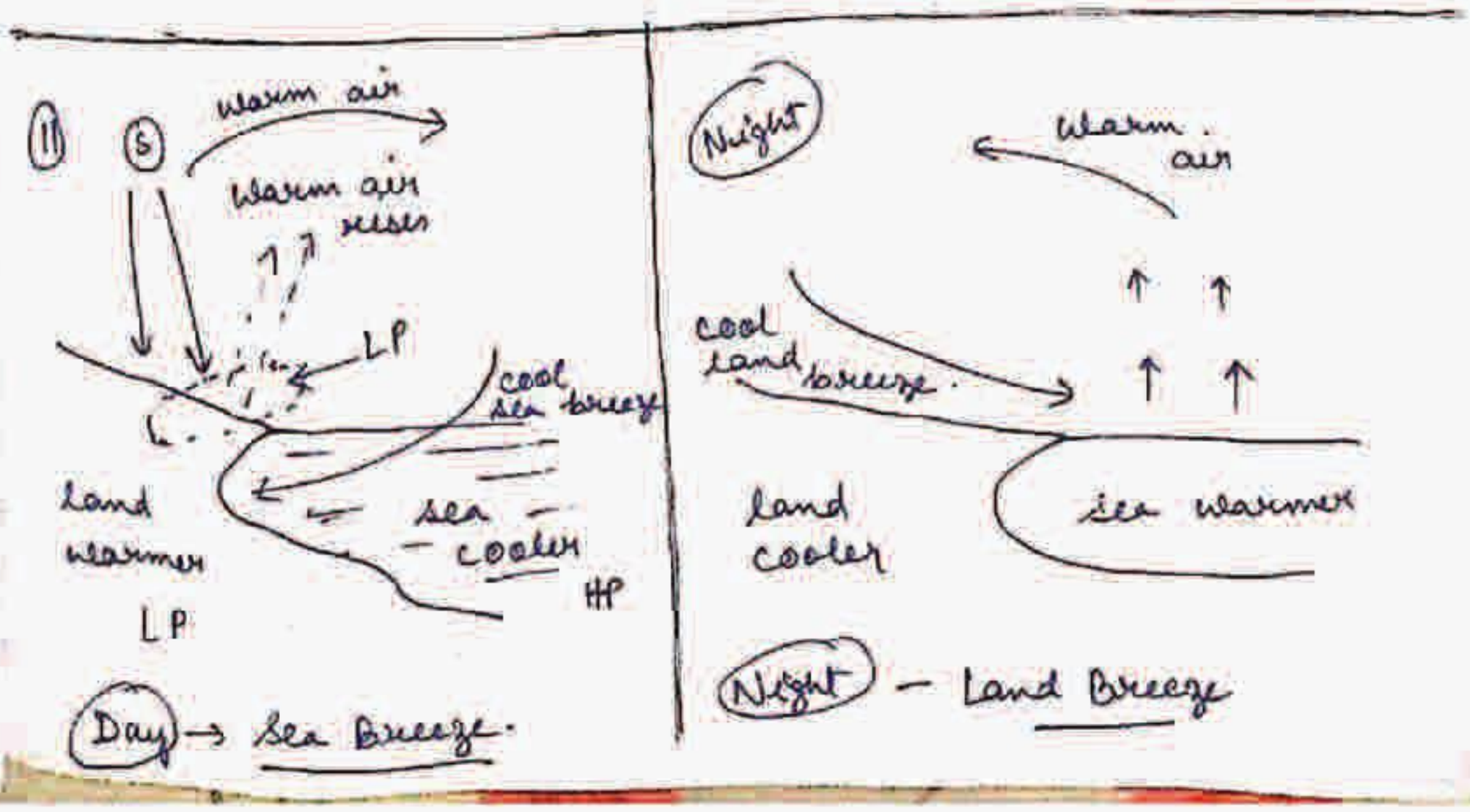


Rotation of earth - dt. line of winds will tilt
(Coriolis force)

N - Right
S - Left.

These winds will prevail across globe throughout the year - permanent wind.

Local (eg: land-sea breeze)
Permanent
winds → Seasonal (eg. monsoon)



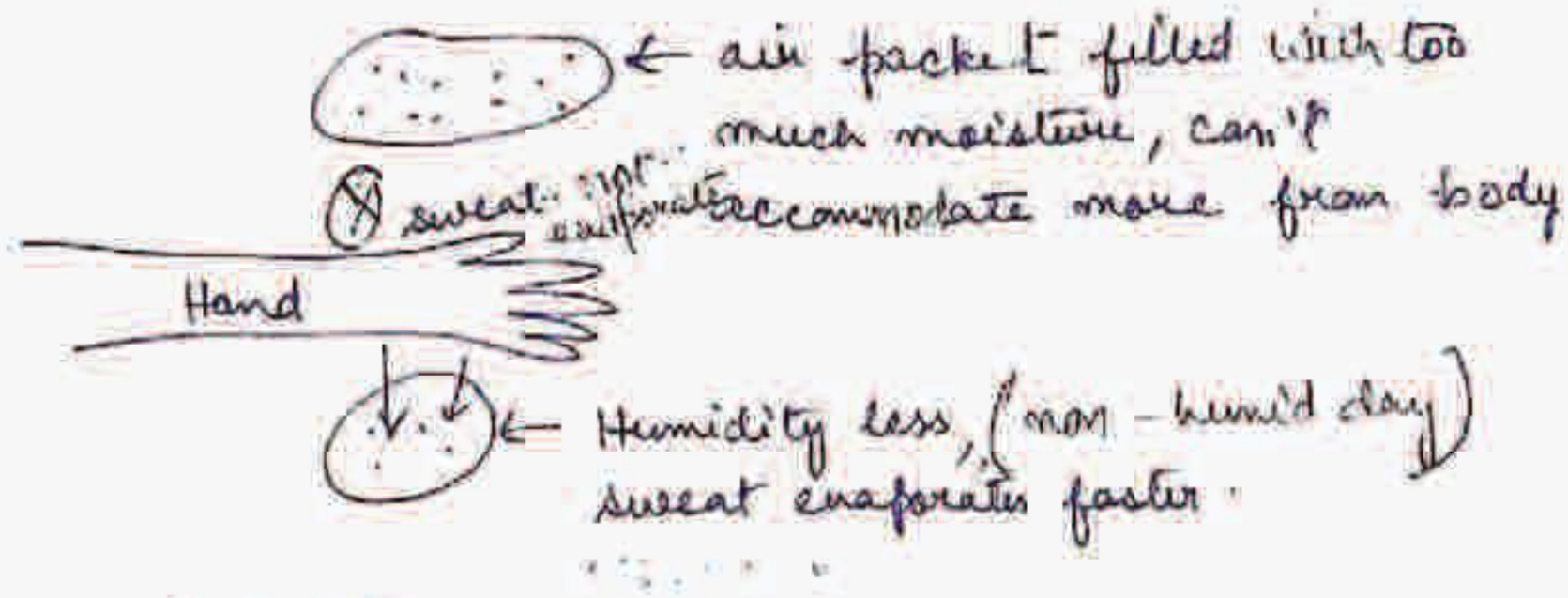
→ land gains / looses heat more quickly in comparison to water.

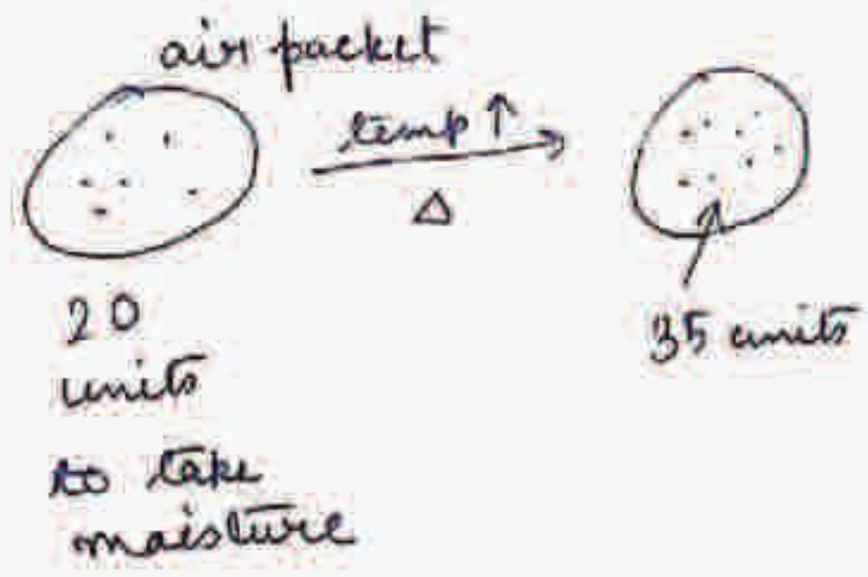
(12) Humidity

→ Humidity → 

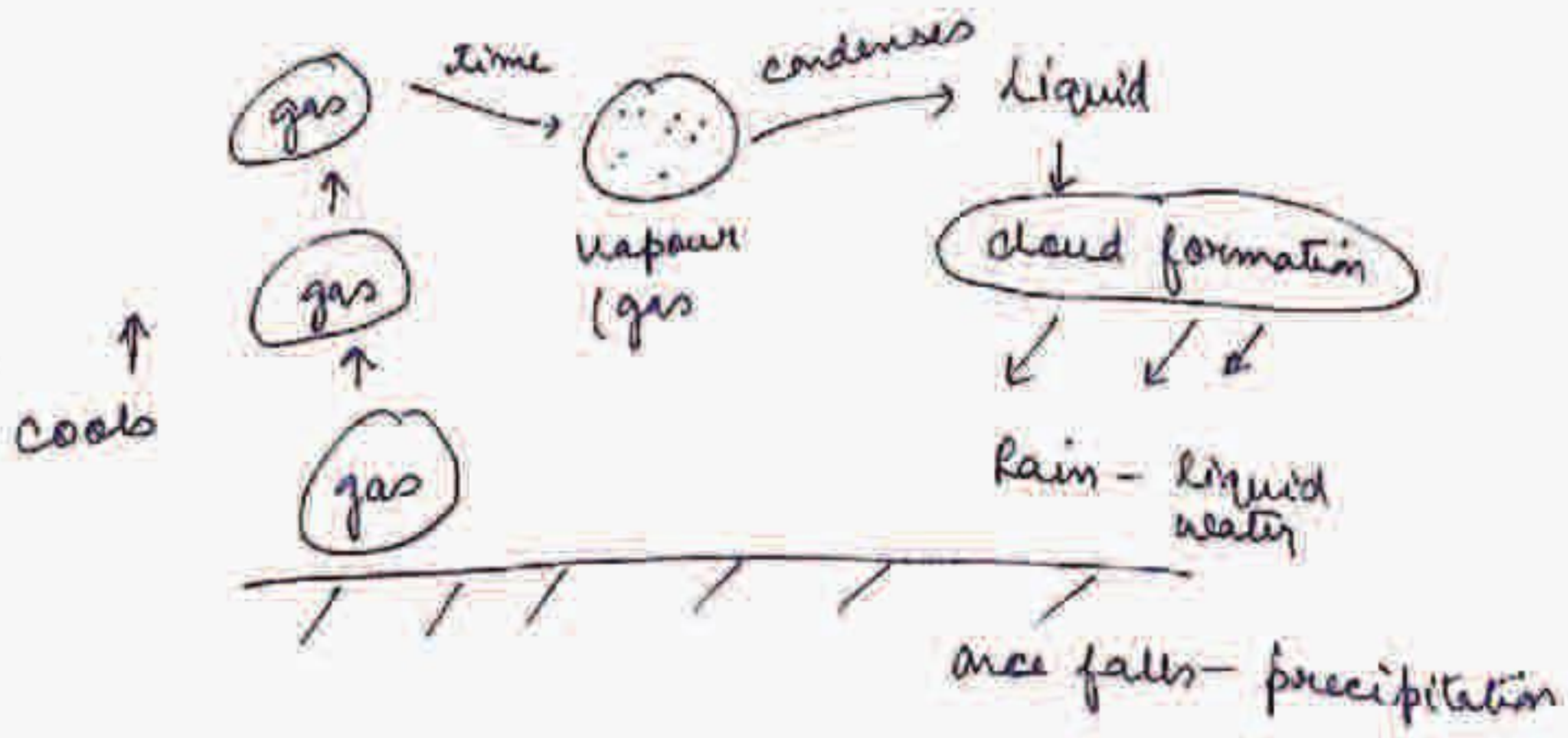
→ High humidity → more water molecules in air packet.

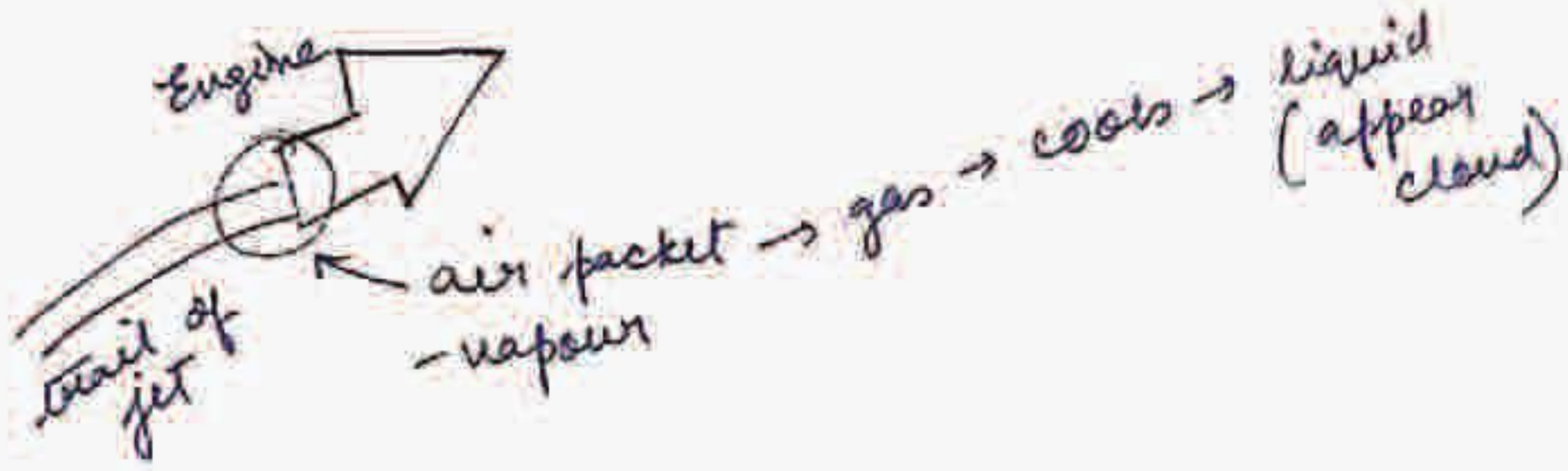
Less " → less w.m. in air packet

→ 

→ 

As air gets warmer, its capacity to hold the water vapour increases and so it becomes more humid.

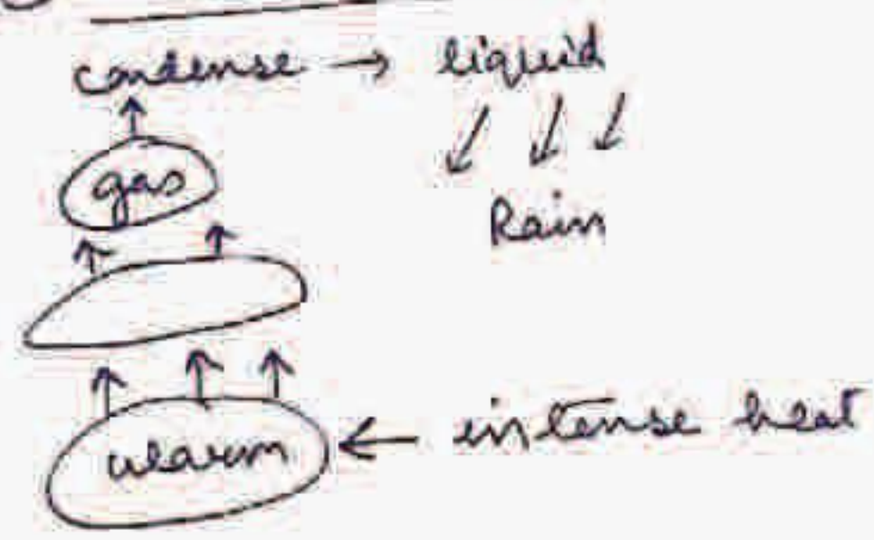
→ 



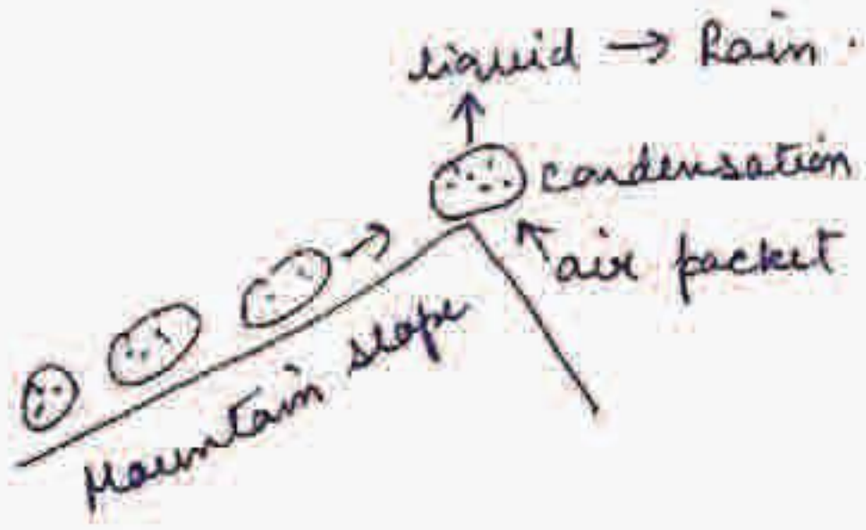
(13) Types of Rainfall.

Mechanism → convectional
→ Orographic
→ cyclonic.

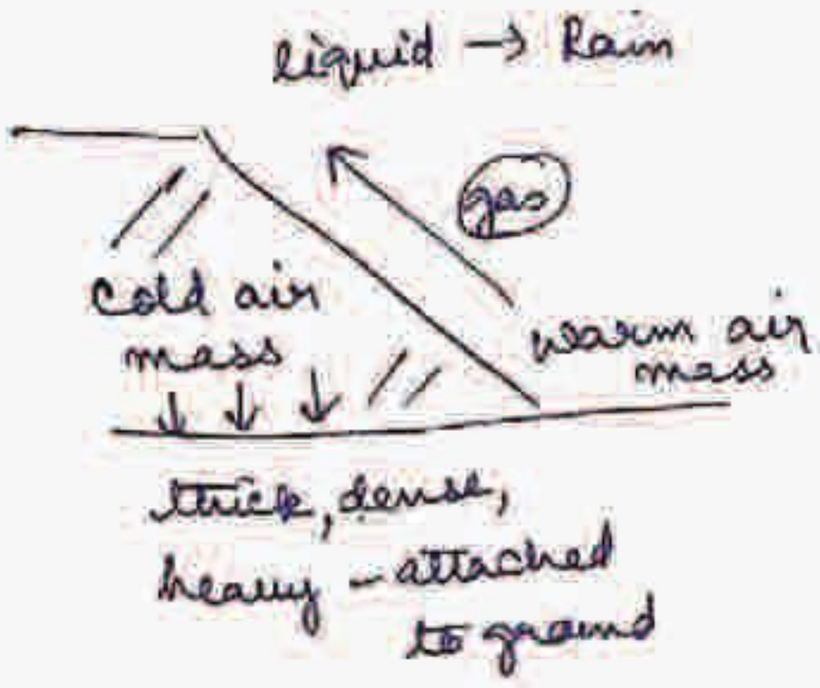
(1) Convenitional rain



(2) Orographic Rainfall



(3) Cyclonic Rainfall



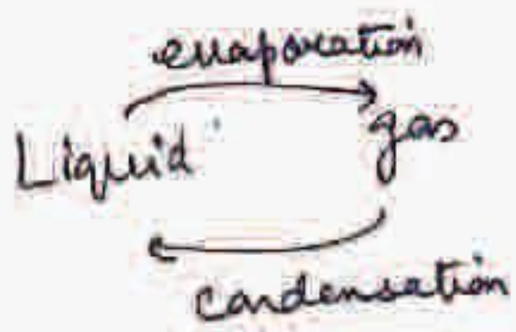
Precipitation -

water droplets, too heavy to retain liquid particles, fall down on earth under gravitational force.

