

# I N D E X

NAME : \_\_\_\_\_ STD. : \_\_\_\_\_ SEC.: \_\_\_\_\_ ROLL NO.: \_\_\_\_\_

20 Nov 25

• Shivasamudram project kareji pe  
1902 me banaya project jiska  
purpose electricity generation tha

Note iska purpose agriculture  
irrigation naitha

• Lava mitti - Malwa plateau

• India me max milne wali mitti

Jalodh / alluvial soil h - <sup>India ki</sup> total soil  
ka 40% alluvial soil h.

• Cherapunji ya M'singram meghalay

ke mai rainfall wale areas h

ye khasi hills pe situated.

• Bharat me page Jane wali  
rocks ko 4 names me

classify kiya h

Archaean

Purana

dravidian

Aryan

• inke subclassification me dharwad kadappa  
vindhya & gondwana ate h.

- Tertiary rocks se himalay banta h jo newest rocks h
- India ka 98% coal gondwana rocks me milta h.
- India me milne wali rocks me se economic por se max important dharwaad rocks h.

## Waterways in india

6 Imp ways

NWW1 allahabad to haldia  
on river ganga

NWW2 Sadiya to dhubri on  
brahmaputra

NWW3 Backwaters of kerala  
kollam to kottapuram

NWW4 East Coast - Coromandel coast  
on buckingham canal  
Kalepattayi Pondicherry se Kakinada  
Andhra

is water way me godavri &  
krishna ka part bhi shamil h

NWW5 : Bramhani river talches to dhamra.

NWW6 : Barak river Manpur  
Lakhimpur to Banga  
on barak.

## Vindhyancha/Ranje

- jise india me great dividing range kaha jata h gujrat ke jobat mountains se lekar bihar ke kaimoor parvat tk expanded h  
ye total 1200 km lamba  
mountain rang h. jo yah. ek natural division line h between  
ganga drainage system & peninsular part drainage sys.

Satpuda range ka expon <sup>approx</sup> 300 km ka h jo names different states ke ac.

Gujrat - rajpipla

MP - Mahadev

CG - Marikal

Mahadev ki highest peak dhoopgarh h  
jo pachmarhi k pas h

MP me pachmarhi ek <sup>famous</sup> hill sta h  
& pachmarhi ek BR hai.

Pachmarhi k pas satpuda

TR hai.

Satpuda k south me 3

mountain range h balaghat

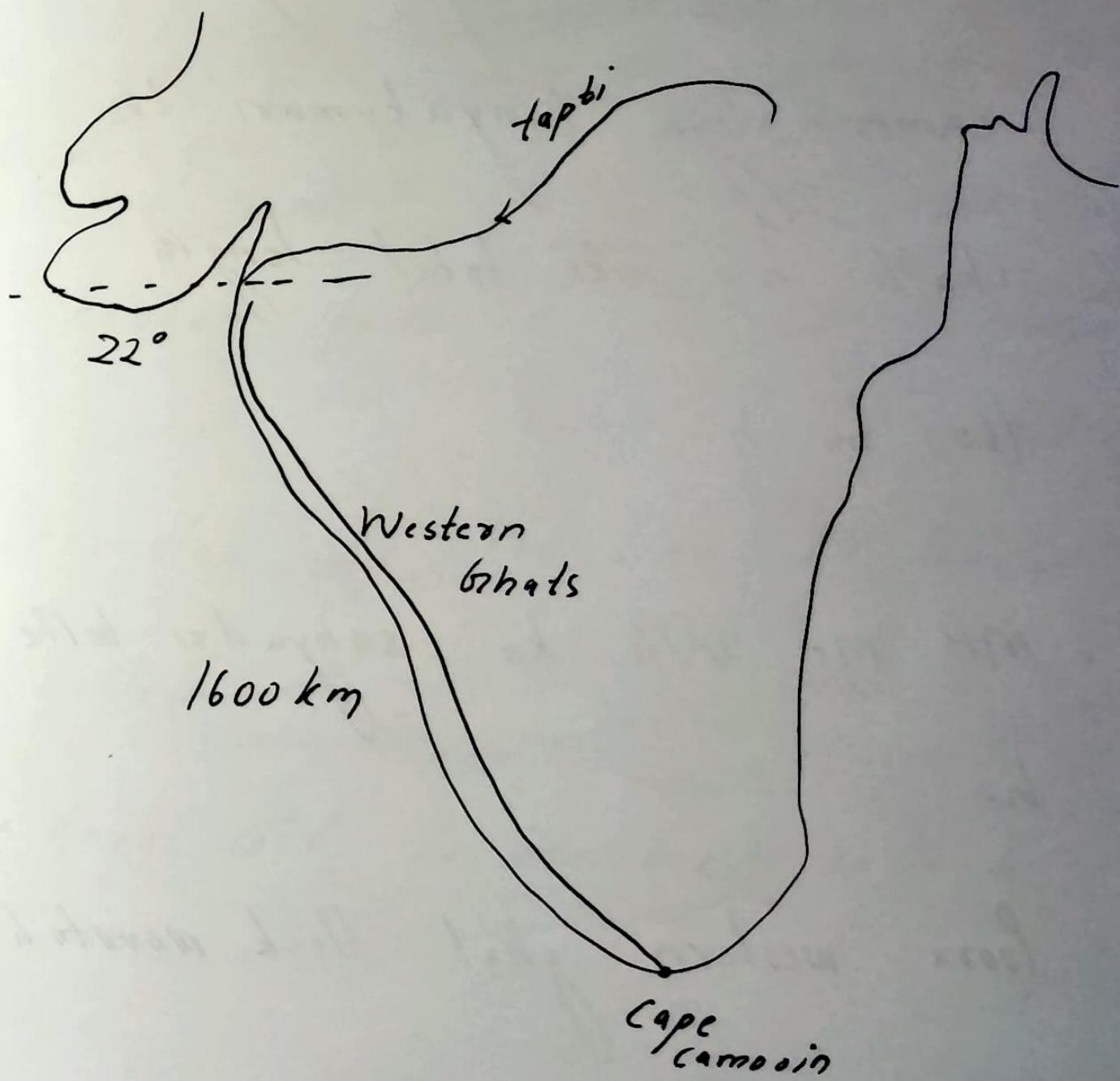
harishchandra & ajanta

balaghat range MP & MH me

bata hua h jiki harischandra &

Ajanta totally MH meh.

Ajanta range one hi famous  
Ajanta ellora caves h



Mouth of Tapti  $22^{\circ}$

Latitude se Western ghat

Start hota h jo cape

camorin ya kanyakumari tk

chalti h iski total length

1600 km h.

MH me WG ko Sahyadri bolte  
h.

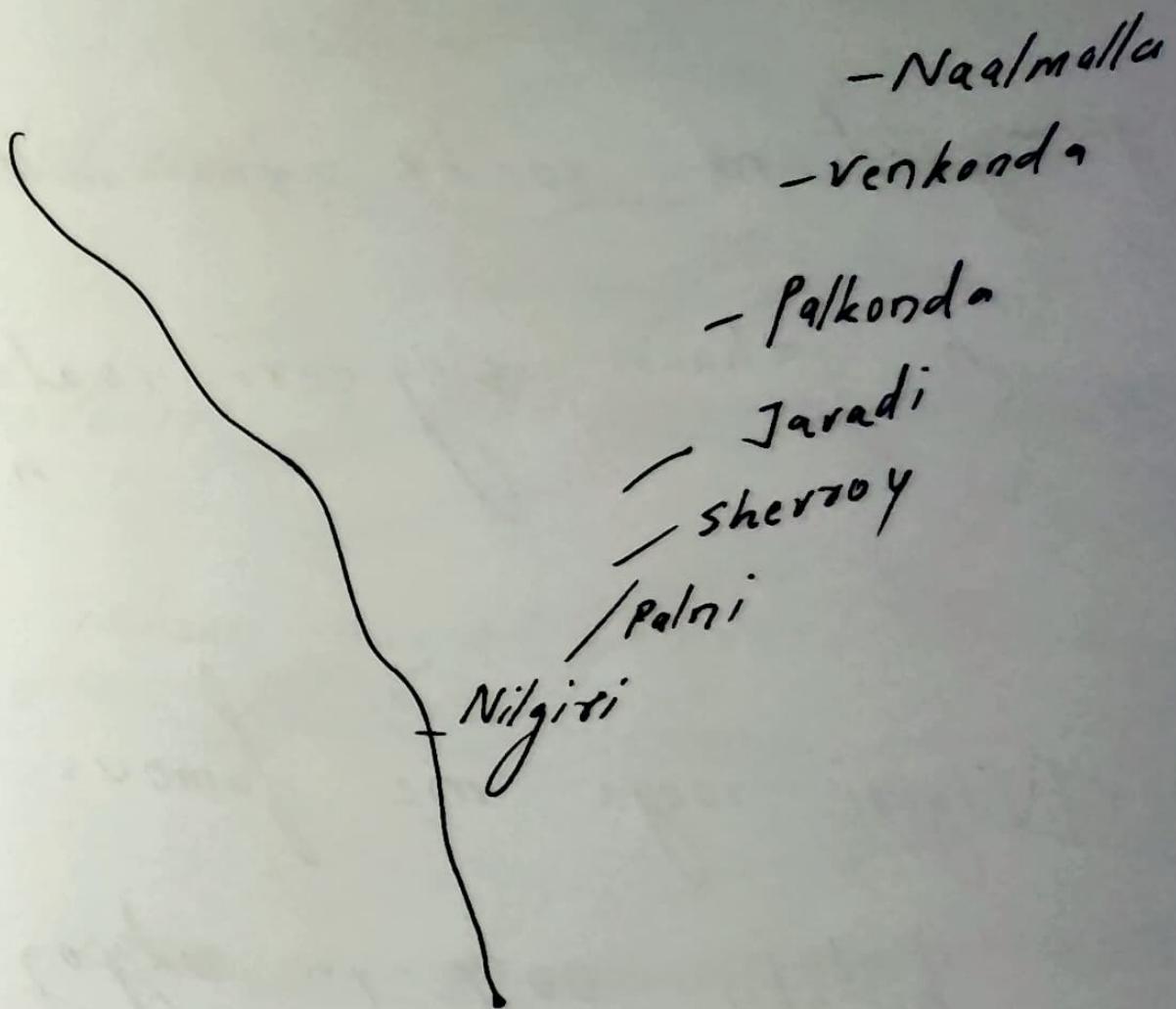
Poora western ghat block mouth h.

- Western ghat se jge coast ko alag<sup>2</sup> area me alag<sup>2</sup> name se jante h jaise maharashtra & goa ek ke coast ko konkan bolte h.
- karnatak ke coastline ko konkan bolte h
- keral cost ko malabar bolte h.