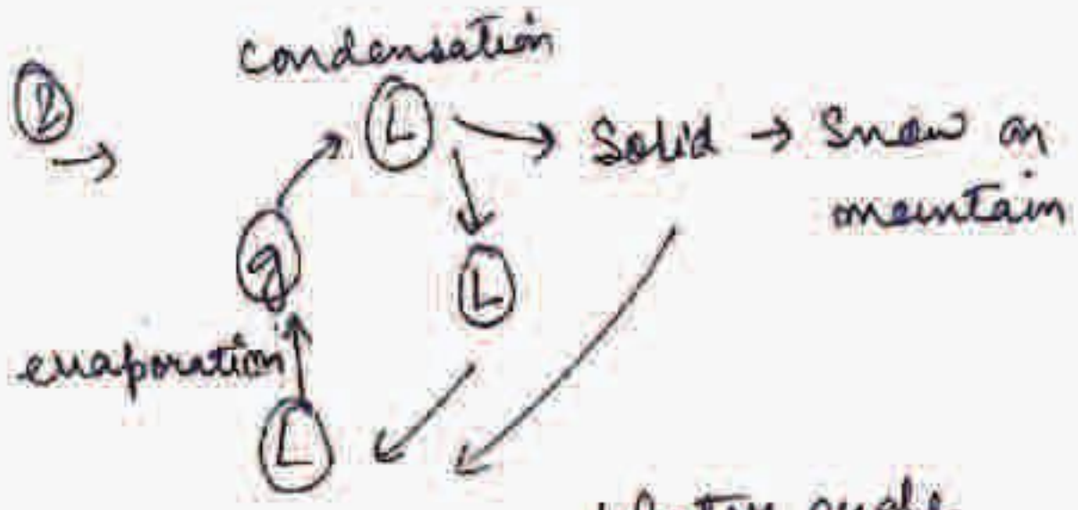
[Rain, snow, sleet, hail]

(5) - Water

(1) →



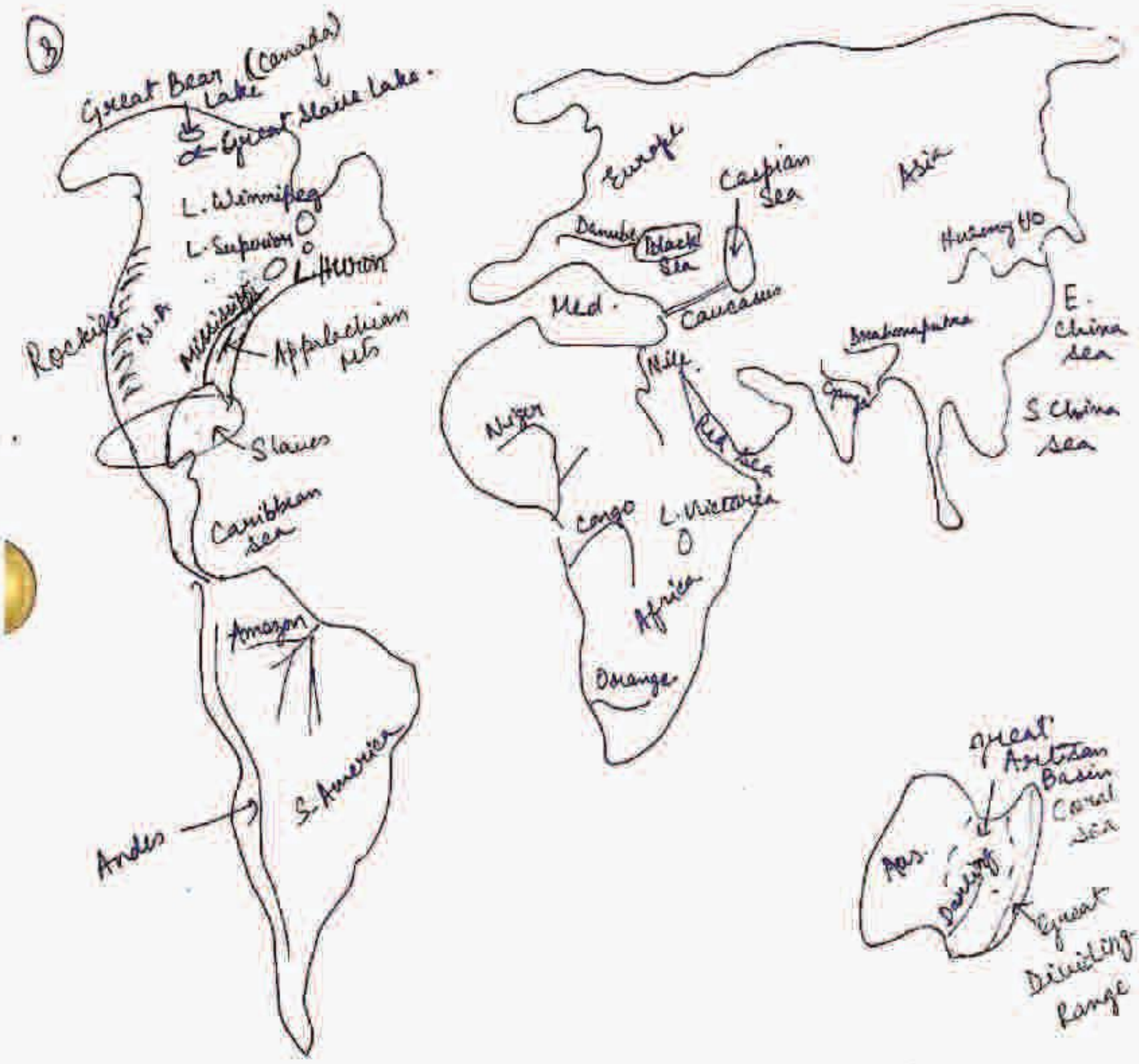
(2) →



earth: terrarium

Water cycle

(3)



R. Mississippi - Bird foot like delta

Canada = USA - St. Lawrence River

Atlantic Ocean - Busiest

Bering St. - Arctic || Pacific

(4) Water

- Fresh
  - Spring
  - glacier
  - River
  - Pond
- Saline
  - Salty (NaCl) dominant

(5) Water intensive cropping at improper places

Water scarcity

- Availability (X)
  - Available + Potable + Accessible → Not sufficient → Population
  - Saline
  - Dry weather
  - Monsoon (X)
- Not usable
  - Salty
  - Potable (X)
- Available, not accessible → only source of water : social factors
  - Physiography
    - eg. Hills.
      - water drains through slope → can't be stored.

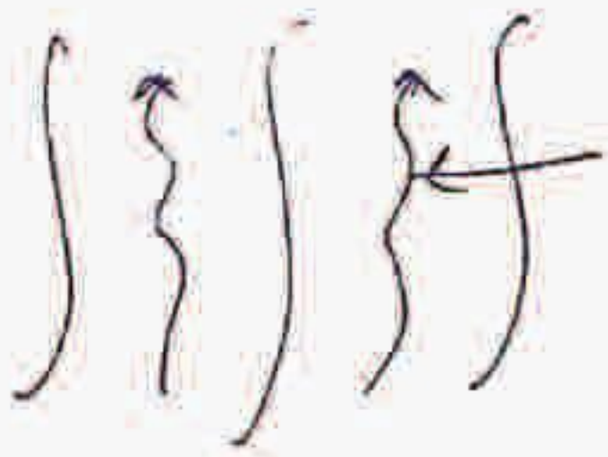
→ Agro-climatic crop - as per climate of that area

→ 'Nature will teach lessons in forms of repercussion'

(6) Ocean movements

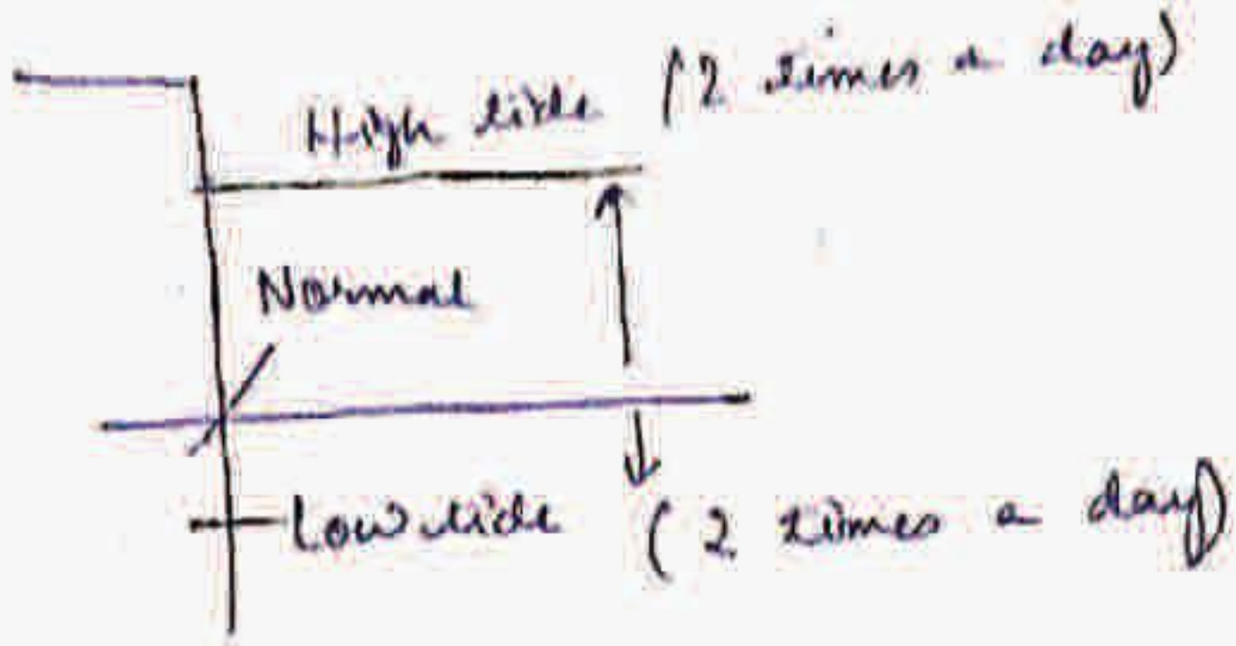
- Currents
- tides
- waves

Current - narrow band of swift flowing water in ocean.



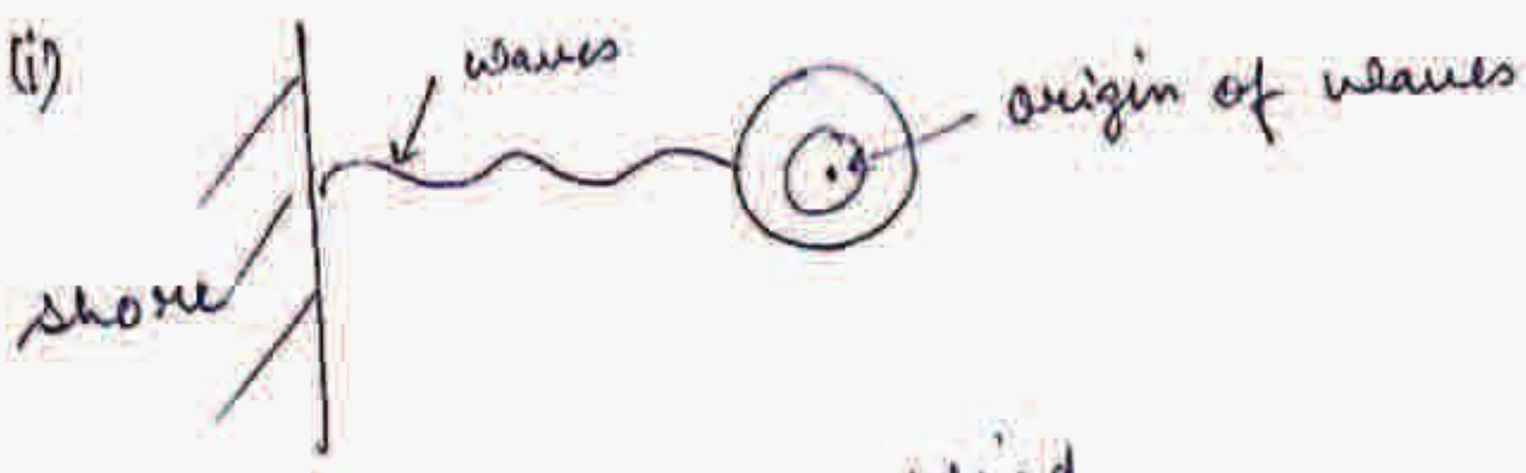
great speed, more noticable. (visible attributes)

→ Tides

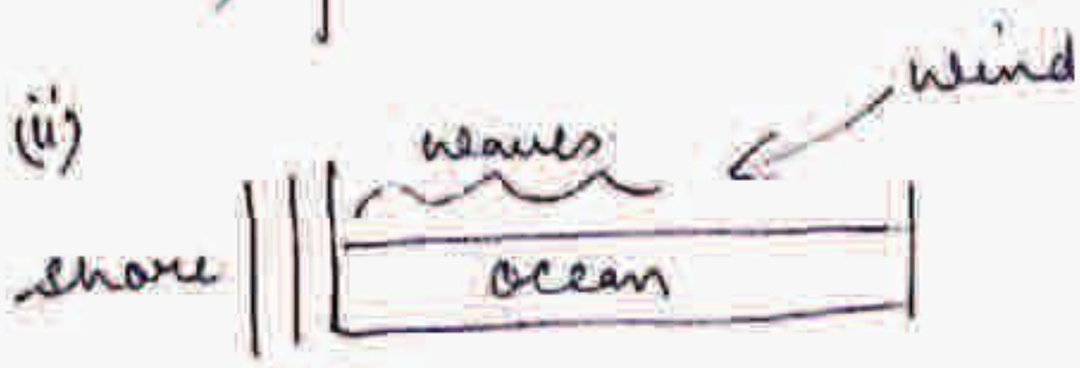


→ Waves

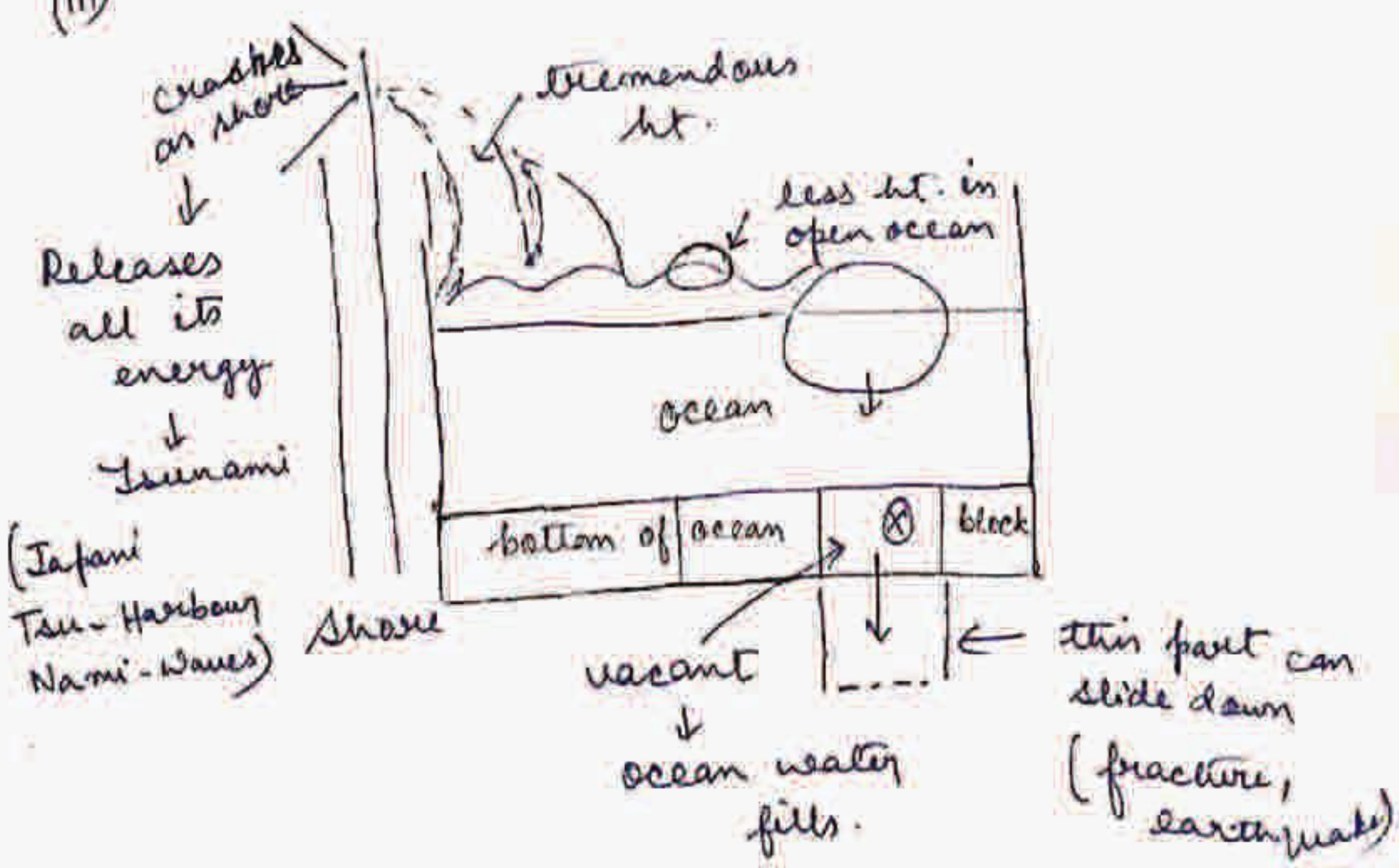
(i)



(ii)

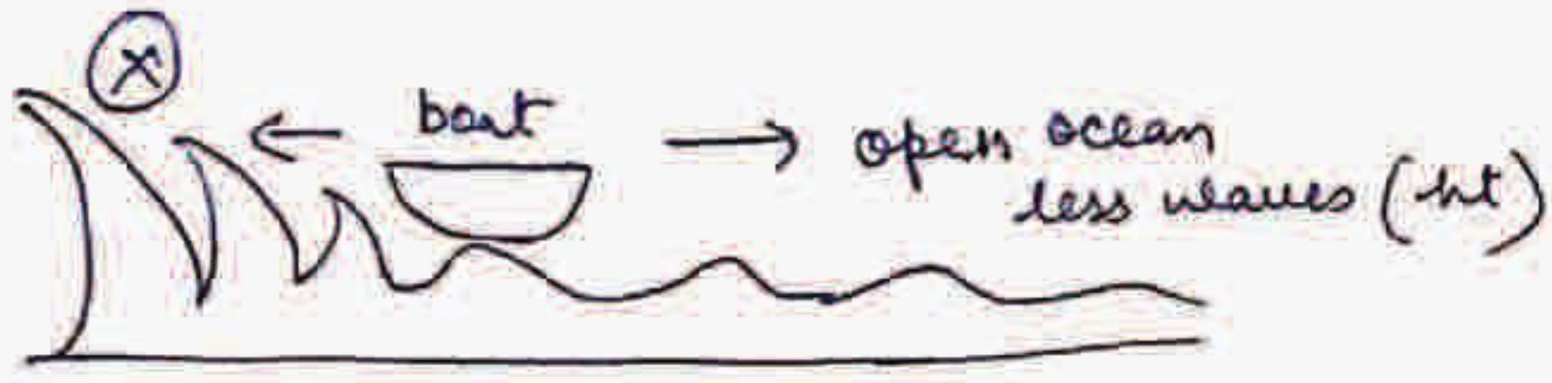


(iii)



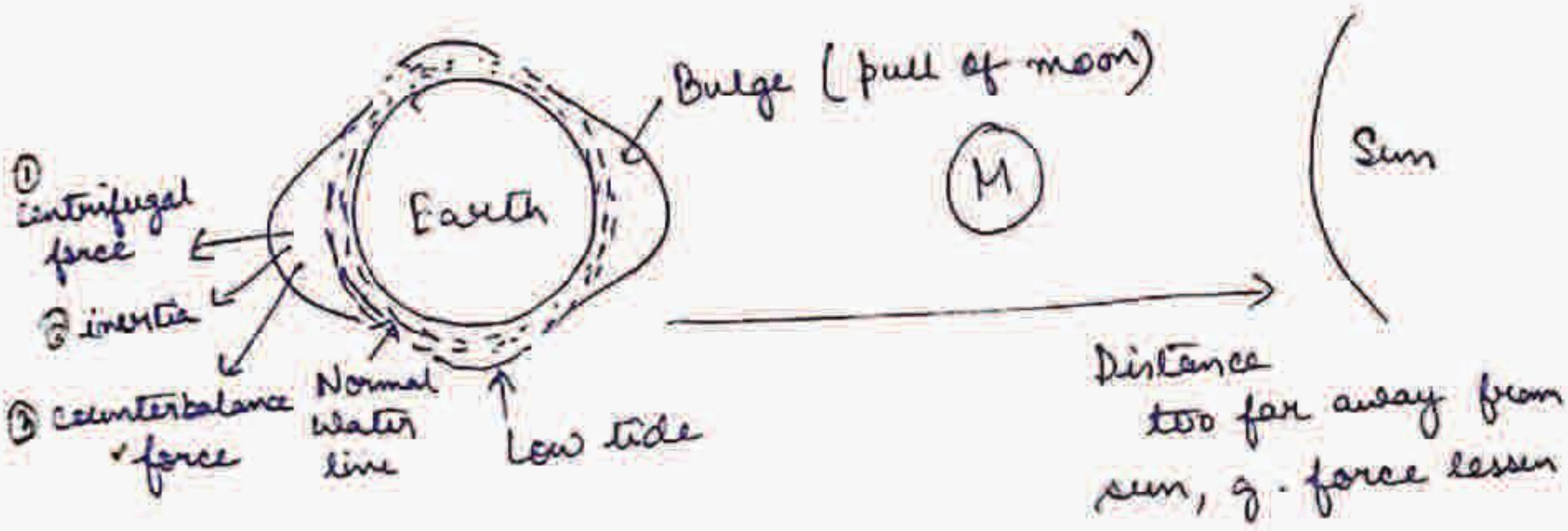
Tsunami

(iv)

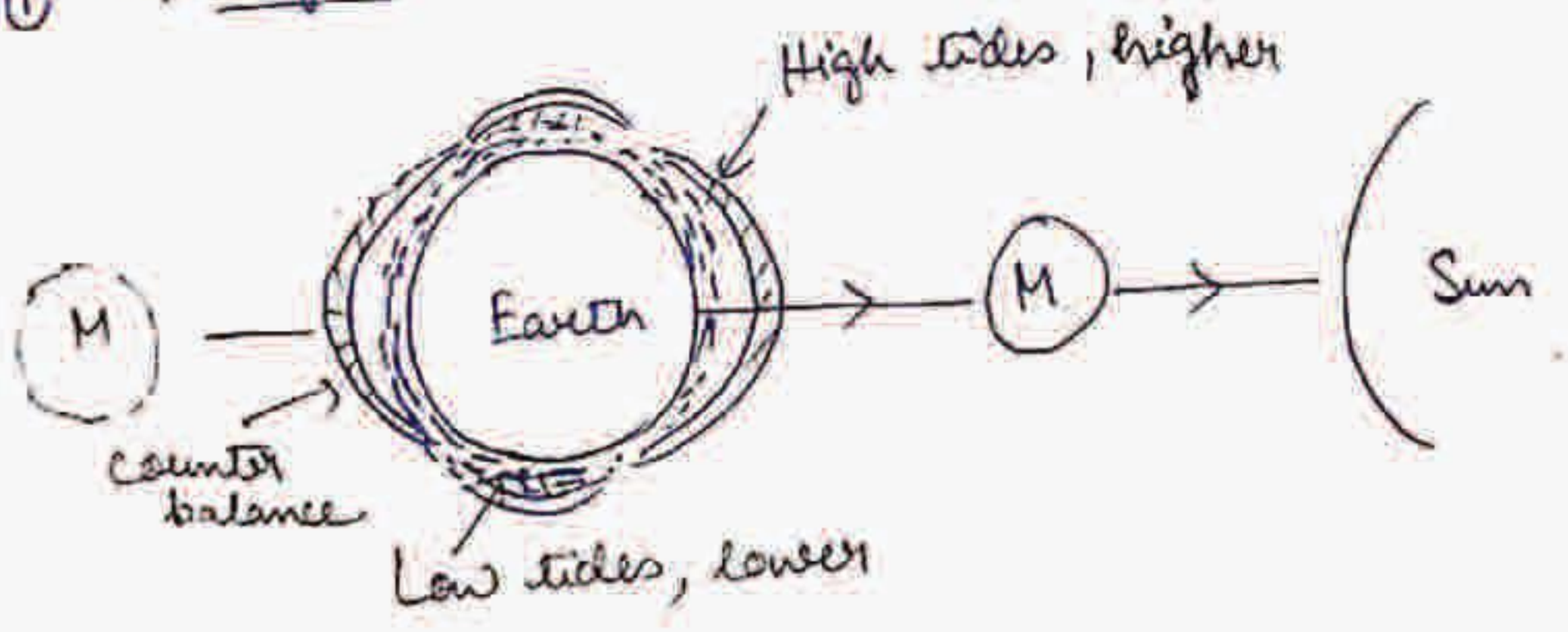


→ **Tides**

① g. pull of moon and sun
② Rotation of earth.

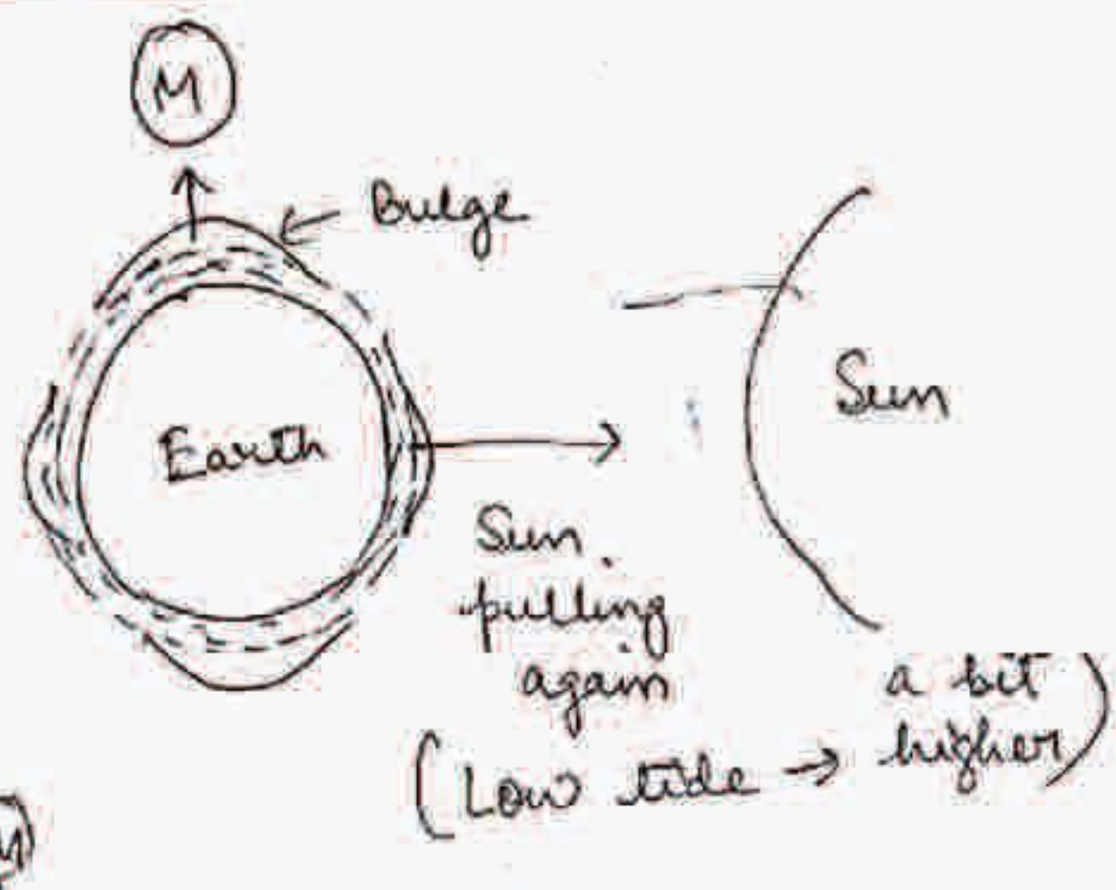


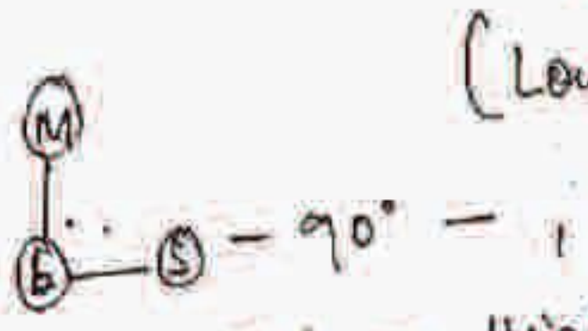
① Spring tide



Earth, Sun, Moon are in a straight line,
Moon + (S) → Pull = Bulge will increase, (HT)
LT → shrink a little.

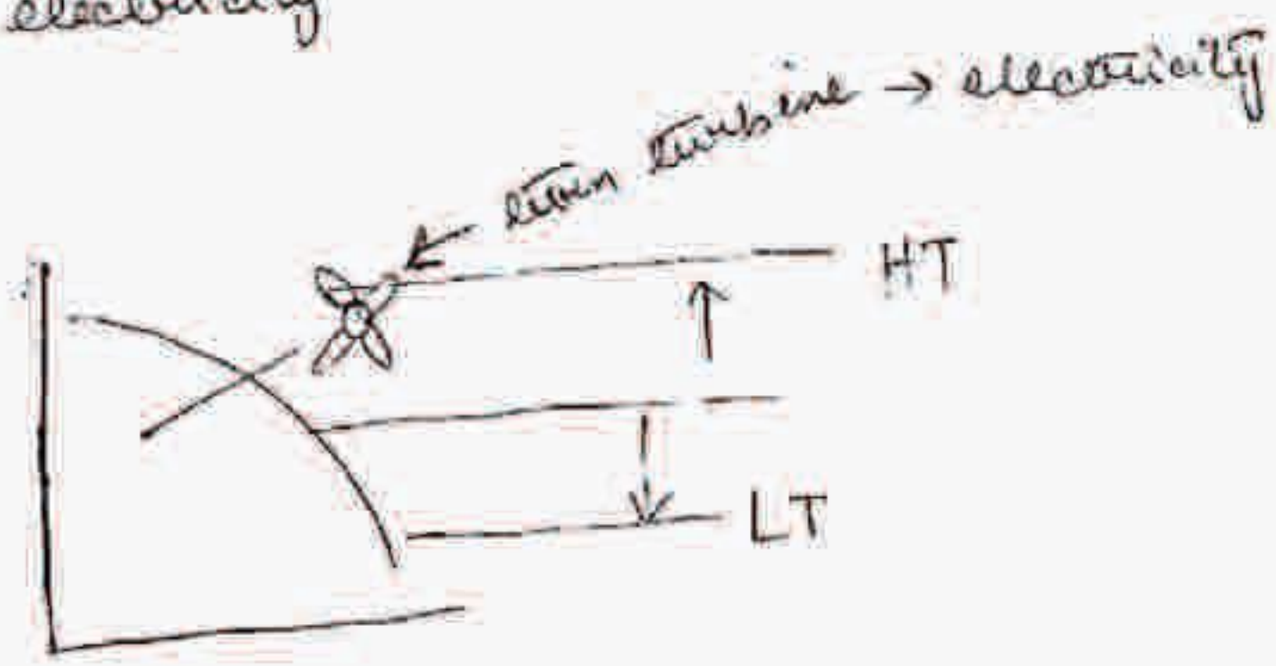
Neap tide



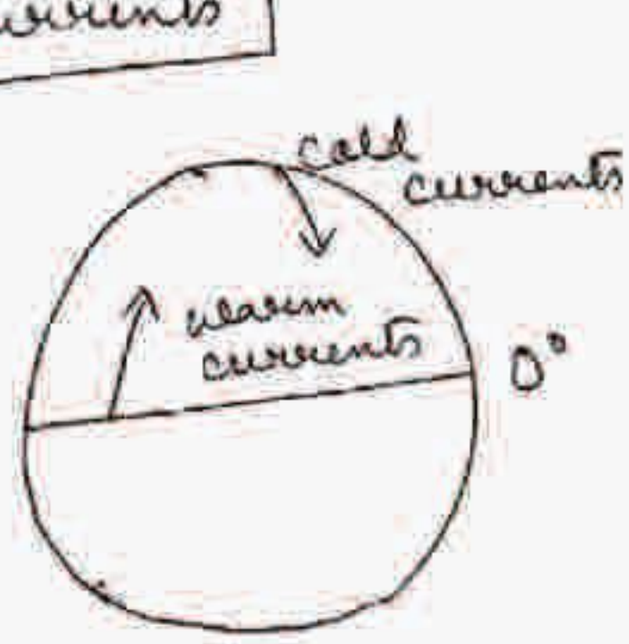


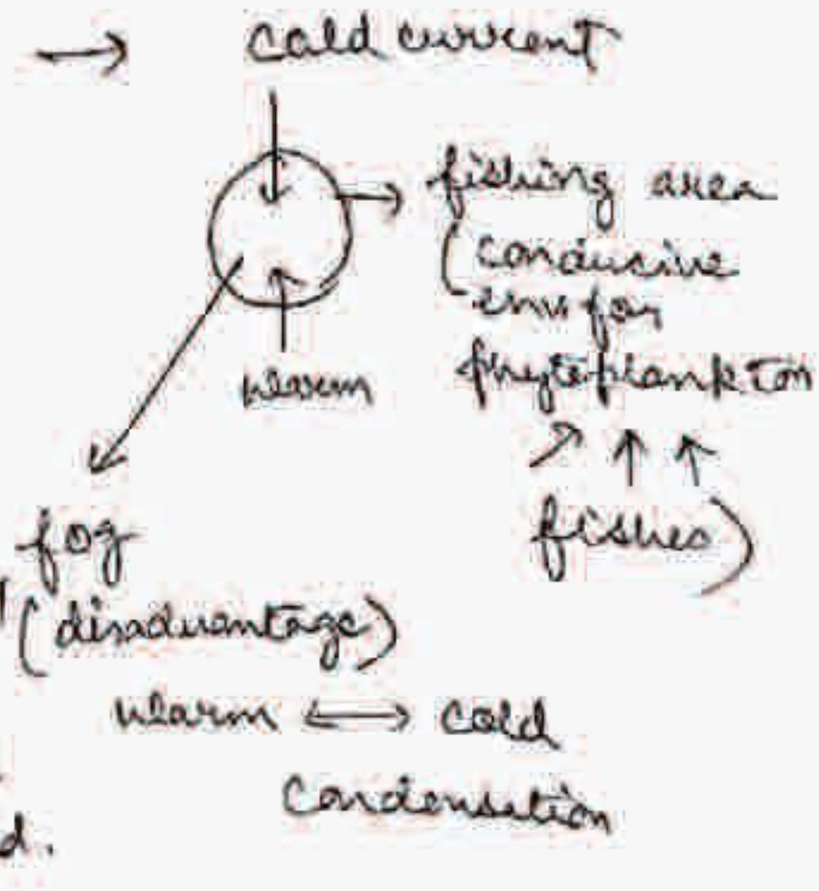
Neap tide – High Tide – Shrink
Low Tide – High.

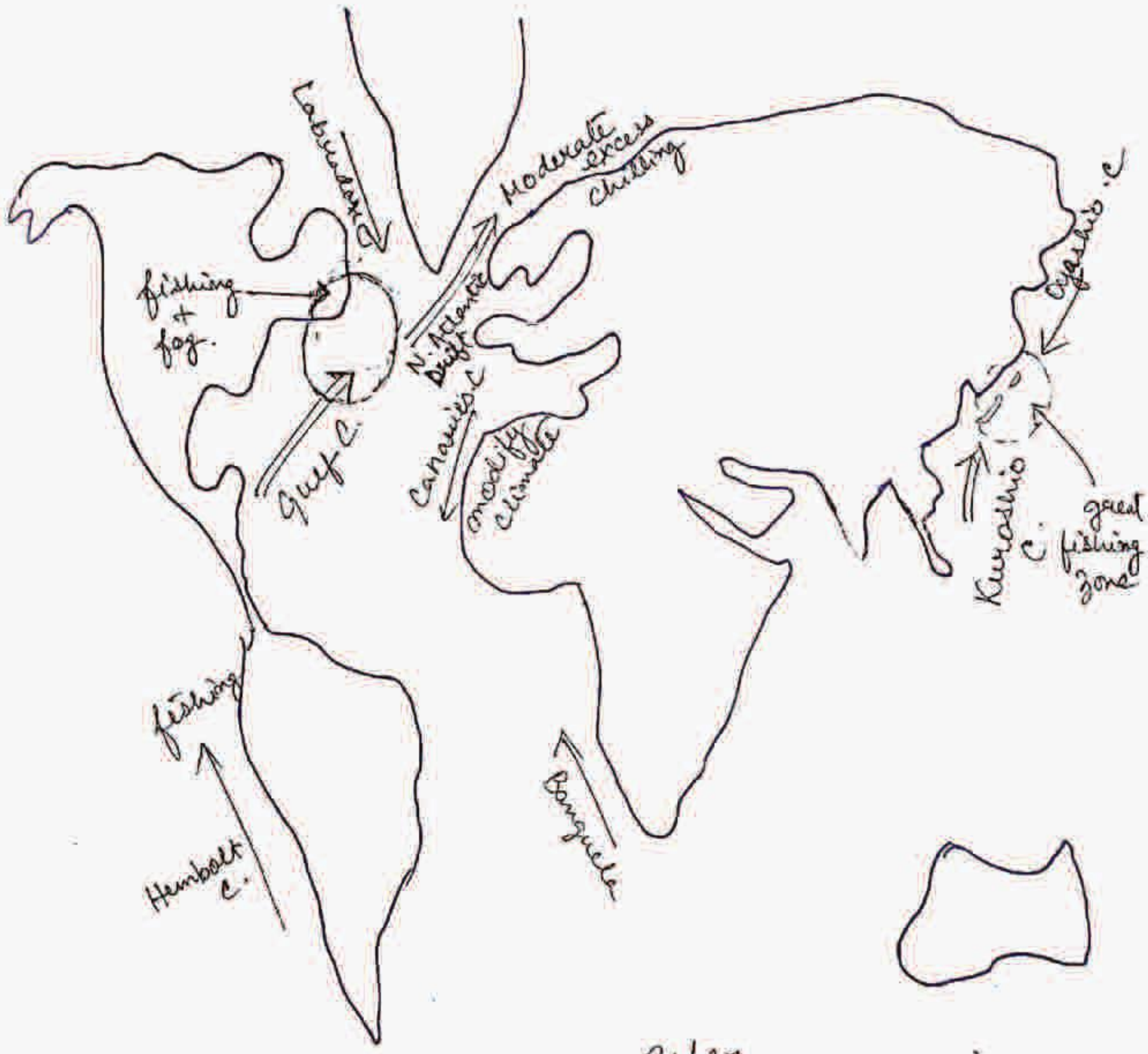
→ High tides → Navigation
→ fishing
→ generate electricity

→ 

→ Currents

→ 

→ 



Refer NCERT

⇒ Warm current

→ Cold current

Natural Vegetation and Wildlife - Ch-6

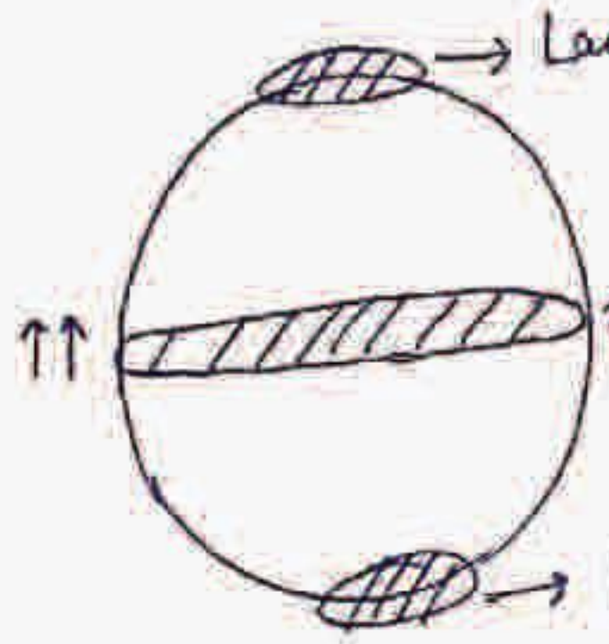
① Vegetation → artificial → eg. Tea (Not agro-climatic, Human intervention)
↓
Natural
(Without human intervention)
↳ Climate + Topography.

→ 'Altitude mimics latitude'
Altitude (↑) → cooler climate → impact on vegetation

→ Determine vegetation in any area → Moisture / Rainfall
→ Heat / Temperature

• other factors - Landforms, soils
[Soil formation is dependant on climate
manifestation of that area - general scenario]

②

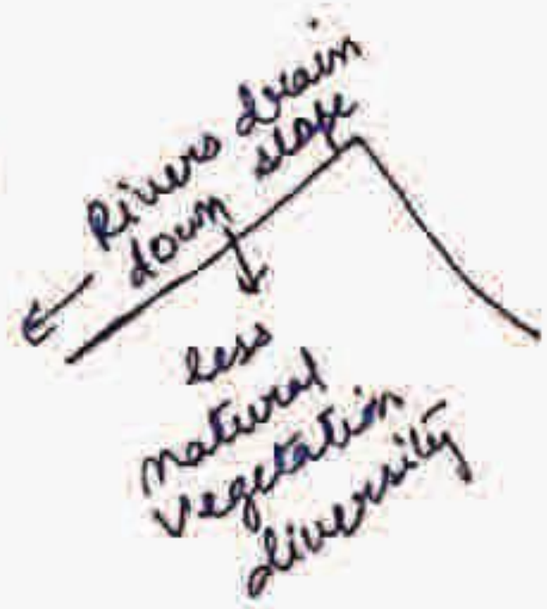


→ Lack of Heat / Temp
Moisture / Rainfall

↑↑ → Surplus Rain
→ Heat
→ greater diversity

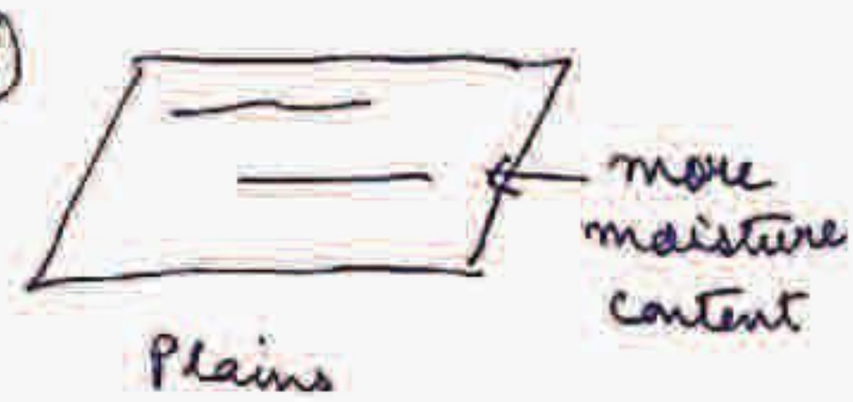
→ Less natural vegetation
less diversity
- lichens, mosses, ephemeral plants