## Eastern ghats

- Western ghat se nikalne  
wali godavri krishna  
kaveri & other rivers ne  
eastern ghat erode kiyे isiliye  
eastern ghat non continuous.
- Nilgiri k east me palni hills  
se iska start h jo  
palni se NE dir me alap<sup>2</sup> names  
Se jaa gaya h

jaise palni sherray jardi  
palconda (<sup>Ven</sup><sub>Wain</sub><sup>condy</sup><sub>condy</sub>) Nalmalla



• koshha godavri rivers k beech  
eastern ghat ka erosion itna hua h

ki vs area me delta

plains hi dikhte h mountains nai  
dikhte

jahaan gondwana rocks bhi milti

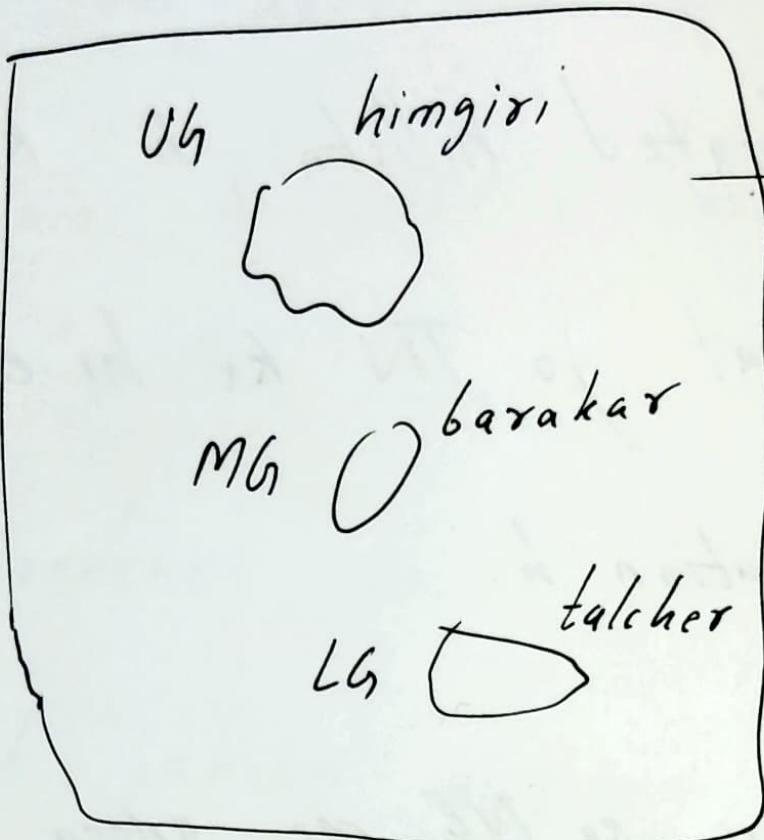
h jahaan singeri coalmine  
h

Nilgiri range me famous

hillsts ooty ya vd yog  
mandalam b

jo TN me h.

- jibki palni hills me  
situated hillstn h kodai  
kanal jo TN ka hi ek  
hill station h.
- Godawari ke NE me orissa highland  
h jahaan garjat mountn rng h.
- is area ki famous peak  
mahendragiri hai.



Gondwana rock pattern jisme

india ka 98% coal milta h

ko quality k base pr 3

layers me batch

upper - himgiri

middle - barakar

lower - talcher

- Best quality coal himgiri  
ko maante h.
- Eastern ghat me kareni 8  
pennar rivers k beech AP  
8 TN me expanded faila hua  
malyagiri/malayiri forest hjo  
Red Sandalwood ke ligi famous  
hai.

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• Panch nadiyo me se sulej river

Last me indus se milti h jikki

indus system ki most imp river  
chenaab hai.

Dharwaad rock pattern

• karnatak me dharwaad rocks me  
iron ore & gold milti h.

- kudremukhi hills famous h  
iron ore ke lie
- kol�ar famous h gold ke lie
- karnatak ragi ka country me  
biggest producer h.
- isi area me bababudaon hills h  
jo coniferous ke poon ke lie  
jani jati h.

Dharwad rock patterns  
ke bstr & chili me milti h.

bstr area me dantewada ke  
baladila me iron ore milti h

(Madhya)  
lb me ragi ka max production  
kondagaon me milti h.

Yahaan ragi ko madiga bolte h.



• Darbhा ghati area me  
coffee production kiya jo chalu  
ho gyā h.

### Vindhyan rocks

• No fossil Red Sandstone se mugal period  
me kai architecture hve special  
Shahjahan  
dehi ka Red fort Vindhyan rock  
pattern me h.

Takki panna & golconda jo diamond mines h.

me bhi vindhyan type of rocks h.

### Gondwana

Rocks jinme fossil milte h ka  
creation upper carboniferous se jurassic

age me hoga h isiliye jinme

Fossils milte h & fossil fuels bhi

milte h

India ka 98% coal gondwana rocks  
me dhari.



## Deccan trap rocks

- Volcanic activity se bani h  
jo MH Gujrat Malwa plateau  
se mithi h
- is mithi ke weathering se  
black soil banti h jise  
Regur soil bhi bolte h jo  
cotton ,wheat ke liye fertile  
maante h.

# Tertiary

• Himalay ka creation Eocene

Pleioscene age

me hua h

• is daaraan tertiary rocks ka form hua

• the rocks found in himalaya are tertiary rocks.



## Quaternary

- ye latest rocks h jiske antagonist  
creation pleistocene se current  
holocene age tk hua.
- Nadiyo ke mouths se related rocks  
Quaternary rocks hai.