③



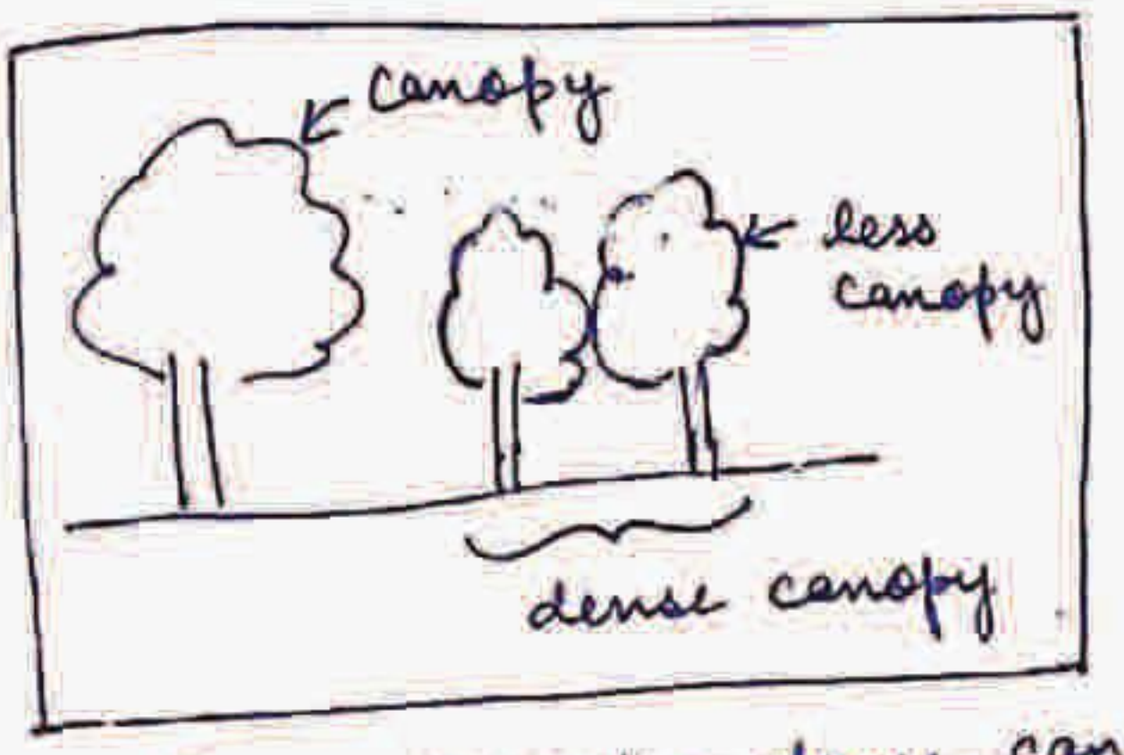
Hilly Areas

④



Plains

(5)

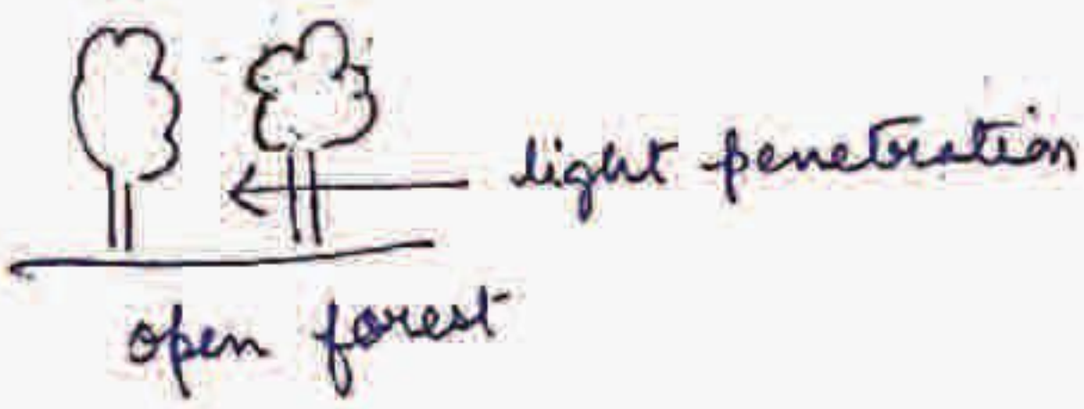


Dense forest - dense canopy.

→ old growth forest
→ maximum density
→ max. biodiversity
→ Part of civilizational growth
→ maintain ecological balance.
→ light difficult to enter.

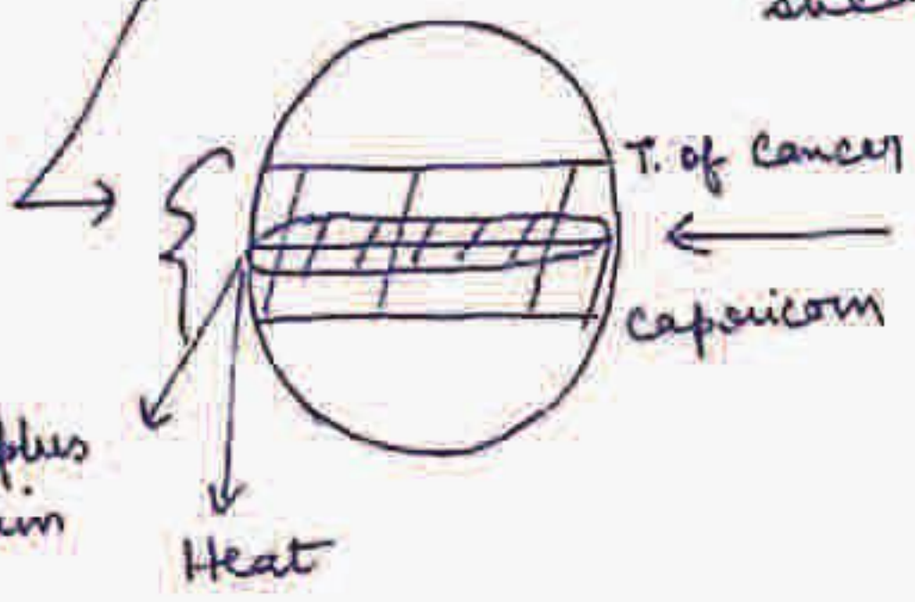
⇒ cutting trees → to compensate : Roadside tree plantation → no match for forest (doesn't support diversity)

(6)



Forests

(I) Tropical Evergreen forest → always have leaves, don't shed leaves together

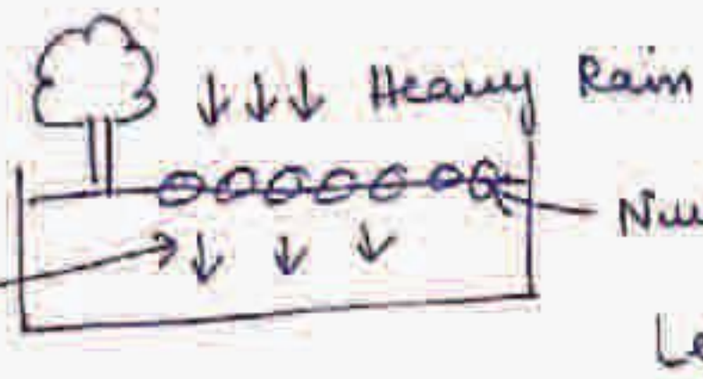


Equitorial forest / eq. rainforest (5°↑↓)
⇓
Hardwood type
- Selvas

→ • No light penetration
• Huge canopy.

eg: rosewood, ebony, mahogany etc.

→ soil - oxysols (depleted) → less nutrient content



Nutrient of Top soil
↓
Leached inside
↓
Topsoil devoid of nutrients

plants can't take these nutrients

→ support fauna

⇒ Monsoon forest in India → Hardwood (not called Selvas)

(II) Tropical deciduous forest:

In b/w tropics

Dry season
↓
shed leaves

Wet season (don't shed leaves)

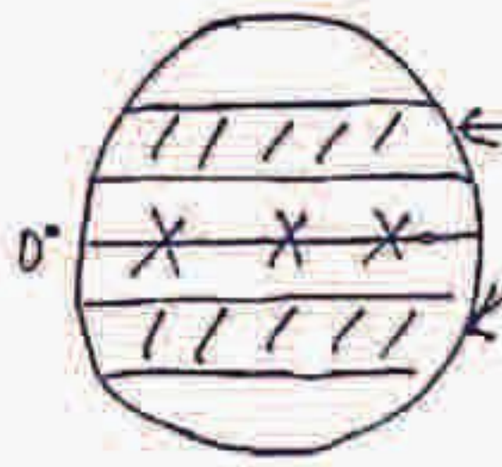
cycle → Resembles our monsoon
↙ 3/4 mons Rain
↘ Dry

eg - sal, teak, furfil, neem etc

→ Hard wood forests here are not called selvas.
- → furniture
- → Transport
- → Construction material

→ N. Australia : Monsoon / Retreating Monsoon.

(III) Temperate evergreen forest : —/(coniferous)



← Temperate climate → cooler condition than tropics.
↓
influence vegetation
↓
Temperate evergreen forest

eg: Both Hard / Soft woods — oak, pine eucalyptus.

Places: SE USA, S. China, S.E Brazil.

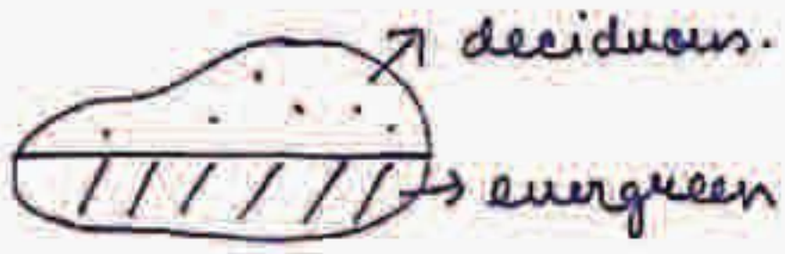
continuous Rain (Fronts Responsible for Rain) → Have leaves throughout the year

(IV) Temperate Deciduous Forest

Temperate → cooler climate

Deciduous → Plants don't have leaves throughout season

higher latitude → dry / wet



Places: China, NZ, Chile, coastal region of W. Europe

→ Less dense canopy, light penetration.

eg: Trees - oak, ash, beech.
Animals - Deer, Foxes, wolves
Birds - Pheasants, morals.

(v) Mediterranean Vegetation

India : Cold / dry - winter
Hot / wet - summer

↓

Mediterranean → cold / wet - winter
Hot / dry - summer. } Influences natural vegetation

eg: figs, olives, grapes, citrus fruits.

Places: areas around Mediterranean sea in Europe, Africa and Asia.
also, in California, USA; SW Africa, SW. S. America, SW Australia

→ Famous for wines eg. Champagne
→ also called Chaparral vegetation.

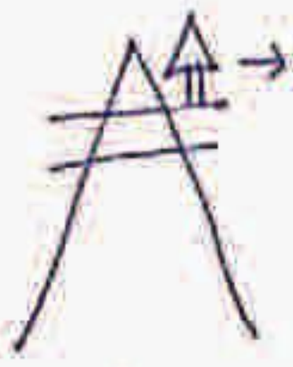
(vi) Coniferous forest

eg. Pine, deodar, birch, chir

→ In general, C. trees are evergreen
can also be called temperate evergreen

→ 50° – 70° N – Taiga – Pristine / Untouched (no lumbering activities)

→ 'Need - greed unbalanced - exploitation of natural resources'.

→  → Coniferous Variety – India (Himalayan Region) (Upper - Middle)

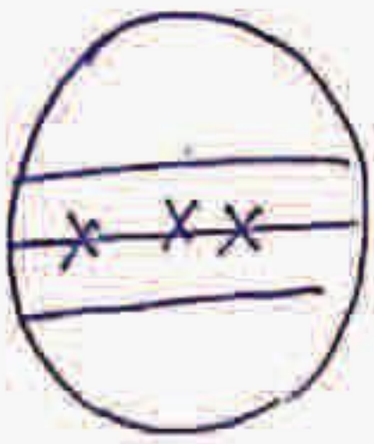
'Altitude mimics latitude'

→ softwood → Pulp → Paper
↓ ↘ Newspaper
↓ Packing Box
Match Box

Taiga - only in NH

(VII) Grasslands

Tropical



0° Equator
(dry) → grassland

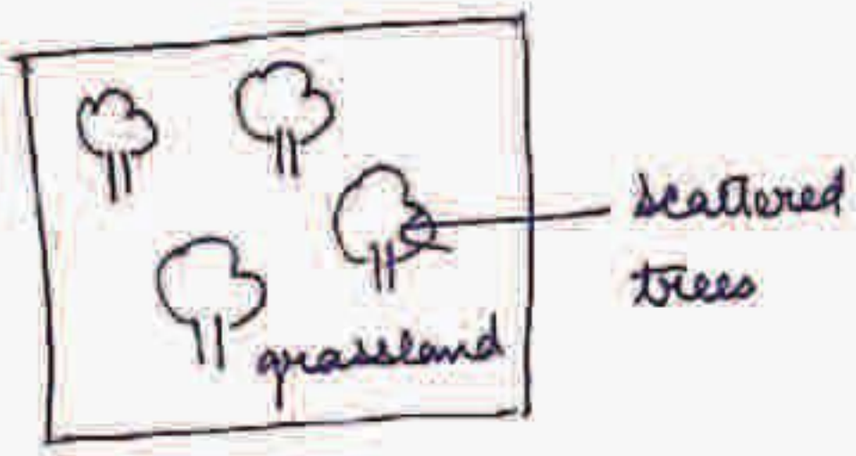
(Rich) Forest → Enough
(Middle) Grassland → Limited
(Poor) Deserts → deficient
— Temperature / Rainfall

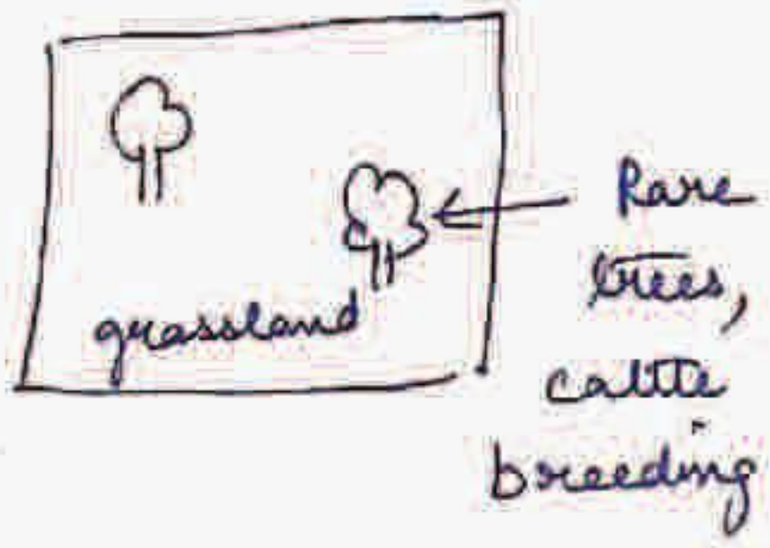
→ tall grasses (3/4 m)
Animals - elephants, zebras, giraffes, deer, leopards

Temperate

→ Less of rainfall at interior part of the continents
→ short grasses, nutritious → cattles breed
→ animals: Wild beffaloes, bisons, antilopes

Tropical grassland	Temperate grassland
① They are impure (There is scattering of trees over the grasses)	① They are pure/proper grasslands. (large expanse of grasses almost without trees)





② grasses - taller, coarser, lacking nutrients.

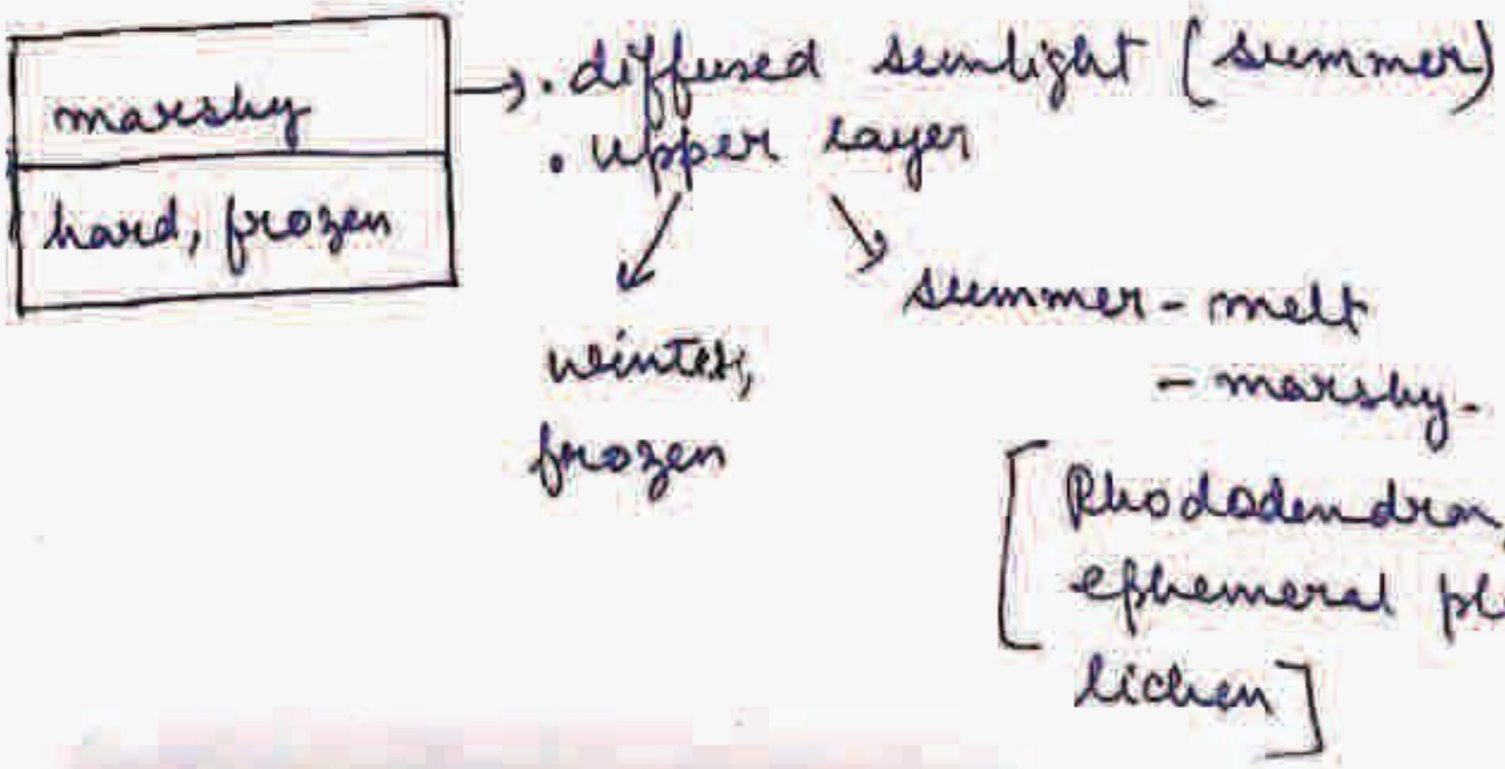
② Shorter, softer, Very nutritious.

③ eg: Savana: Africa
Llanos: Venezuela
Campos: Brazil

③ eg: Prairie: N. America
Steppes: Russia
Pampas: Argentina
Downs: Australia
Velds: S. Africa
Pustaz: Hungary.

(VII) Thorny Bushes: Desert Regions.

(IX) Tundra:



Tundra

Barren Land

winter - frozen

Finland calls Tundra Barren

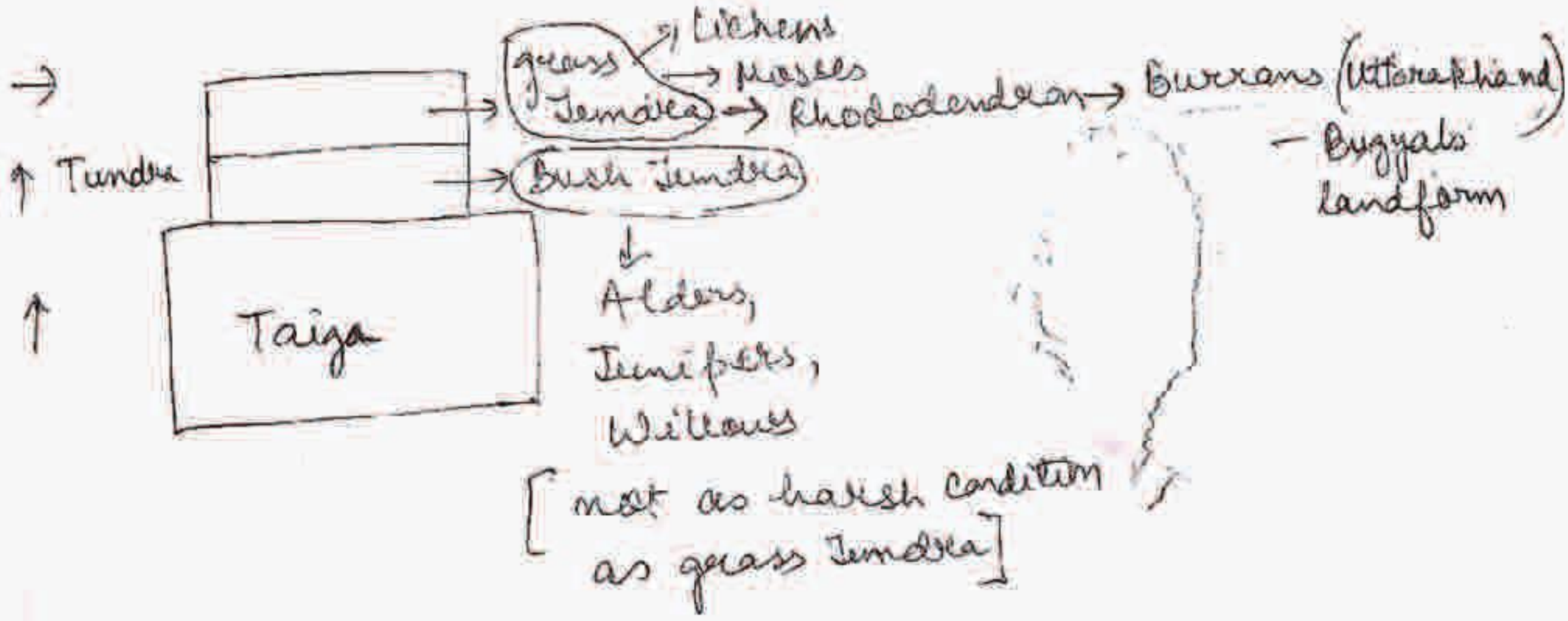
Marshy Land

summer - ephemeral plants

Russia - Marshy -

eg → dome.