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Islands of India

Andaman Nicobar BoB me

hugli nadi jaise hi samudra  
me pravesh krti h Ganga Sagar  
island h

isi area me ek naya island  
banah new moon island h.

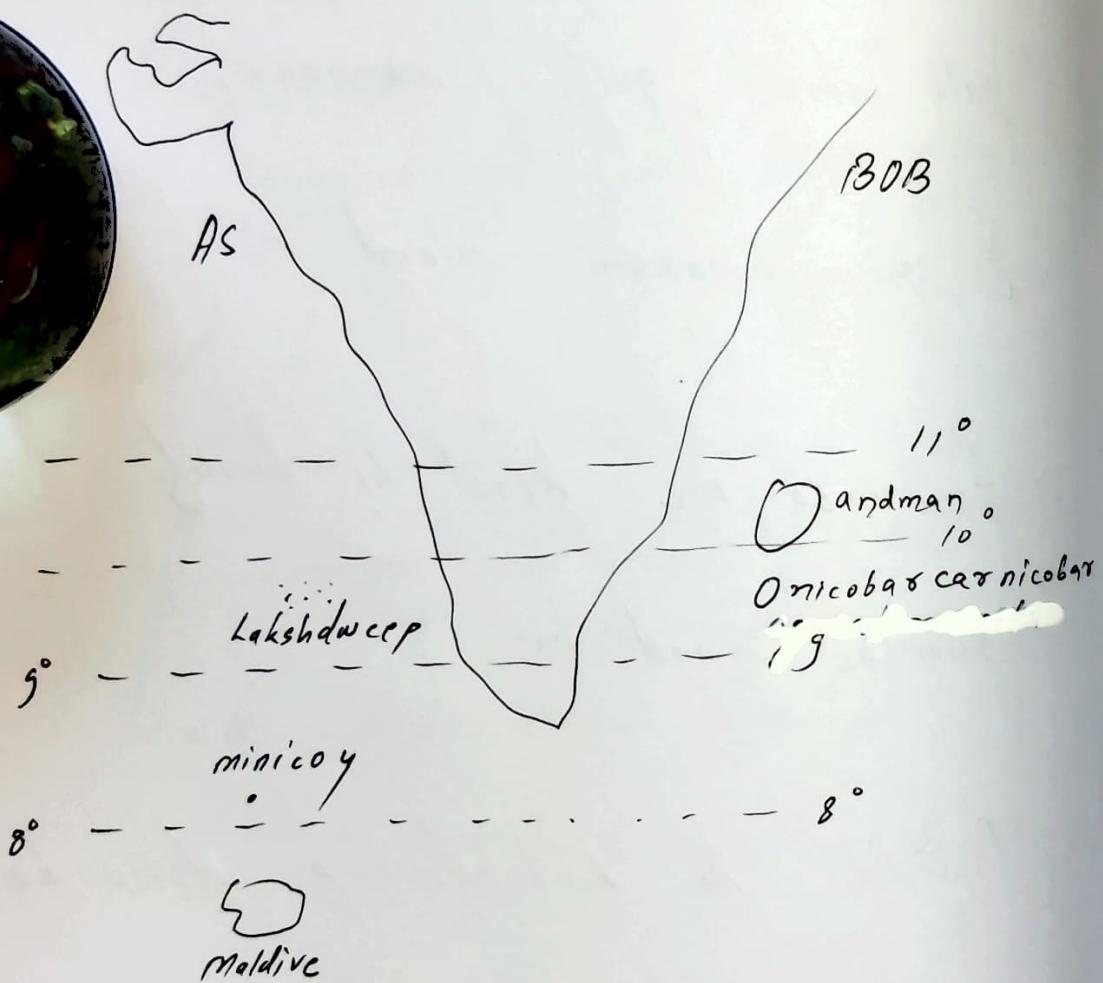


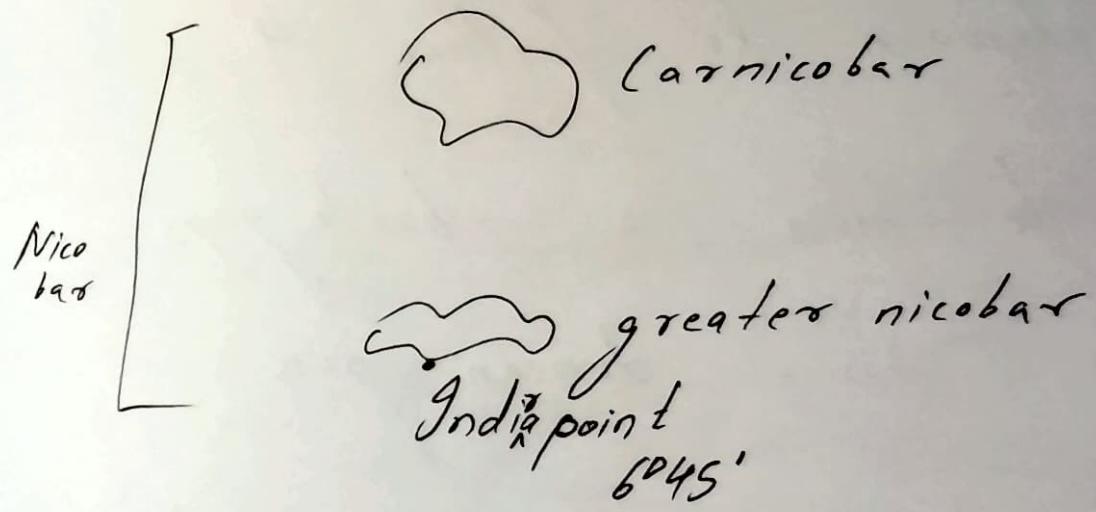
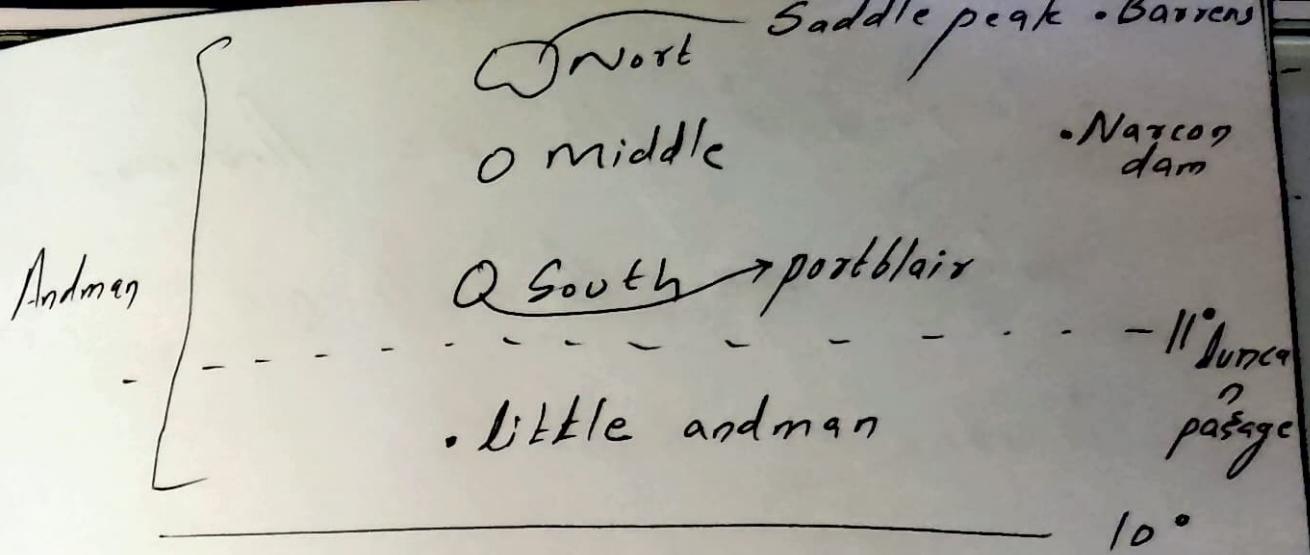
- Shrihankota island Andhra ke coastline k pas h jahaan ISRO ka Satellite Launching station h
- Srilanka & India ke beech palk strait, gulf of mannaar, S Rameshwaram island h.
- Isi area me keral ki taraf pamban island hai
- A&N & Lakshdweep dono ko

Samjhne k lie  $8^{\circ}$  to

$11^{\circ}$  latitude ko samajhna

imp h.





• Andaman & nicobar ko divide kne  
wali line  $10^{\circ}$  channel h.

•  $10^{\circ}$  le north me Andaman

islands me & south me

Nicobar

• Andaman ko further 4

bade hisso me baata gaya

h 11° Channel duncan pass

little andaman ko south andaman

se alag karta h iska meaning h

11° (duncan passage) &  $10^{\circ}$  le beech  
channel

me little andaman h

Jabki duncans " passage ke  
north me North andaman  
Middle "  
South Andman h

North andaman me saddle  
peak / palyaan shikhar h.

✓ jo andman nicobar ki highest  
peak .

South andaman me cgp h

portblair jkki nort & south

k east me narcondam &

barren islands h

narcondam dormant volcano

barrens active volcano.

Andaman Nicobar me kai'

aisi tribes hjo life ki morden ge