→ when ice covers the region, plants get covered by thick layers of ice.



Human Environment - Settlement, Transport and communication - Ch - 7

① Past - cooking (X)
Agriculture (X) → Hunter
→ gatherer
→ wanderer → Shelter
→ Food
→ Hunting.

↓

Concept stabilized

↓

Temporary → Permanent settlement
(Ancient civilization)

② Transhumance : seasonal movement of people.
– people who rear animals move in search of new pastures according to change in seasons.

eg.  — animalist people → place 2 with grass.

Place 1
grass finished

dog breed
– shepherd breed
(German shepherd)

③

settlement

Rural
- → agriculture
- → fishing
- → forestry
- → craft
- → trading etc

Urban
- → manufacturing
- → trading
- → services

Compact / scattered settlement →
- Hilly areas
- Inhospitable climate
- Less population

- Plain area
- Hospitable climate

Closely Packed Home

→ conflicting / competiting demand → pressure on land.

→ Places with heavy rainfall - slanting roofs

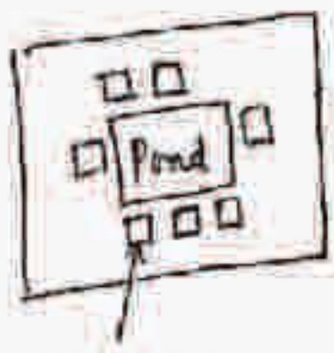
→ Rainy areas: water accumulate:

Raised platform → (stilts), rainwater can pass.

④

Compact settlement

- Rectangular
- Ribbon
- Circular
- Star form

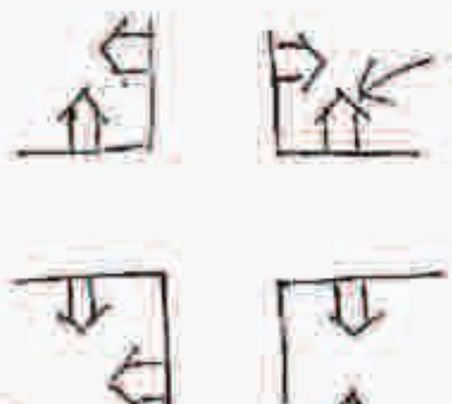


Houses

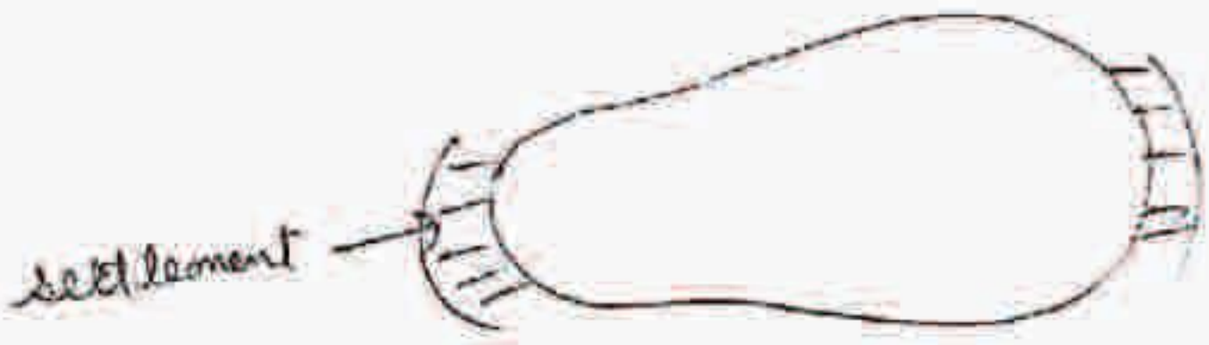
Houses

Ribbon pattern

eg: Rajasthan



Houses / Manufacturing industries agglomeration



Transport

(1) Road → Metalled / → Unmetalled

(1) Roadways → 75% goods transport (intra state movements)
→ 90% perishables (milk, curd, fruits etc)
↓ Important for economy

Issues:

- → no constant speed, no dedicated corridors
- → Accidental prone
- → no 24 hrs movement
- → diesel dependence high
  - ↳ logistics cost (↑) 1.5 ₹/km
- → env. issue / pollution

China: logistics cost (↓) → use rail transport MRP (↓)

* Govt. must try to rationalize logistic cost.

(2) Railways

logistics cost ₹1/km

Issues

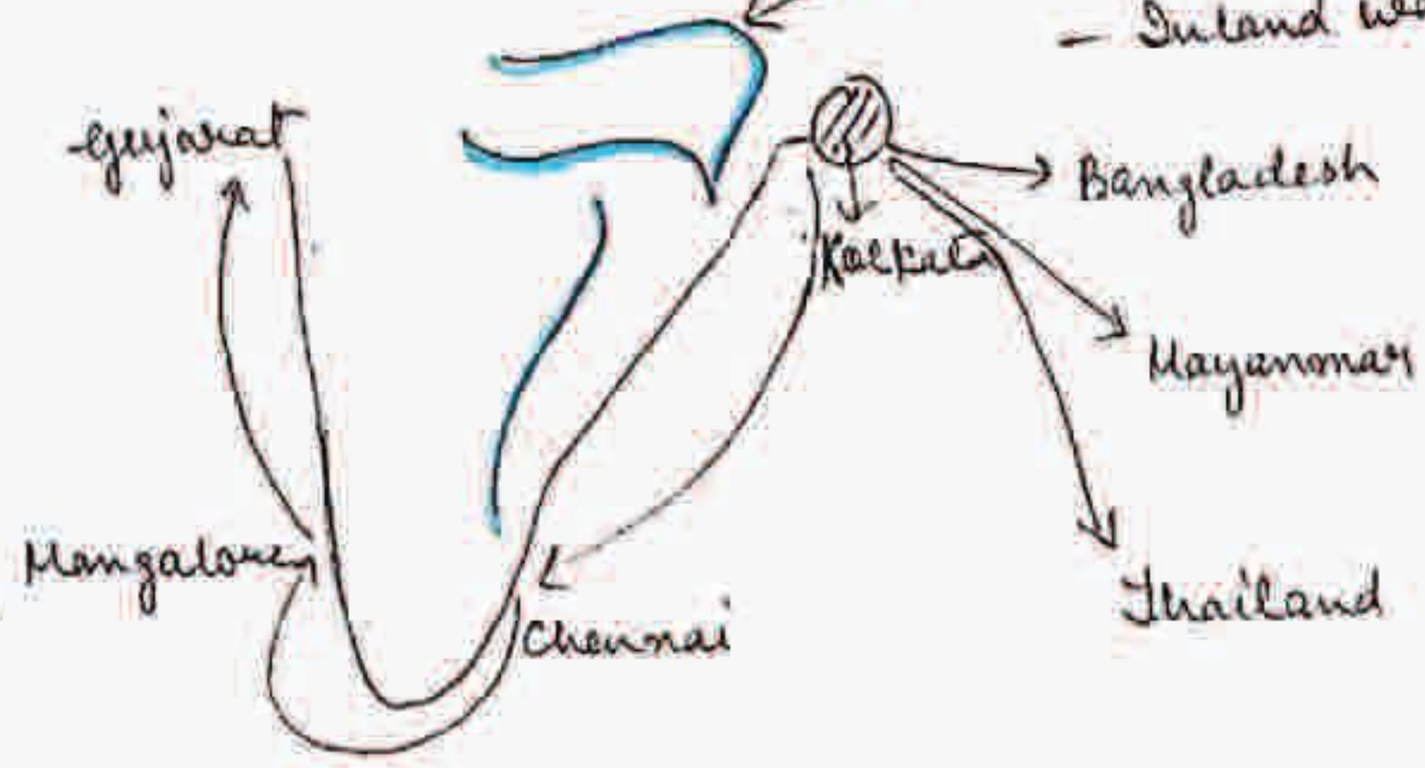
- → same track for passenger and freight vehicles → delay / decrease in speed.
- → No operation dedicated to freight train / corridors
- → Charging high tariff for freight goods to compensate for low passenger tariff (loss for economy in long term)

Indian Railway network – vast, developed, largest

(II)

Waterways → Inland.
→ Sea

Rivers - Part of Indian territory
- Inland waterways transport



Sea : Ports (gateways of development)

Inflow / outflow of trade → economy grows

surroundings of port → development → godowns, shops, washing/drying yards will come up.

Issues

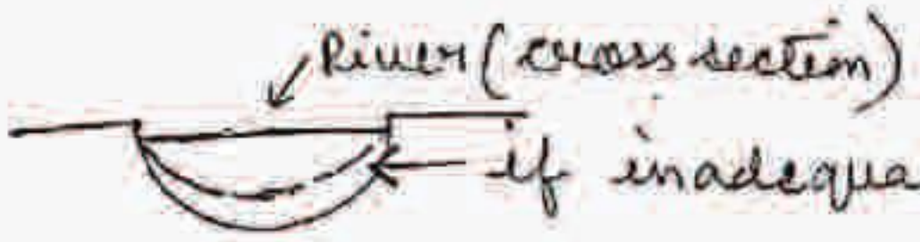
- lack of good ports to dock heavy vessels
- Turnaround time is very high [Takes time to unload goods/ clear customs etc] → not good maintenance.
- Ports less lucrative (ships take time to come and go)
- not cost effective, costly affair (no goods in return journey)

Inland transport

↓

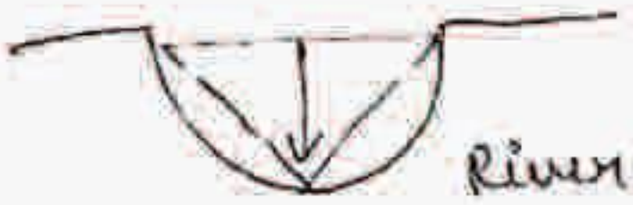
Issues:

① Inadequate depth:



← if inadequate depth → Boats will get stuck

↓



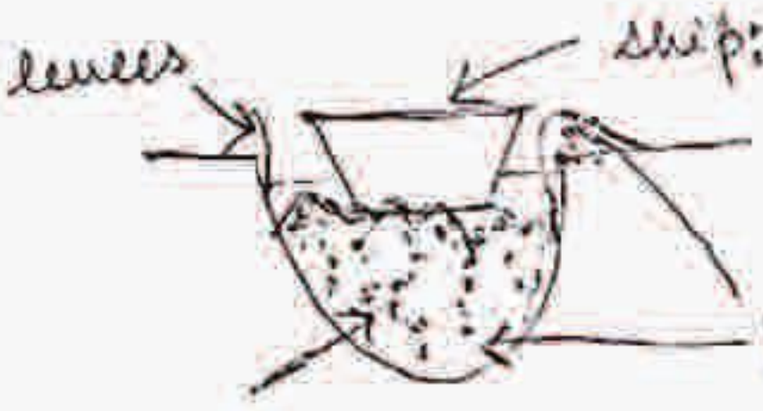
River channel depth

→ make river deep
Remove Sand / Silt

② Low transport speed.

③ Night navigation Issue [No proper lighthouse]

④ High siltation issue.



ship: sufficient depth to sail
↓
(but)
↓
when silt deposition starts

more silt deposition by Rivers

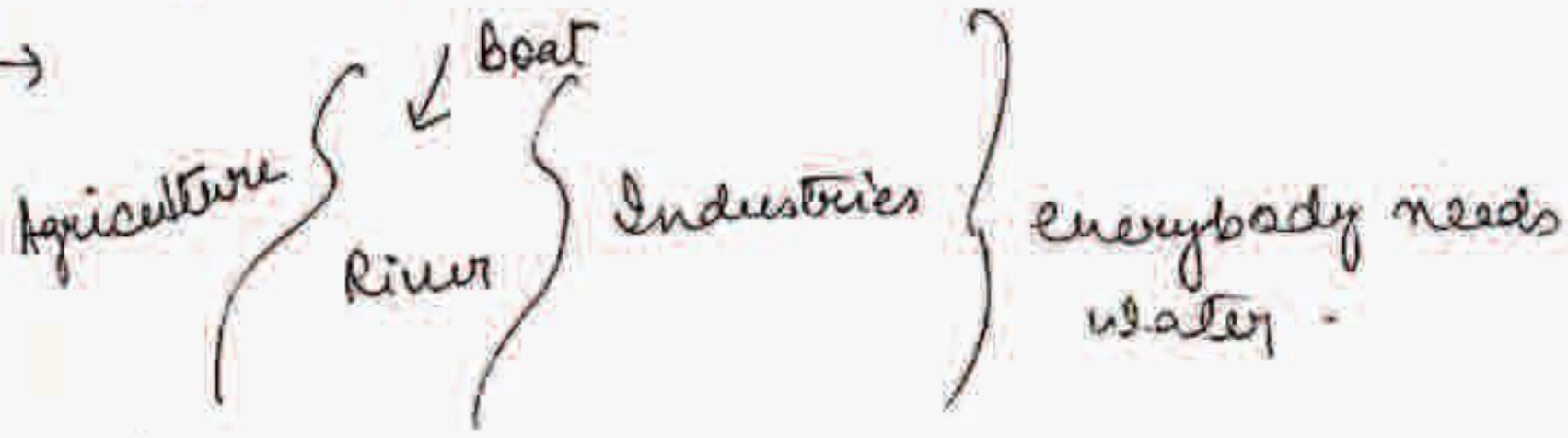
↳ ship blocked
↳ difficult to sail.

⑤ Capital intensive infrastructure

⑥ Seasonal availability of water

⑦ Conflicting / competing demand for water

→



(8) Environmental issue

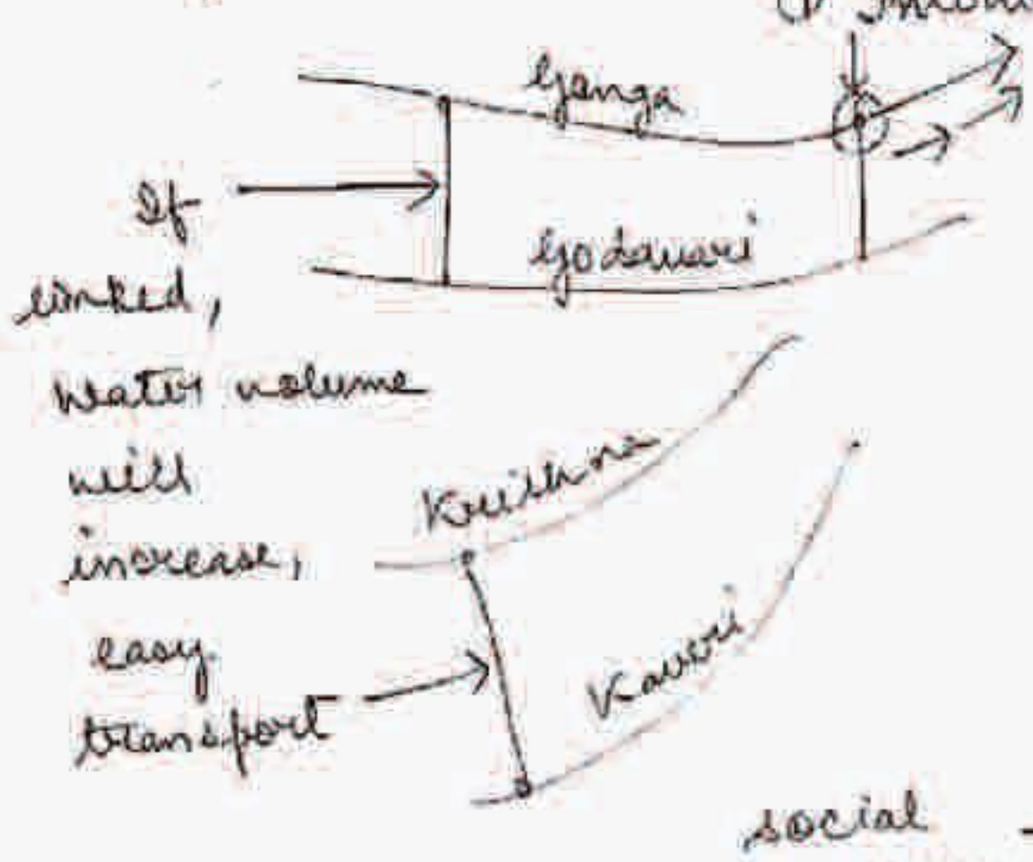
← siltation → can be removed
↓
dredging
↓
Biodiversity loss during scooping.

(9) Domestic MRO (X)
we outsource it.

(10) Lack of expertise in ship building industry.

⇒ Hurdles / Challenges associated with interlinking of Rivers:

(1) If Interlinked; Less water will flow – downward ecology problem.



(2) Tribals / PVTs
fear of creating development refugees
↓
100% rehabilitation not possible
social challenges →

(3) People's protest to build canals.

(III) Airways ∝ Tourism ∝ Economy.

Issues:
- → High tariff
- → Low coverage in tier 2/3 cities.
  - ↳ UDAN scheme
    ↓
    town (Boost tourism)
- → Domestic MRO (X)
- → less importance to air cargo

Defence / Domestic sector

→ 5/20 rule:
↓
5 yrs of experience (owner) → of domestic flights
↓
flight nos should reach 20. → only then one can apply for international flight

* Illogical Rule

⇒ Communication:

Important ports:

Hambantota – Sri Lanka
Chabahar – Iran
Gwadar – Pakistan
Dhaka, Kolkata, Tokyo, Osaka, Hong Kong, Istanbul, London, Stockholm, Boston etc.

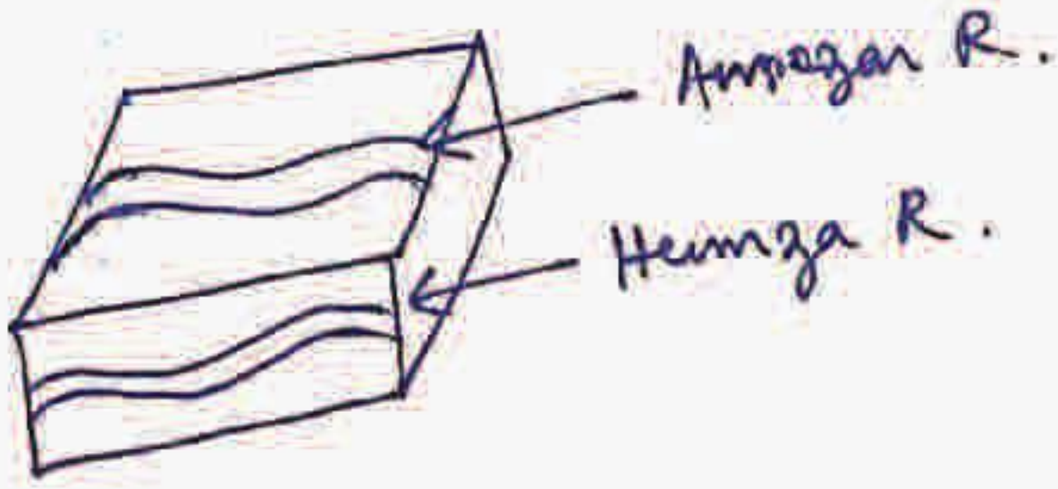
Human, Env Interactions, Ch: 8 - Tropical/Sub-Tropical Region

(I) Amazon Basin

(1) Amazon : W → E

Amazon River Basin of Amazon. R.

Hemza R. — It is believed that this river flows below the ground in Amazon Basin

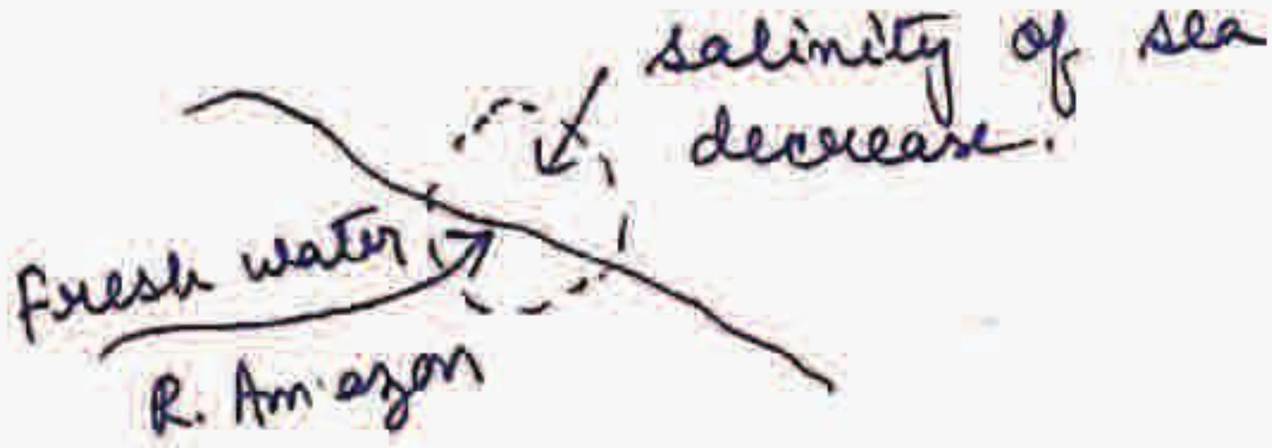


→ Amazon - Tropical

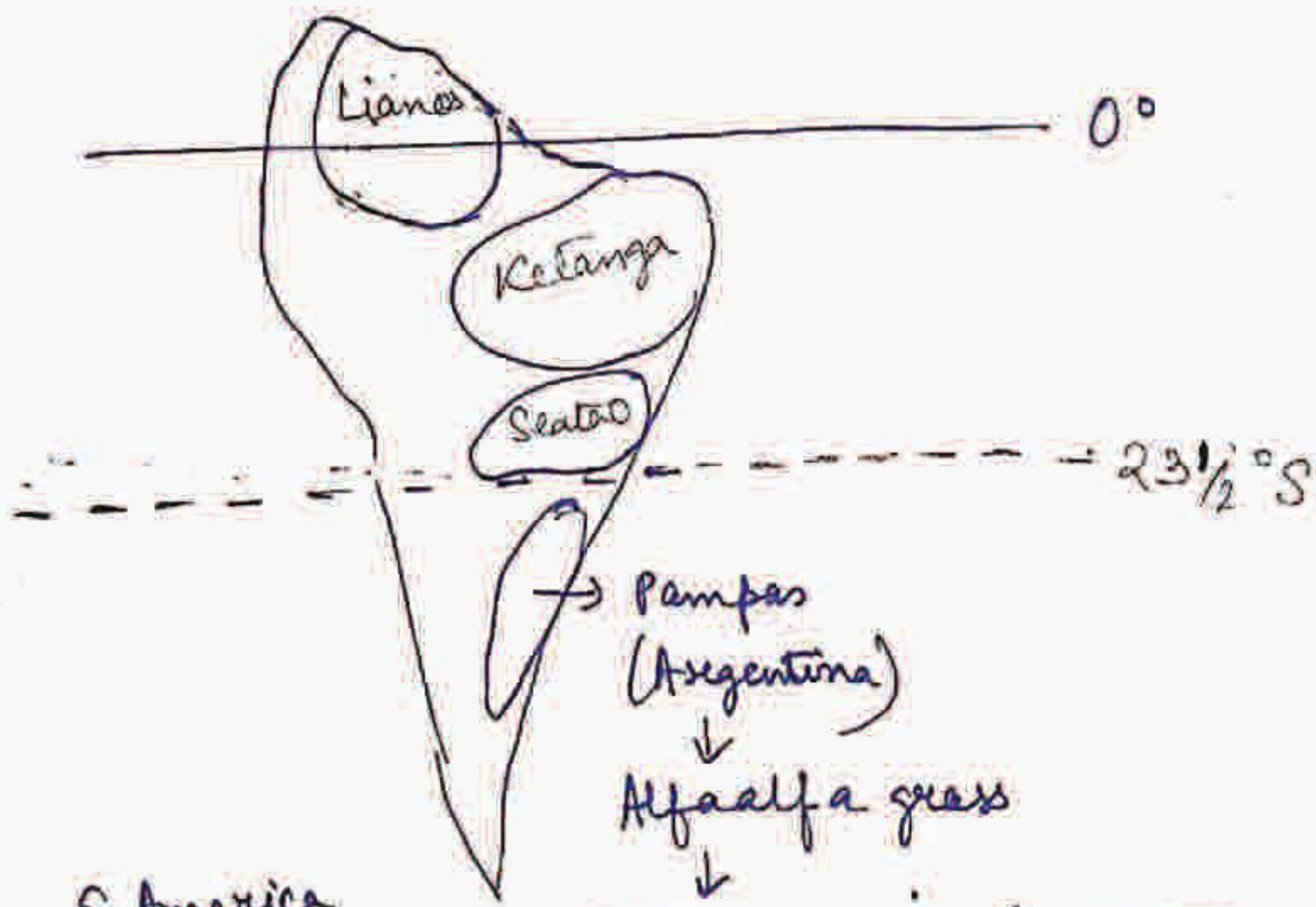
→ Water

↙ fresh → Amazon meets sea → (decrease) salinity of sea decrease.

↘ saline



→



→ Pampas (Argentina)
↓
Alfaalfa grass
↓
Cattle rearing (nutritious grass)
↓
Argentina: good exporter of beef

S. America

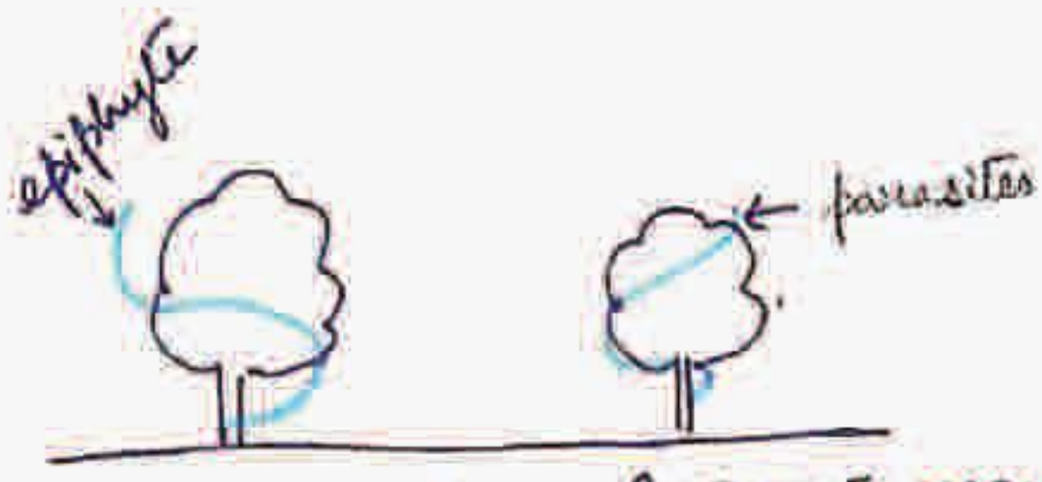
→ Climate : Hot, humid,
Rains almost everyday

→ Vegetation → Temperature
→ Rainfall →

← shade tolerant species.

→ dense canopy
→ dark, moist ground
eg: epiphyte : bromeliads

→



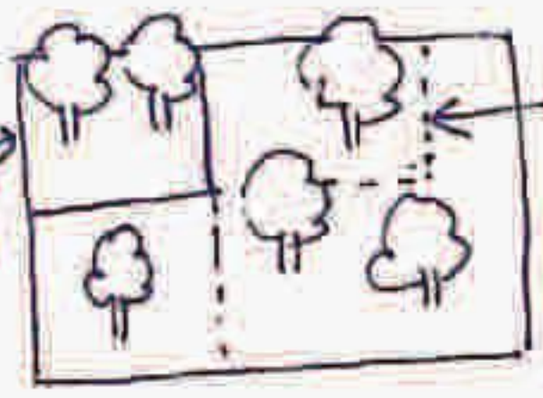
① Takes help of tree to get sunlight
② Nutrients ⊗

① Plants crawl over these trees
→ takes nutrients.

→ species: Rich in fauna:
Birds: toucans, Humming Bird etc
Animals: monkeys, sloths, tapirs etc.
— Piranha fish.

→ People: Men - Hunting, fishing
women - agriculture
Crops grown - tapioca, pineapple, sweet potato.

→ take a particular part of soil
↓
burn
↓
ash
↓
add organic component to soil
↓
nutrients → fertile land → cultivate



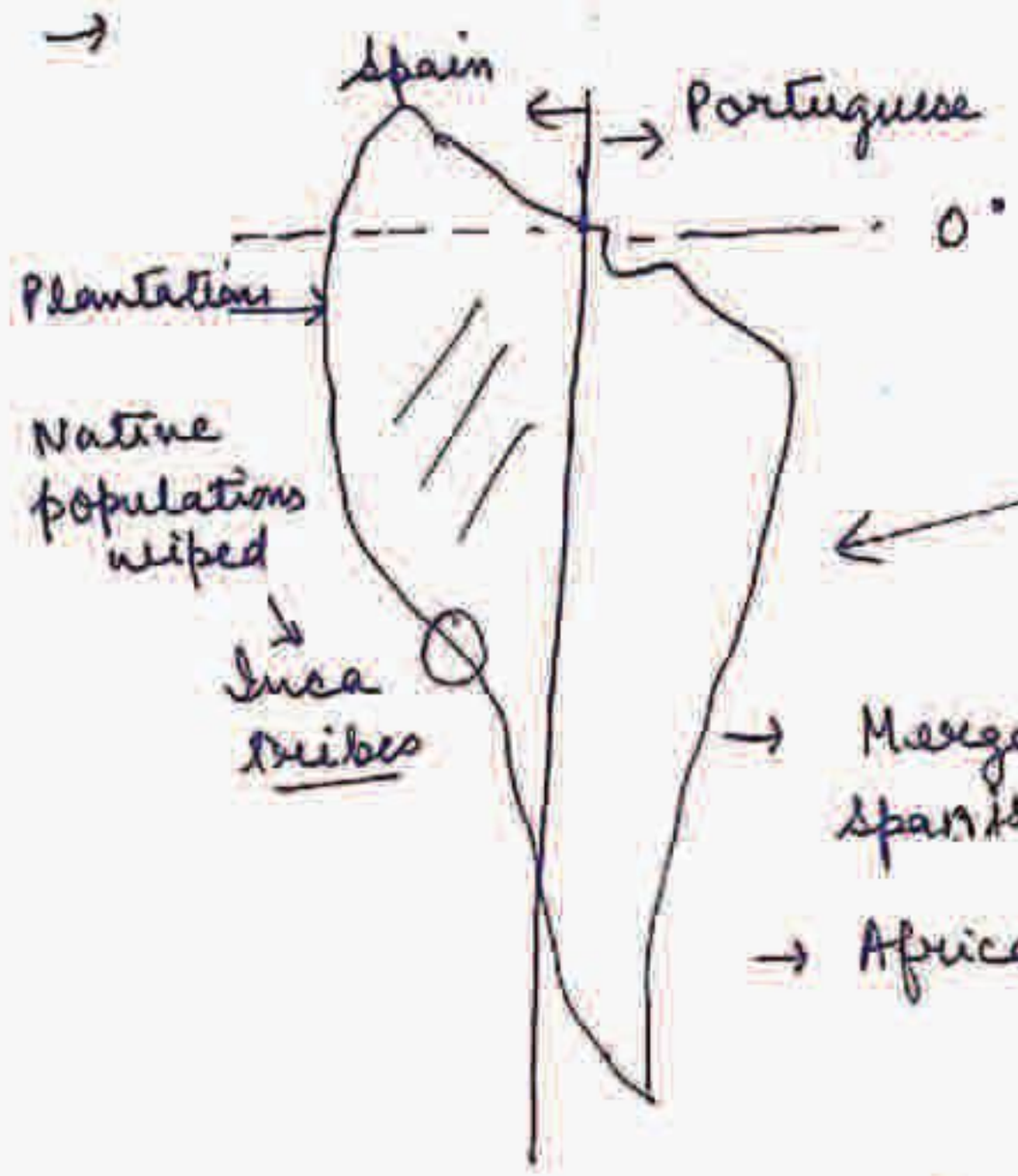
← similar patch of land cut.

Slash and Burn Agriculture

→ House :

← steeply slanting Roof
– Malaca

→



Europe → Navigation
↙ ↘
Spain + Portugal
↓
New - sea routes

→ Merged Spanish + Portuguese

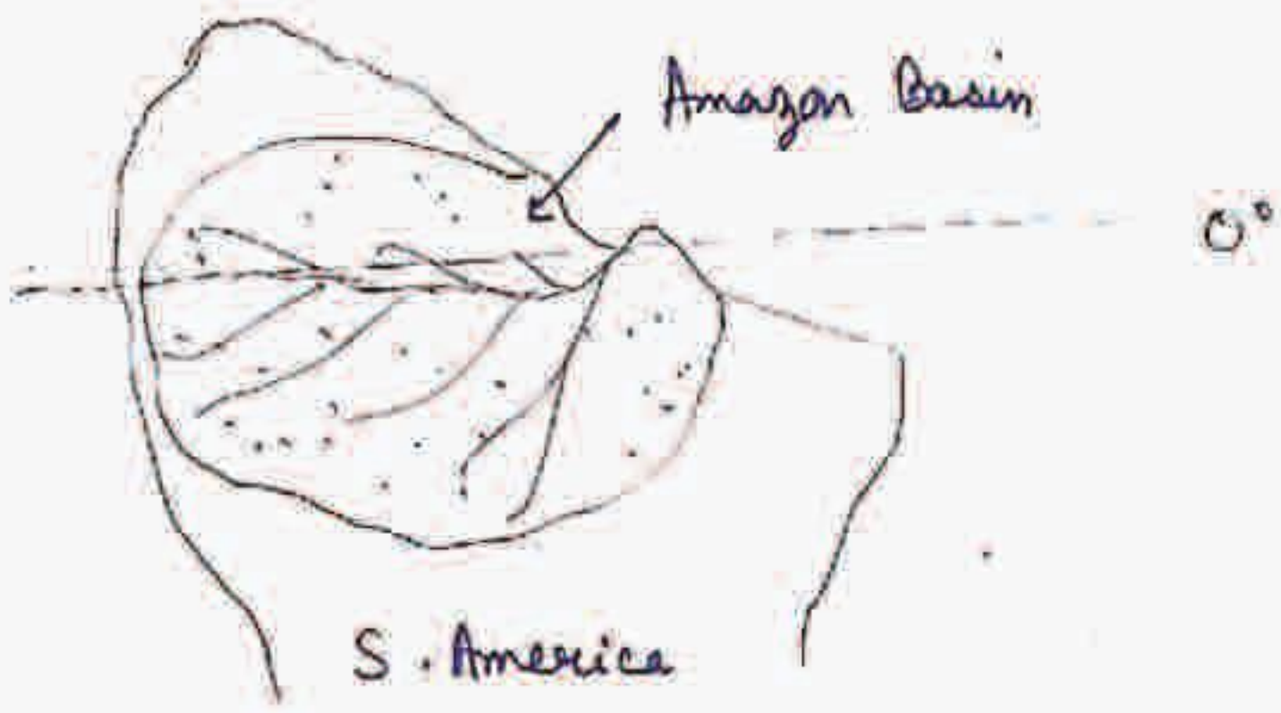
→ African slaves : to work in plantation.

→ Mestizos : Europe + local people

→ Mulattos : Europe + African

→ Zambo : Indian + African

Native population were wiped out by Europeans and got merged.

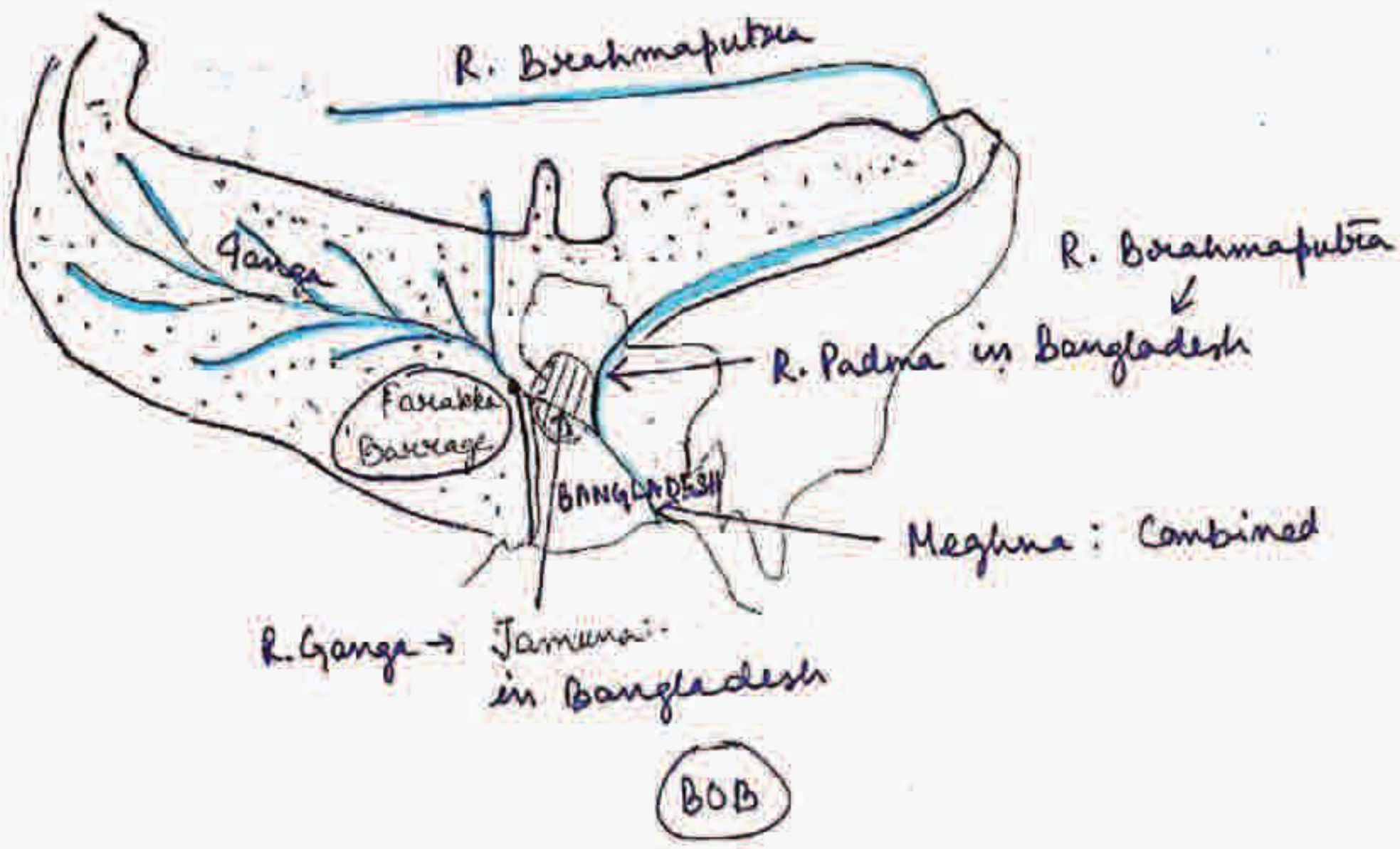


People:

→ Yanomami : Largest relatively isolated tribe in S. America.

live in → Rainforests, mountains of N. Brazil, S. Venezuela

① Ganga - Brahmaputra Basin

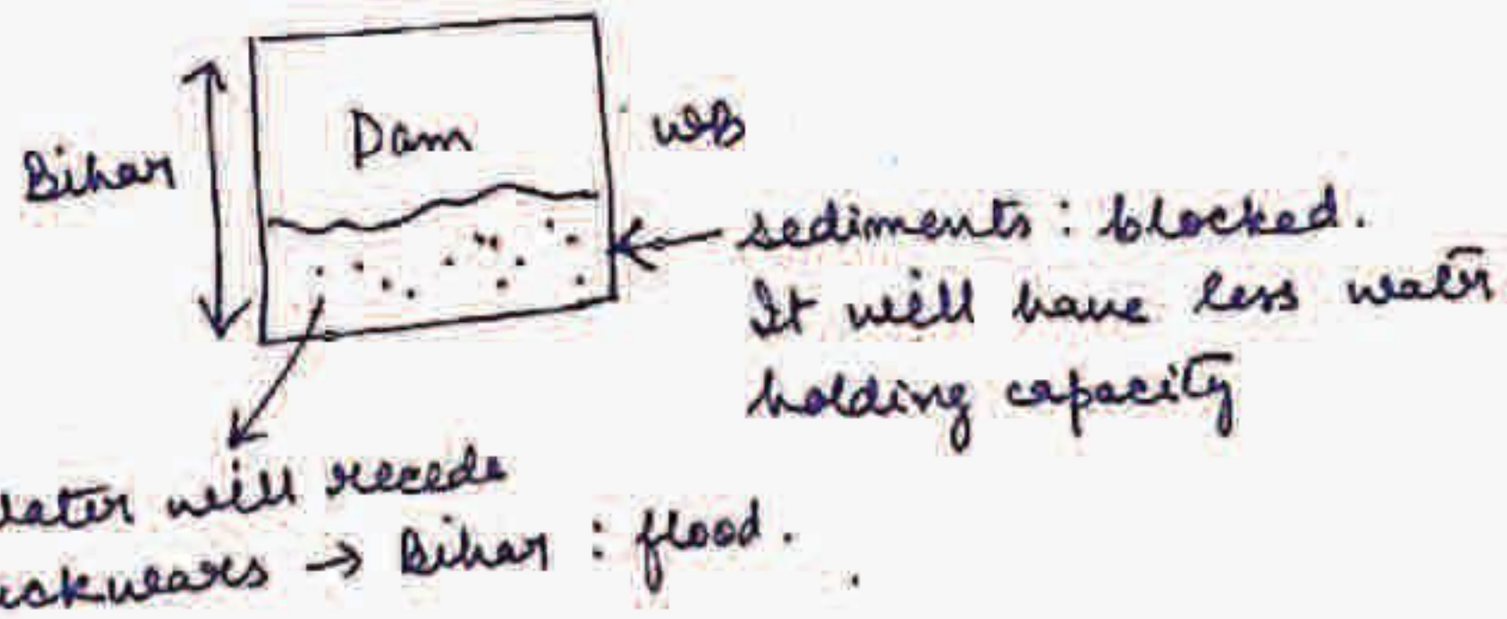


Farakka Barrage : Used to direct stream towards Hoogly Port (Kolkata) - divert water from R. Ganga.
↓
Make Kolkata Port feasible (increase volume of water)

Objection ⇒ ① Bangladesh.
→ demanding water to be divided in 50 : 50 ratio.

F. Barrage → Domestic
→ International issue.

⇒ ② Bihar : sediments .. start depositing.



→ Population Density:

Top 5 | Bottom 5

→ People: occupation (main) → flat land, fertile
↓
agriculture
∴ main
↓
eg. paddy, jute, sugarcane, wheat etc.