mainstream se doo r h ① Ong

② Tarawa

③ Senthaluccese.

Q Little andamani <sup>these</sup> are the tribes  
greater nicobar ka southernmost pt  
pt  $6^{\circ} 45'$  india pt kehla ta  
h jo india ka southernmost pt  
iske alawa kaii other islands  
h jaise havlock island,  
interciview island, ye andaman  
nicobar ke antagonist atc h.

# Lakshdweep

Arabian sea me  $8^{\circ}$

channel maldives se

minicoy ke aay kothi

minicoy ke north me  $9^{\circ}$

channel h jahaan se

indian ocean ki boundary h

$9^{\circ}$  channel ke north ke

islands Lakshdweep h jo

Kerala ke parallel Arabian sea me h.

Ye island coral reef se  
banc islands h

- India & Sri Lanka k beech  
Kacchatcerv  $\rightarrow$  island h jo  
geo-politically disputed island h
- Maharashtra me bombay ke paas  
Elephant island h , historically  
important h

Table

types of Sols

I Incepti - 40 (39)

E Enti - 30 (28)

A Alfii - 10 (13)

V Verti - 8

A Aridi - 4

V Uli - 1

M Moli - --



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- Rocks ke classification 4 types se kic  
gaye archaean proterozoic dravidian &  
aryan.
- further inke kaaii subclassification bhi h  
jaise gondwana etc.
- Rocks se hi soil profile develop hoti h
- Soil is important for mining &  
agriculture.

• USDA ke classification k basis par  
indian council of agriculture research.  
me India me mile wale soils ke  
Y. ke base par 8 types of classification  
kiya h jo iss prakaas h.