→ Bihar - sugar mills
- Jute - water intensive during processing.
- Tea cultivation : WB, Assam

→ Silk:
- → Muga silk → Assam (chiffon)
- → Tassar silk → Bihar (Bhagalpur) → Riot → Hindu / Muslim → Industry wiped out.
- → Eri Silk → Bihar, Assam
- → Mulberry silk → Karnataka, S. India (most dominant) (mulberry leaf ↓ silk worm)

→ N.E India: Bamboo craft is focussed on.

⇒ Blind dolphin
→ Vikramshila Observatory → planning to make dolphin observatory in ~~fast~~ Bihar

→ R. K Sinha: Dolphin Man of India

→ Dolphin – Indicator species
– Indicates health of aquatic system
– Dolphin population (↓) → Degradation
↓
Degradation

⇒ Towns / Cities of G. Brahmaputra Plain

① Kanpur : Leather factory → Banks of Ganga
↓
wastes into river
↓
polluted.

major cities of G. B. plain from UP to Bengal are into business of polluting industry.

② Varanasi : Religious gathering → Ganga pollution
[chemicals, idol immersion]

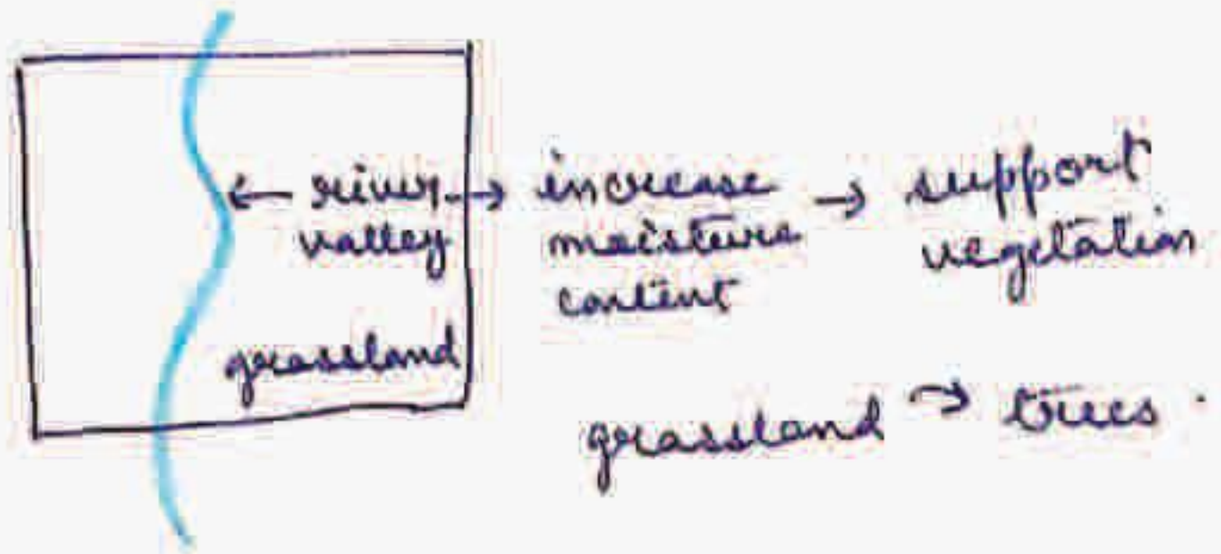
Allahabad : Kumbh Mela

→ Major cities : Allahabad, Kanpur, Varanasi, Lucknow, Patna, Kolkata

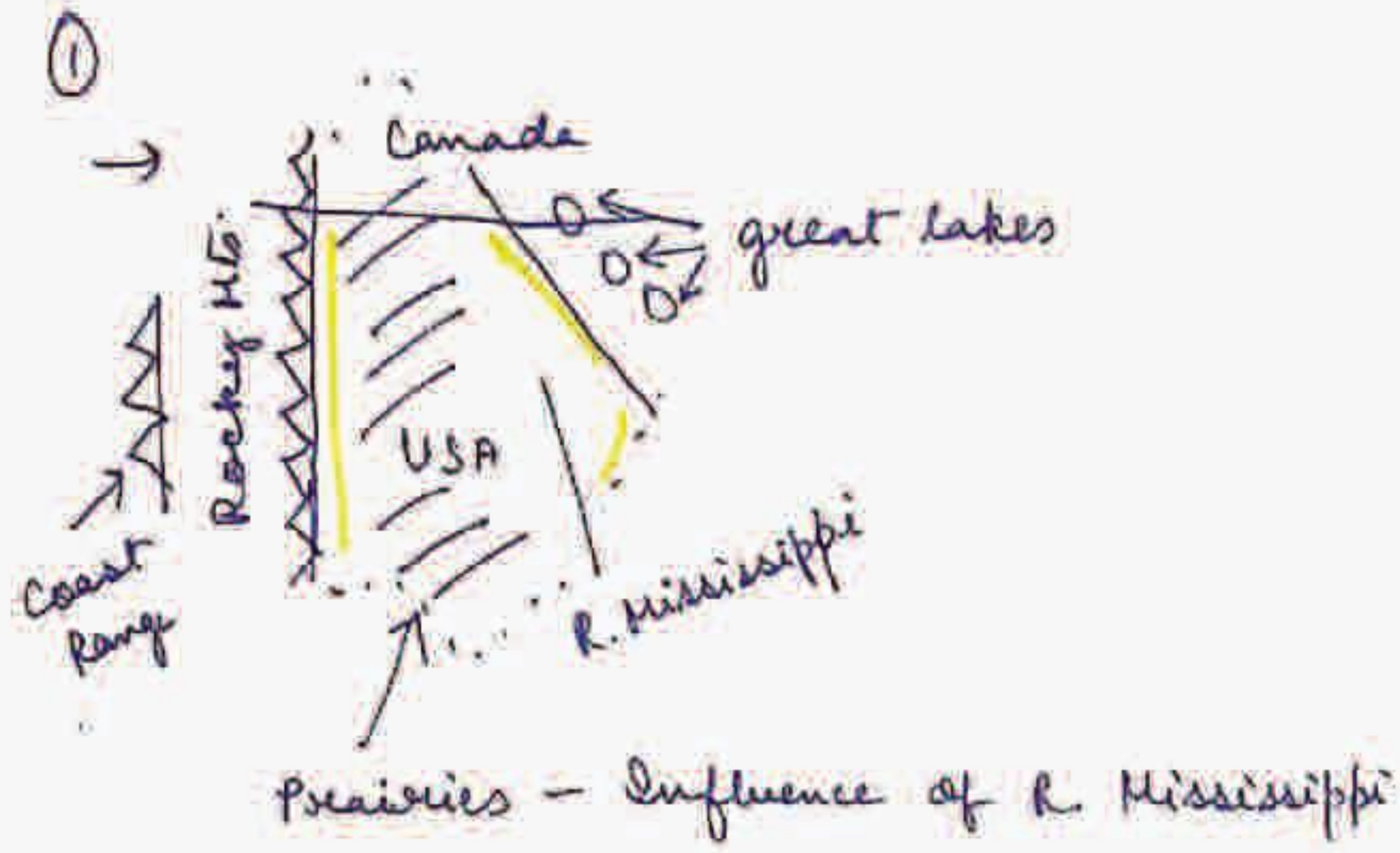
③ Big towns → Factories (Economy)
→ Religious gathering
→ Demography → population
→ Tourism
] → Ganga Pollution

Ch: 9 : Life in the Temperate grassland

(I) Prairie: temperate grasslands of N. America

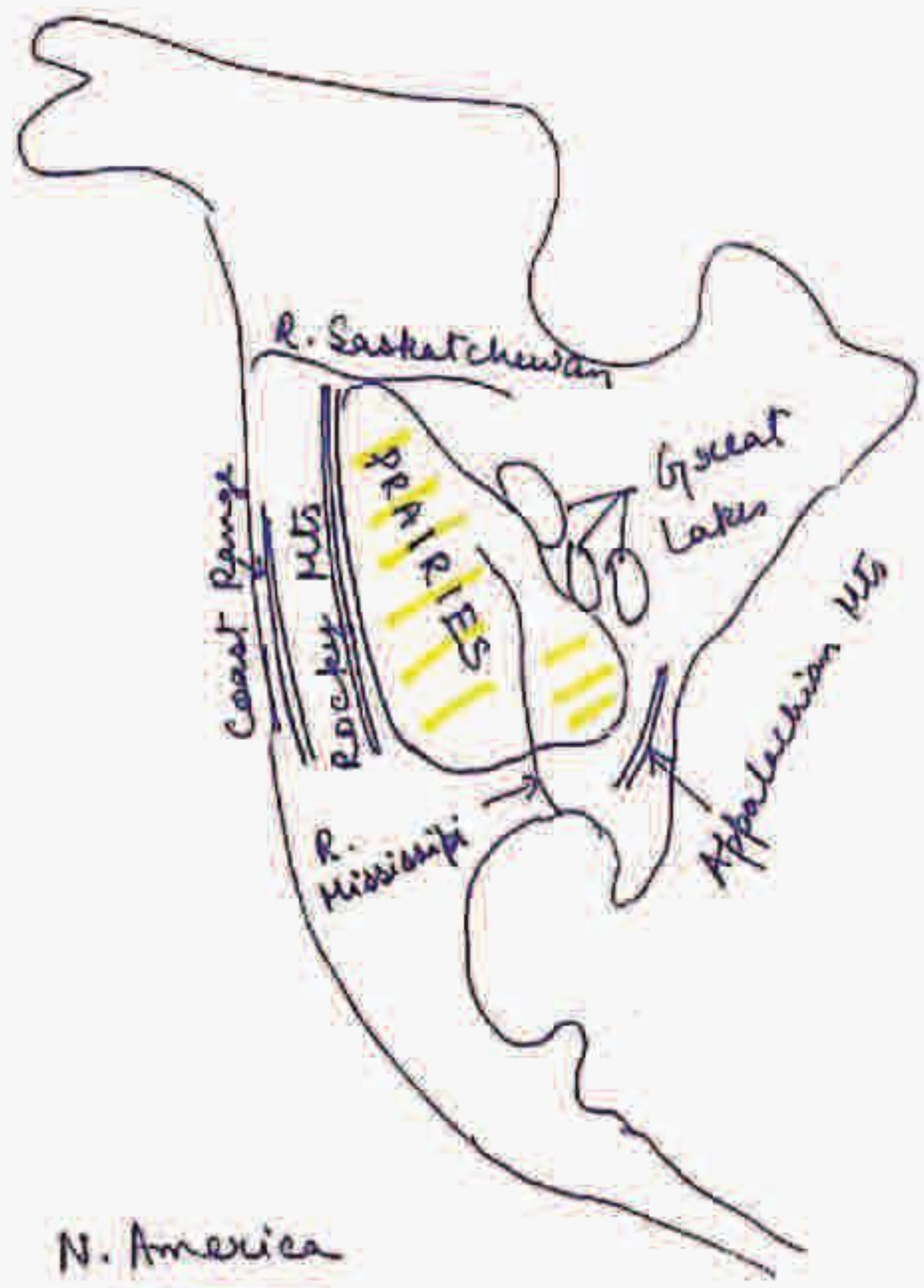


(1)

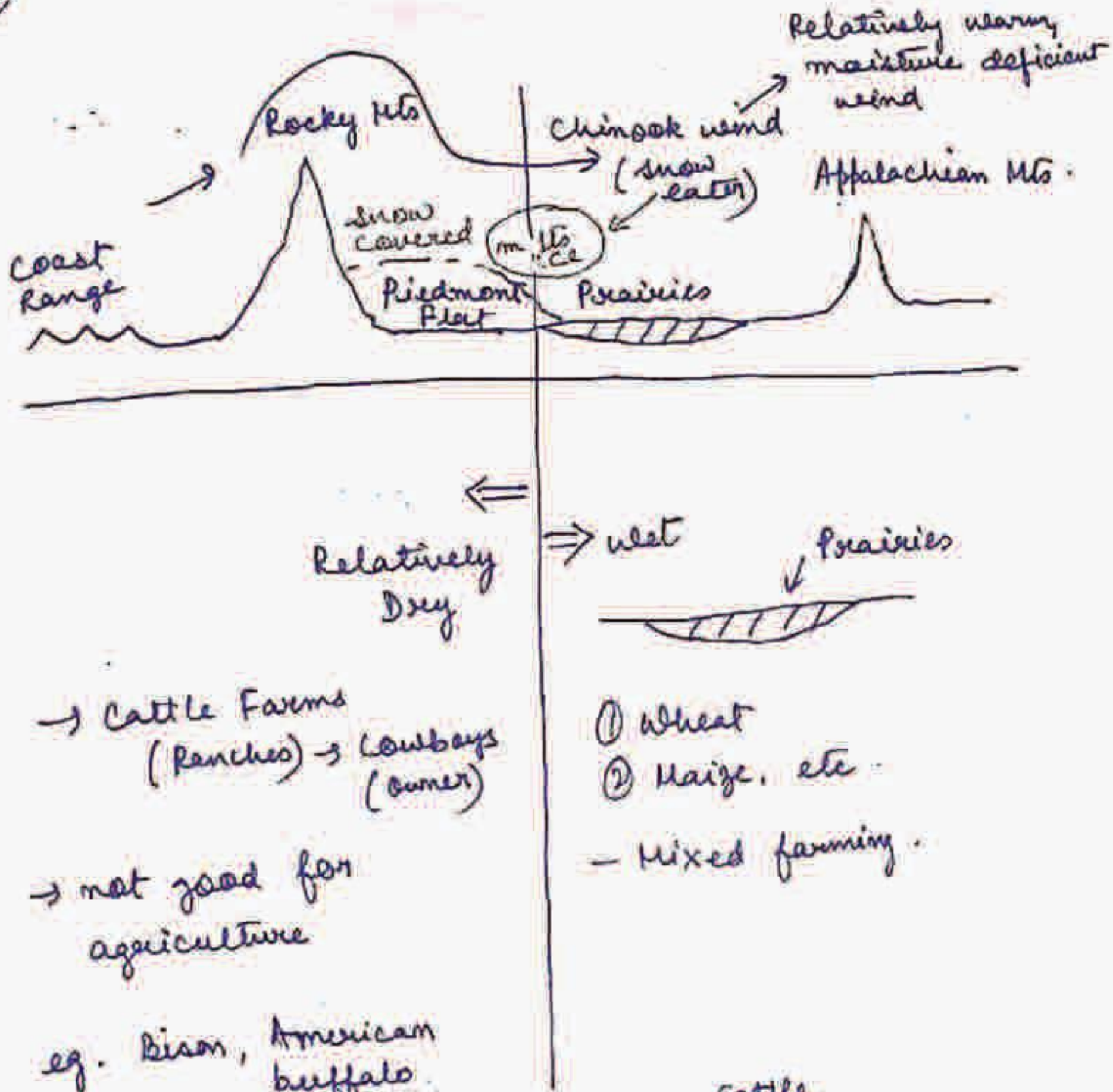


Prairies – Influence of R. Mississippi

(2)



N. America



→ Russia (steppes)
- ↳ 'Wheat' – dominant
- ↳ 'Bread Basket of the world' → different from Prairies of N. America

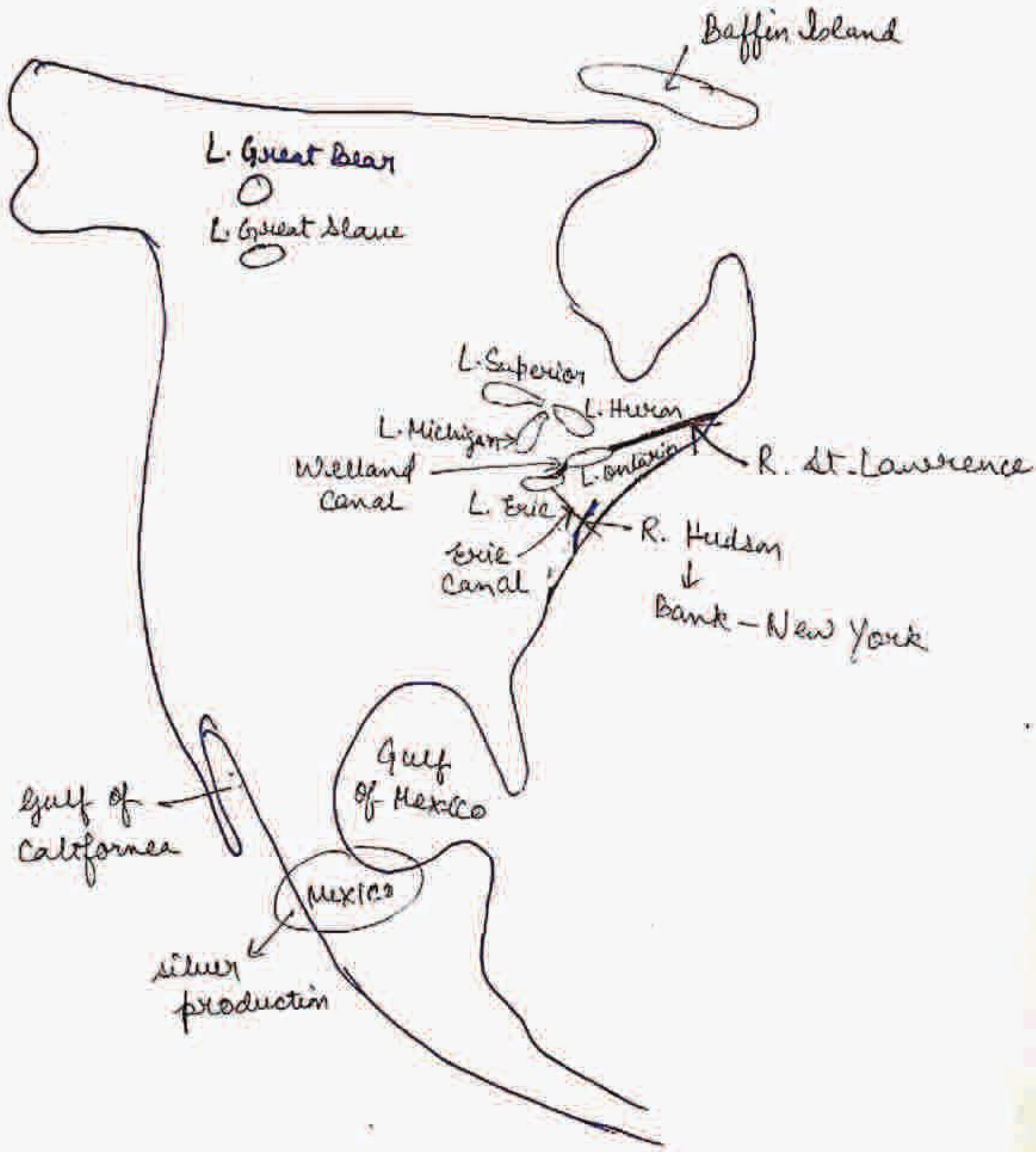
→ Prairies → Trees: Willow, Alders, Poplars
- ↳ also in India
- ↳ farm forestry
  - ↳ Matches, Wooden box of fruits
  - ↳ Plywood
- ↳ Crops
  - → Maize
  - → potato
  - → soybean
  - → cotton

⇒ Climate: Continental type (extreme climate)
– no moderate climate.

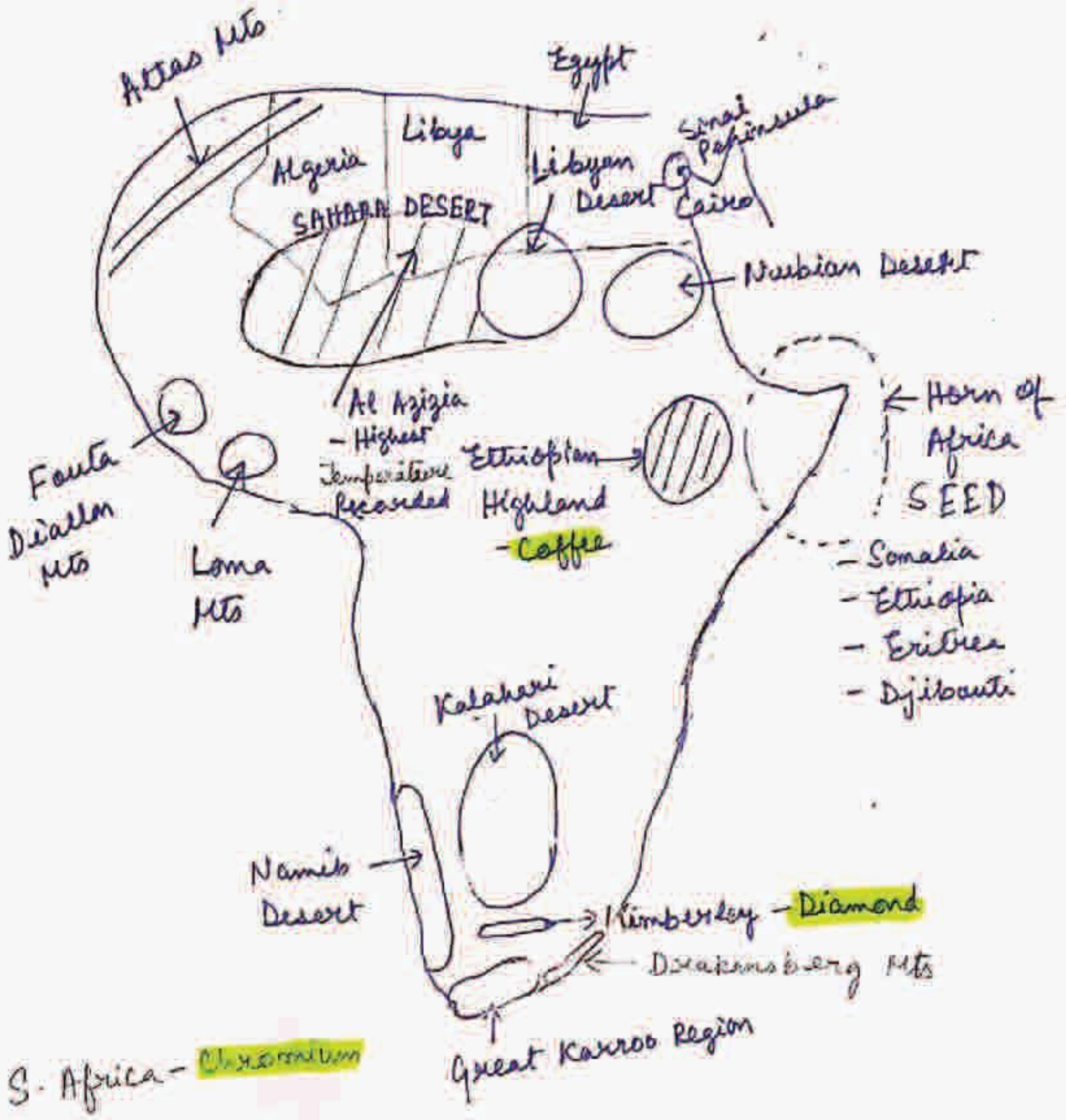
→ People: Hardworking
harnessed technology
• Mechanized form of agriculture as flats are vast.