I EA VA V M

Inceptisol	39.74
Entisol	28.08
Alfisol	13.55%



Vertsol 8.52

Aridisol 4.28

Ultisol 2.51

- - - - -

Mollisol 0.4%

India me 1986 me ICAR ne  
india ki mitti ko 8 categories me  
baanta

Jalodh (Alluvia)

black cotton / regur

Red yellow / matasi

Laterite

## Alluvial Soil

- India ke total soil profile ka 40% is mitti ko kaij area me kaamp ~~तीव्र~~ mitti bhi bolte h
- MP woh state h jahaan <sup>alluvial soil ka</sup> minimum deposition hai.
- Soil property
  - Potash & <sup>lime</sup> Choona ki mura mitti h jiki phosphorus nitrogen & humus cum mitti h.



Tarai areas me ugne wali fasle  
Gehu

Chawal

Banna

Potson / Jute

Soyabean

South india me coastal alluvial soil/  
pariyal ke liye bohot suitable h

## Black cotton soil

- Deccan plateau ke volcanic degeneration se bana h.
- Ye mitti mar maharashtra me <sup>mitti</sup> h.
- Cotton ki fasal ke lie suitable h.
- iske particle pas-pas hone k kaaran iski water holding capacity high h
- ye mitti jo time tk. moisture retain krte h.



• alt name = degur

• temp badhne se ye mitti sookh  
kr phat jati h.

• isko self ploughed soil bhi bolte h.

• Bahu arhar jowar alsi sarson  
fambakoo moongfalli etc ke lie  
fertile h

• Jowar max : Maharashtra trick bhakhri

• Moongfalli - Gujarat max

### 3: Red yellow soil

Area ka basis pr alluvial soil / k  
baad iska area <sup>of</sup> second max h

- iss soil ka profile India ke  
eastern part me more h

- distribution TN South MH CG

AP Orissa CNP(JHK) me h

- inme present red colour

ferrous  $\text{Fe}_2\text{O}_3$  iron oxid k karan h.

Ye mitti upar se laal h pr

neechे ki layers me yellowness h

isiliye is laal peeli mitti bolte h

isme phosphorous nitrogen & humus

ki kamai payi jati h

paddy crop k lie suitable h

in plains me redyellow soil mitti h.

## L laterite

- high altitude pe mitti h jahaan fast leaching process se iska profile develop hogi
- isme iron <sup>oxide</sup> aur aluminium oxide high hota h & iron ki excess k kaaran ye mitti less fertile hoti h  $\uparrow$  pucha h
- is mitti ka use construction me brick formation k lie hota tha.

is mitti me horticulture

products joise cashew mango kathal  
coffee Litchi ke banv ki kheti hoti h

Western coast ke along mar no  
me ye malabar <sup>(Kerala)</sup> coast me laterite  
mitti h

## Tropical evergreen forests

• India me jin areas me

200 cm ya more ka rainfall

hota h aise areas me evergreen

forest hota h

• • Western ghat ke along s

eastern <sup>(check)</sup> ghat me vegetn isi prakaar

Plant — Rosewood

Mahogany

Ebony

lach  
emp

Rubber

iron wood

• Northeast me Meghalay me  
Khasi tribe

• aise areas me milne }  
valley trees ki ht }  
60 metr tk ho sktih }  
tree root bridges banate h.  
aise trees ki }  
roots to  
apas me gootth kr

• Andaman & Nicobar me bhi ye  
vegetation milta h.

# Deciduous forest

• 100 to 200 cm are fall

wake areas me hole h

• Summer season ke start me

ye ped apni leaves gira detch

• Do types me divided

dry deciduous

moist deciduous

• Bagor Baa / Bheesham harra mahua  
Chandan etc ye forest ke types h

## Thorny & desert forests

• 50 cm se kam rainfall areas

jaise rajasthan biij MP me

ber                      khejdi                      khajoor

khair                      Paanash

Neem                      babool

• In forests me extreme dry weather  
me survive kone kuch adoption

milte h jaise <sup>2</sup> leaves size kam hona

2 leaves ka kalon me badal jaa

3 Roots ka gehra hona

4 stem mota hone / wax coated  
hona

Note : ye adoption karke water  
conservation badhaya jaata h.  
ya moisture retain krte h.

Western himalayas me tundra &

Alpine vegetation milte h jo lagbhag

banjar hota h

Jabki south mountainous range

Annamalai range & Nilgiri range 1600  
kamuchai wale forest  
to 2000 mtrs pc milte h jinhe

Shola bolte h

inme famous plant h cinchona jo

medically important plant h.

Mixed Agriculture : Agriculture & Animal husbandry

Sustainable Agriculture : Chemicals & Fertilizers ka min use karna

Mixed cropping : do aise crops ko sath me ugana jo bakh ek doosre ko protect kerti h.

Eg Cotton & Ladyfinger ko Sath lagane se Bhindi me paye Jane wala bacteria Kapadsko black spot disease se protected

crop rotation traditional

crop  
rock cycle k beech me

ek cycle aise plant ka jagana

jo leguminous plant ho & land

nitrogen recharge kri eg paddy  
k beech

pea, lentils, peanut

crop rotation h

## kharif season

India me weather k basis par

3 type ke crop cycles milte h

## kharif

monsoon ke ane k saath June

me 6 or 8 october Nov khatai

dhaan

bajra

Moongfalli

Makka

kappaas

Rabi

• October-Nov me boj h Feb me khati

• main crops gehu  
Chana

Matar

\* Season \*

On kaunsi kharif ki fahri h

Dhaan

Ragi

Makke or Maize

Bajra

(✓) Season

# Zaid ki fasal

- Tarbooj
  - kharbooj
  - kahdi
  - kuch vegetables
- } January &  
baad nivat  
bed sand pe  
lagate h = zaid

• J8k ka pampore      kesar production  
ke liye famous h

## GTS Geological timescale

~~dt~~

- As per gts universe ke forma  
me 13700 years ago big bang  
hua tha
- iske baad supernova hua 5000  
million year ago birth of star  
Like sun
- 4.6  $M_{\odot}$  <sup>billion</sup> yr ago birth of earth
- Earth par hue all geological development ko eons → eras →

→ period → epochs me baba gay,  
h jinme kuch imp events  
iss paakaar h.

e.g mesozoic era ko era of  
the reptile kaha jata h

cenozoic era me himalay  
ka upliftment shuru huo isiliye  
himday m<sup>r</sup> factory rocks milte h

Cenozoic era ke quaternary

period me 10,000 saal pehle

holocene epoch me modern man

ka jann hua.

kul ~~E~~ Latest epochs hain jo iss  
order me h. Oldest to newest

(P)ut

Paleocene

(E)ggs

Eocene

(O)n

Oligocene

(M)y

MIOCENE

(PL)ate

PLIOCENE

PLIocene

HONEY HOLDEN

Q Choose the correct chronological  
order of given epoches

Put Eggs on My Plate Please honey

Ans Eocene > Miocene > Pliocene

> Pleistocene > Holocene

Put	Paleocene
Eggs	Eocene
On	Oligocene
My	Miocene
Plate	Pliocene
Please	Pleistocene
Honey	Holocene

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## Climate

- greek word h
- India ka <sup>climate →</sup> monsoon based climate

kehata hai

- India ke climate to affect  
kone wale seasons

## ① Latitude

dist fm coast

② himalay ka presence

③ Relief

(dist fm sea level).

Coastal states me daily &  
yearly temp diff kam hota h  
Reason : sea ka balancing effect  
<sup>equable</sup>

Water ki spec. heat property k  
kaaran pani na bohot adhik  
thanda hota h na garm . iss  
kaaran usega ga coastal landmass  
hi bohot adhik garm ya  
thanda nai hota.

isilge daily ya yearly temp diff

3yada nai hota.

<sup>iske, opposite</sup>  $23\frac{1}{2}$   $^{\circ}\text{C}$  ke north ke states

me jahaan koi badi whatsover  
nai h equable effect absent h

jaise jaise west me thar desert

jata h air moisture content

l hota :. din raat me North

india me temp diff high &

yearly temp diff high h.

yahi reason h ki phar  
ke desert me din extreme  
hoti raat extreme thandish.

Himaly India ke climate ka  
ek imp factor h jo siberia ya  
middle east se aane wali extremely  
cold winds ko india aane se  
dokta h jisse north india ka temp

bohot zyada rai milta

Saath hi saath himalay south

west monsoon ko block karta h

S indian subcontinent se bahar  
nai Jane deta.

Altitude / ht fm msl

jaise<sup>2</sup> height ↑ hoti h temp ↓ hotah

Example agra & darjeeling same latitude  
pr h pr agra ke compared  
darjeeling cooler h reason altitude of  
darjeeling <sup>↑</sup> hone.

## Western disturbance

Shand ke samay India ke  
northern plains (Punjab Haryana)  
areas me rain ka reason  
western disturbance h ge  
mediterranean sea k effect se  
hoti h.

Punjab Haryana me iss samay  
gehu ki fasal hoti h ge  
rain vs fasal ko help  
koti hai.

## Monsoon

Arabian language ka word h jiska  
meaning h ziru or reversal of winds

Monsoon equator  $\approx 20^{\circ}N$  &

$20^{\circ}S$  me ghatne wali ghatne h  
par kisi region ki topography isc  
affected kr skti h jaise india me  
monsoon himalay se greatly  
affected detta h.

Surya ke <sup>summer</sup> solstice k time

jab T.O.C pe sunrises fer  
padti h to  $23.5^{\circ}$  ke upar  
ka india gaon hota h

temp badhte badhte  $45^{\circ}$   
degree chala jata h

iss high temp zone k saath  
yahan ek low pressure  
zone hota h

iske opposite indian  
ocean k south me  
equator k south se high  
po zone se fast winds  
HP to LP chine Jti h  
equator cross kote hi  
apparently inka direction  
change hot & S South west  
direction se monsoon in di  
Jhansi h. (according to ferrel's Law)

India me monsoon ka

first impact ASIV

jabki SW Monsoon ka landfall karde

landfall k sath hi monsoon

do badi branches me bat

jata h Arabian Sea branch

BOB branch.

- Assam ka digboi assam ki oldest refinery hai
- Bombay high india me petroleum ka highest producer hai
- ASN is the largest UT in area
- Vishweshwaraiya iron & steel (Bhadravati steels) india ke PSUs me oldest steel plant h
- Bharat me crude oil ki kholi first Brahmaputra nadi ghati me hui.

Tidal energy ke liye potential  
areas h Gujarat ~~mangroves~~

8 Bharnagar

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area wise  
top JK

Leh

third Andaman & Nicobar

Returning monsoon se TN ke  
lat par baarish hoti hai ya  
cocomandel/ coast returning monsoon se  
baarish recieve karta h December  
month me

• Withdrawal of monsoon = phise

reversal of winds h.

jo september me shuru hota h

& december me coromandel

coste barish karata hai.

• January month me North India  
me hone wali barish ka

reason western disturbance h.

• Bharat me hone wali total  
rain ka 75% Southwest monsoon se  
recieve hota hai.