Other industries: Dairy farming.
Iron Ore (Canada - Near L. Superior)

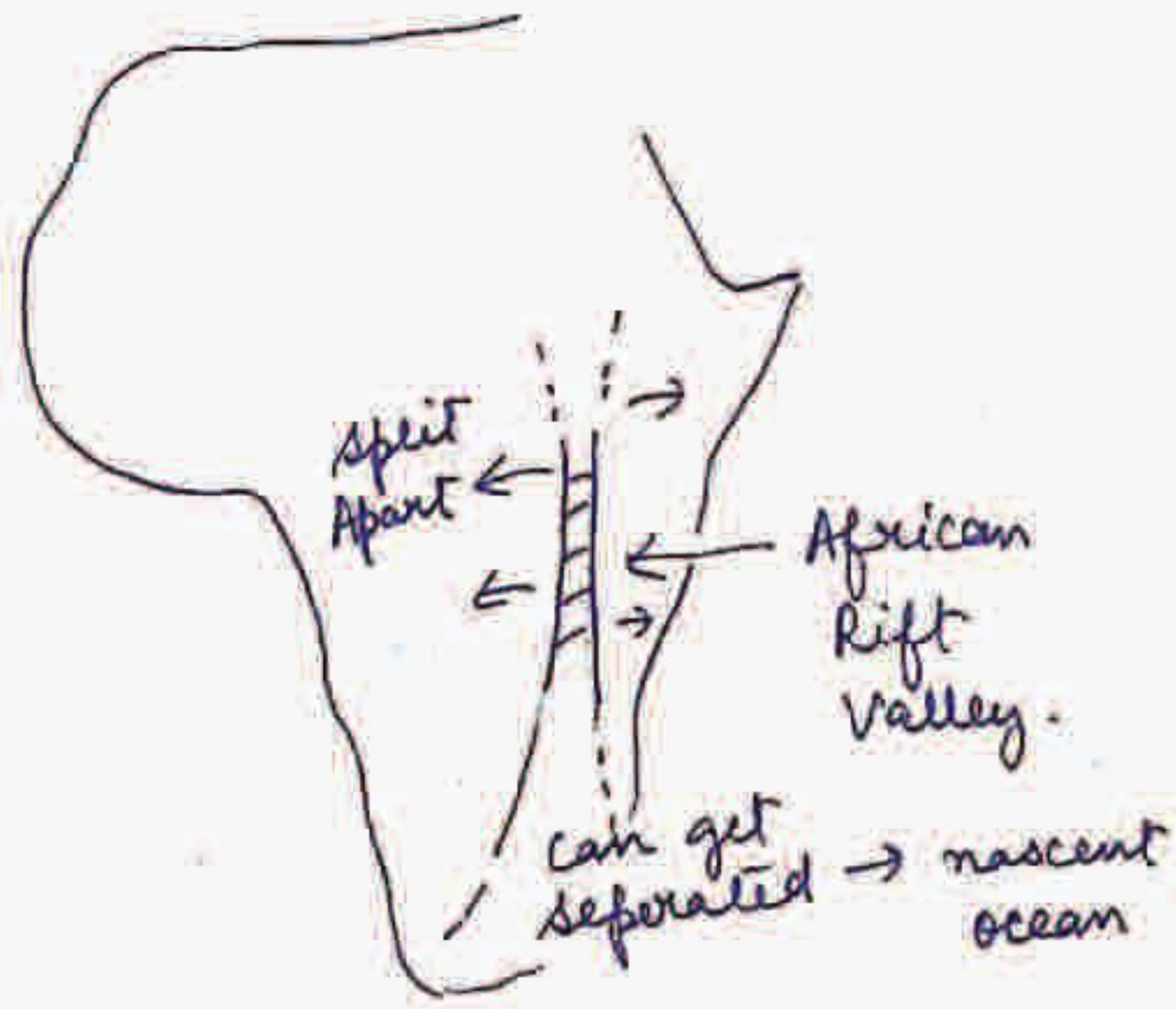
④ Map of N. America



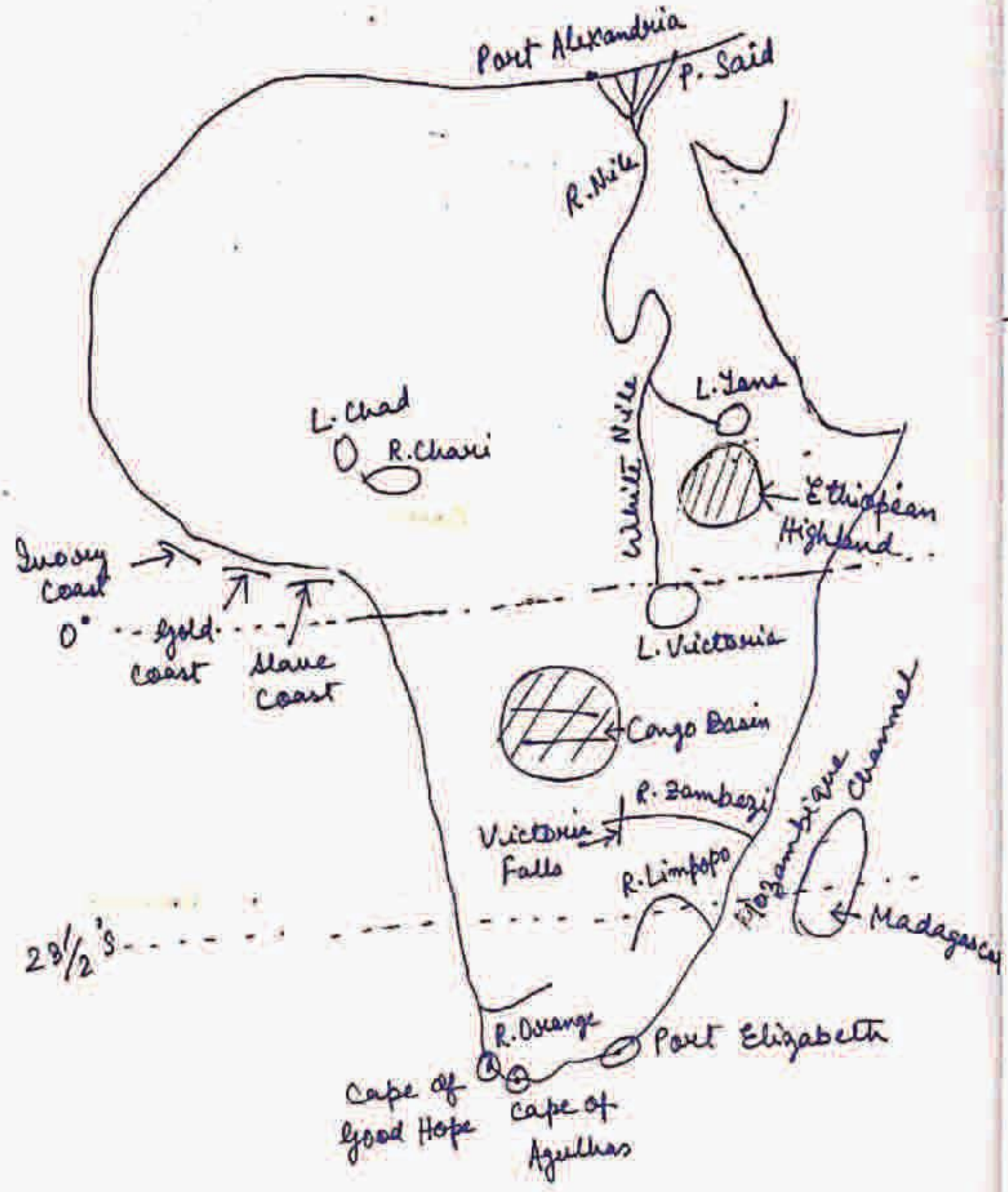
Map of Africa



Deserts, Mts, Highland, Peninsula



Africa – 'Dark Continent'



Rivers, Coasts, Basins, Capes, Ports, Falls, lakes

River		Dam
R. Nile	–	Aswan Dam
Zambezi	–	Kariba Dam
Niger	–	Kainji Dam

→ Johannesburg → gold mine

→ People : Cattle Rearing
Mining → gold
→ Diamond
→ Chromium.

→ Sheep - Merino - wool.

→ Temperate grasslands of S. Africa : Velds.

Life in the Deserts : Ch - 10

(I) Africa :

→ Desert : Sahara (N. Africa)
- largest desert of world
- Countries →
  - Algeria
  - Chad
  - Egypt
  - Libya
  - Mali
  - Mauritania
  - Morocco
  - Niger
  - Sudan
  - Tunisia
  - W. Sahara

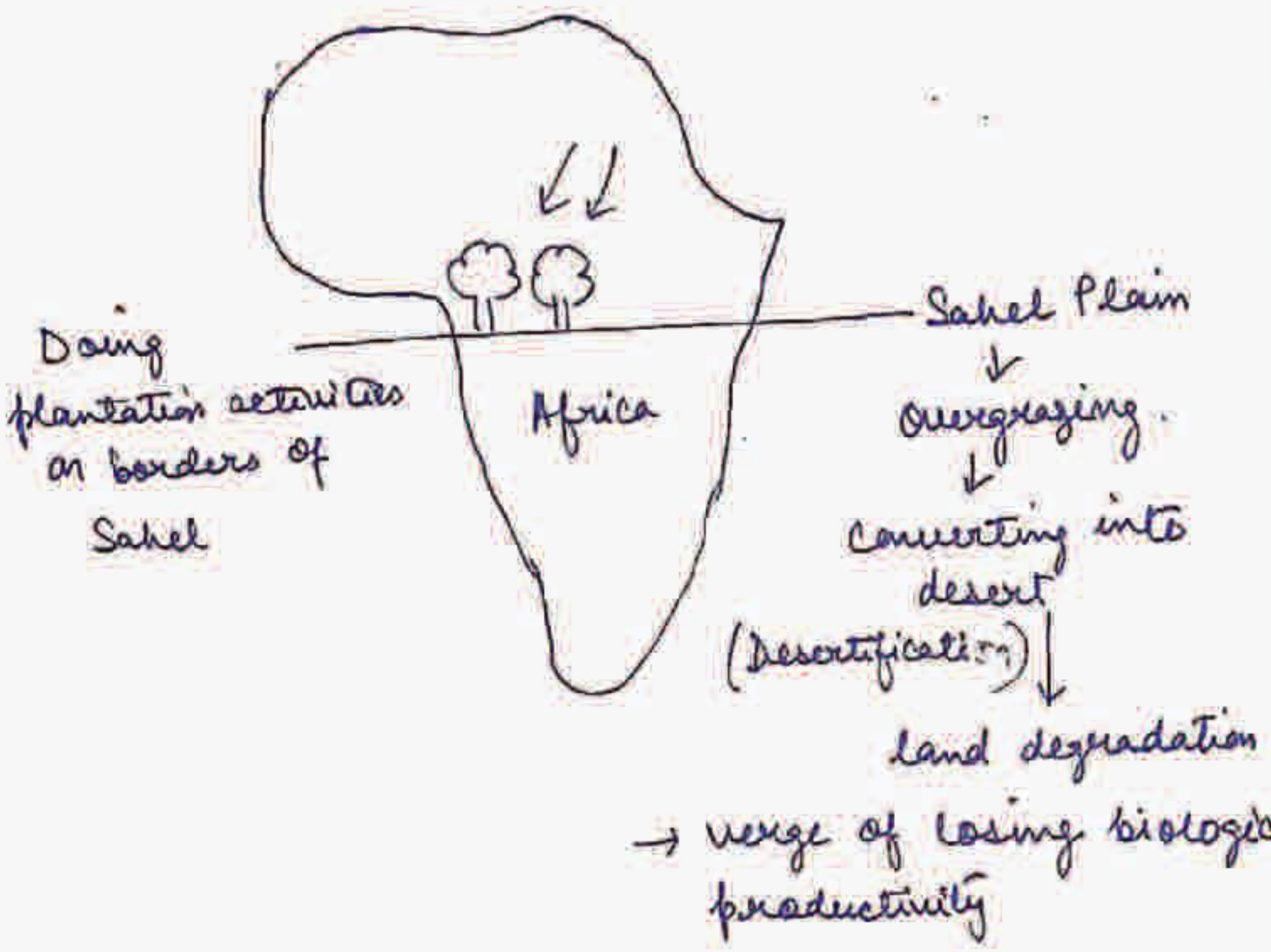
→ Sahara is inhabited because of conflicting / competing demand of land. People are forced to stay at →
- → Hts
- → Deserts
- → Plateaus

} Inhospitable climate

→ People : Bedouins, Tuaregs (Horsemen) - Sahara
Bushmen - Kalahari Desert.

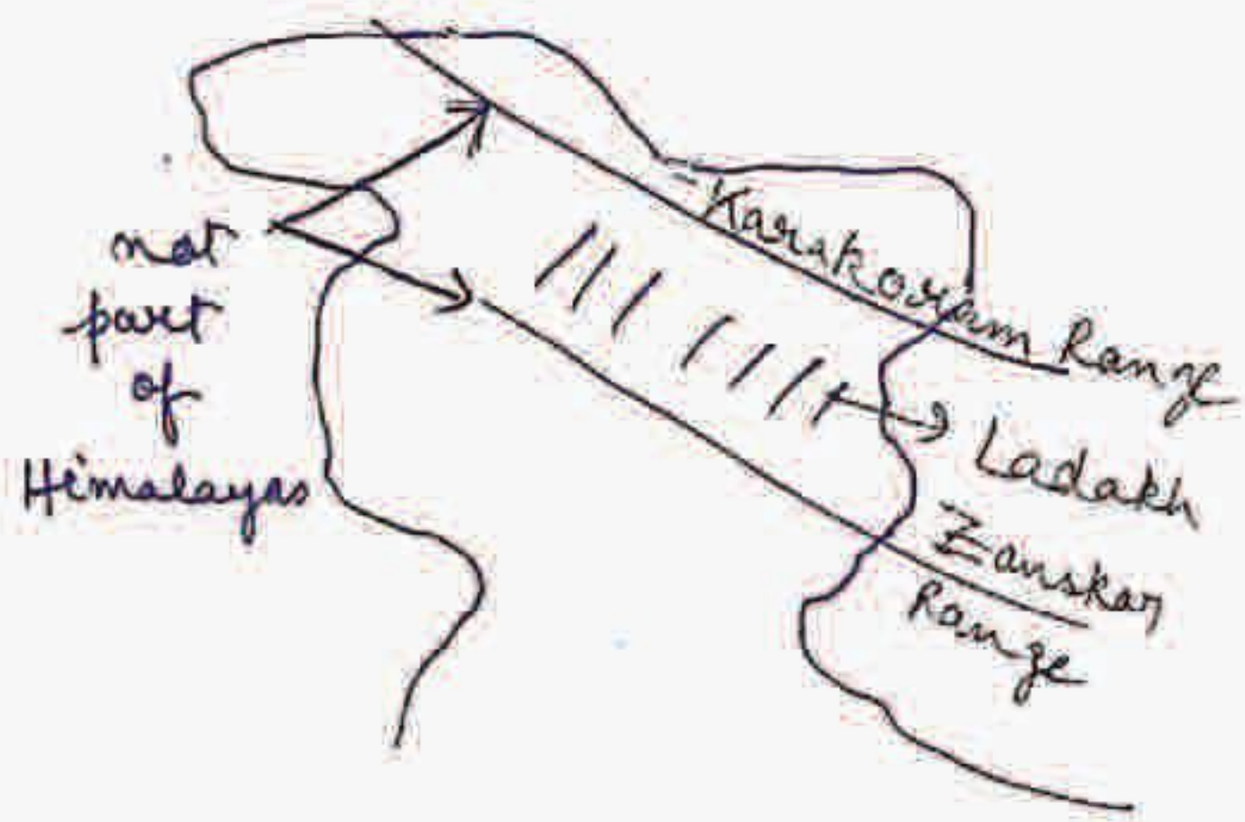
→ China - Check Book Diplomacy at Africa
→ Extracting raw materials → move to own country → supplying finished products
↓
neo-colonialism

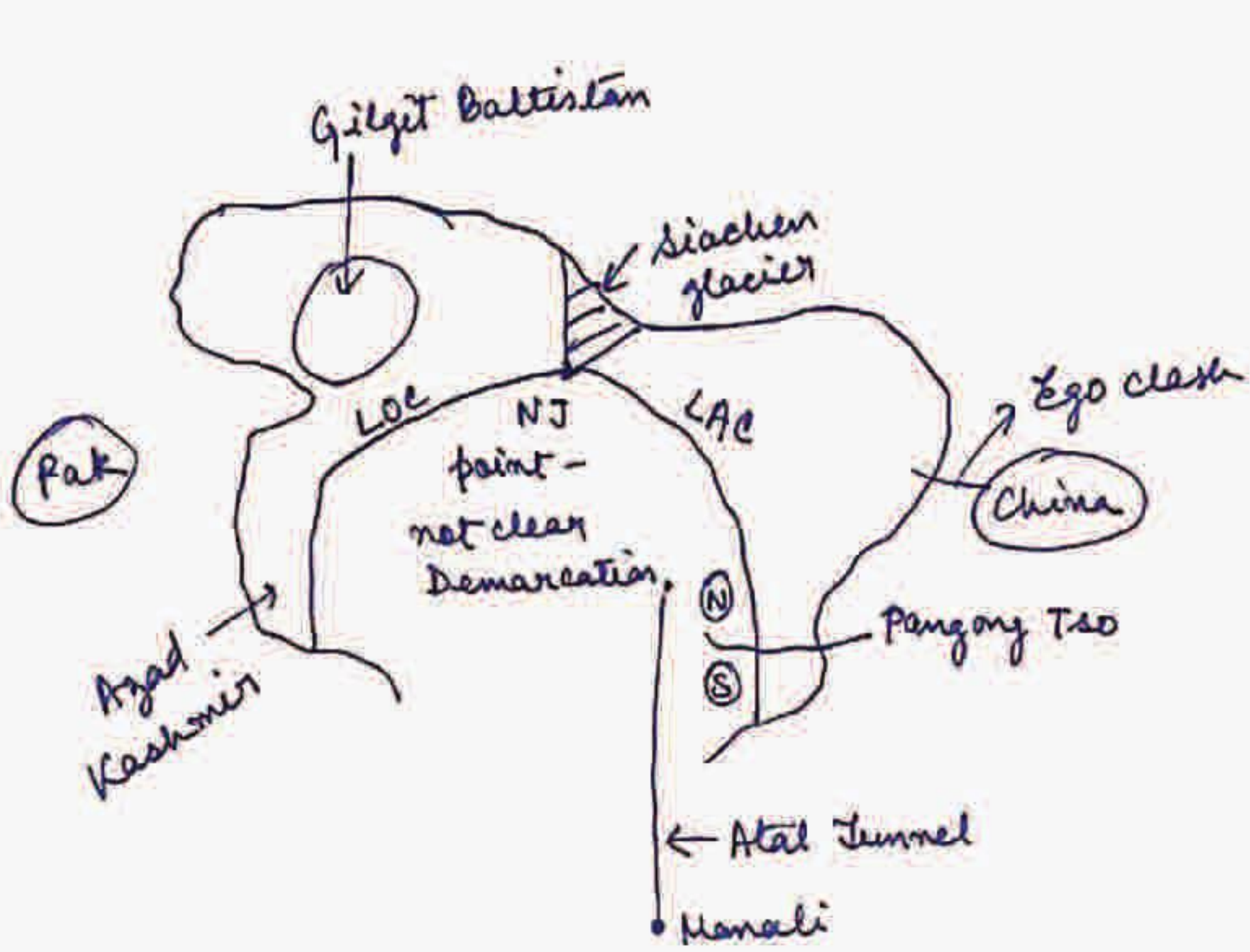
India → Soft powers → Training
(not-exploiting) → Defend from Pirates
→ Telecom service etc



(II) Ladakh - Cold Desert

Desert
↓
Moisture
↙ Hot ↘ Cold





→ Chiru → endangered
↓
wool → Shahtoosh → fine fabric → shawl/ scarf/ stole
↓
costly.

→ Pashmina wool → Trade in name of Shahtoosh
↓
Cashmere goat.

→ Buddhist monasteries with traditional gompas.
Monasteries – Hemis, Thiksey, Shey, Lamayuru

→ NH 1A – Leh to Kashmir valley through Zoji La Pass

→ Tourism: Major activity Here
Responsible tourism ! ones → state + individual → towards environment, society etc