• Southwest monsoon se TN ke  
coastal areas me rain nahi hot  
uske do reason h ① BOB branch  
Coromandel coast ke II nikal jati h  
jinki ② Arabian sea branch ke rain  
shadow area me TN ata h.

• TN ke coast par Coromandel  
cost pe rain SW monsoon

se nai hoti baiki returning

monsoon se hoti h dec me

• India me Agriculture monsoon  
par depend kohi h first  
agri cycle kharif cycle  
monsoon ke advent h  
sath show hata h.

Jau = Barley max produc Rajasthan  
jabki Jowar = Sorghum ka mix produc Maharashtra me  
hai.

- Bajre ka max production Rajasthan.  
Bajra ek millet hai.
- Soyabean is known as magic crop
- Soyabean ka origin china ka hai
- Soyabean me protein content 40 to 50%  
hota h

jisse soya milk soya oil  
Soya chunks bante h.

- MP Soyabean ka biggest producer hai
- Ye dalhan fasal hone ke banjood iski sowing kharif season me karte h
- Dalhan faslon pr india ki import dependency high jise dekhte pulse

policy ki shuruwaat hui gayi thi

pickle 3-4 years se cooking oil

ke prices india me badalte ja

the h season aise leck jinke

india palm oil import karta tha

unhone ya to export kam kr dia

ya band kr dia.

Sugarcane is a cash crop

jo terai areas me ya

100 to 150 cm rainfall wale area  
me hota h.

• branne sugar industry

ka raw material h

• branne se nikalne wala sheera

alcohol industry ka raw matl

• branne se milne wala ethanol

Indian govt ki ethanol blending

policy me use hota h

• currently fuel me 20% ethanol mix kr di

Note : fuel me ethanol mix kone  
ka objective h crude oil  
ke import dependency ko reduce  
karna

- 2003 me ethanol blending policy start hui. jiska start 5% ethanol mix kone se hui
- isse 2006 me vistara dete hve 20 states me lagu kia gaya

presently 20% ethanol mix karte h

Sugarcane ka use paper industry me hota h

banana bamboo ya jaggery a hi ek type h

banne ki bhoosi ko dagase bolte h

jo sugar industry ka waste material h CECB AE puchah

, Bagasse me calorific value hone

karan iske pellets banate h

jo chote<sup>2</sup> industries me fuel  
jaise use hote h

• Rubber : Tropical vegetation ka paudha  
h jo fundamentally brazil ka h

• India me keral biggest rubber producer  
h 30% produce krtah

Shatru,

Rubber

research institute keral  
ke kottayam me h

As per Land holding size  
farmers

Marginal 0 - 1 ha

Small " upto 2 ha

Medium " 2 to 5 ha

Large " more than  
5 ha

Per farmer

India	avg landholding	1.16 ha
"	"	1.36 ha

Marginal & Small farmers make  
upto 80% all farmers in India

• kisi bhi government k dwaara  
subsidy aelted policies small &  
marginal farmers ko dhyaan me  
rakh ke banate h.

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## Sectors of economy

Primary	Secondary	Tertiary
Agri S	Power plants	BFSI
Allied	Construction	Banking
eg Animal husbandry fisheries	Steel sec	Finance
forestry	Cement sec	Securities
Apiculture	Refineries	Insurance
Beniculture		Telecom
		IT solns
		Tourism

Note: Mining primary  
sector activity & pr  
Ago & Allied services  
me nai atq.

Mining

Mining

nonmetallic

ka purpose h metallic

radioactive raw

materials different industries k

lie available karana

Industries me do type ka

raw mat use hota h 1<sup>st</sup> Agt

based raw mat

jaisa jute cotton sugarcane

coffee

rubber

tea

etc

2 Raw materials which have  
metallic property &  
can be used in heavy  
industrial sectors

### Minerals

- Secondary sector ko chalaane  
k liye minerals ki pehlी  
necessity hoti h
- koi bī big industry kisi area

me lagana possible h jb us  
area me us industry se aetd  
raw mat available ho.

Note:

- Steel ko zang lagne se bachane  
usko zinc coat karte h is  
process ko galvanisation bolte h
- Mica ka india me world me  
biggest producer hai.

Mica is used in electrical equipment industries for the purpose of insulation

Lambe samay se mica ka largest producer jharkhand h  
jise haal hi me Andra ne peeche chod diya hai.

Rise minerals jinse metals milte h

in the metallic minerals belt h.

- Jaïse iron manganese tungsten  
copper lead zinc bauxite gold  
silver ilmenite barite tin.

• iron : iron mineral india me

mainly dharwaad rocks me  
mitch.

• Dharwaad series rocks ko

economically most imp rocks  
manu gaya h.

iron ore ki 4 cat

hoti h

① Magnetite

② haemite

③ Siderite

d.

④ Limonite

Best quality iron magnetite ko  
maante h.

A. Jbki india me mar haemite  
mitah.

- India me milne wala iron  
State wise  $\xrightarrow{\text{Imp sites}}$
- ① Ors  $\rightarrow$  \*Mayurbhanj & Keonjhar
- ② Konka  $\rightarrow$  \*Bellari, \*Chikmaglur  
Kudremukh hills
- ③ JHk  $\rightarrow$  \*Sindhroon
- ④ AP  $\rightarrow$  Kadappa & Nellore

Manganese ka max use steel sector  
me hota hai.

Manganese states 8 sites

MP Balaghat Chhindwara

MH Nagpur Bhandar

ORS Keonjhar Majurbhanji  
(same as steel)

Copper

electricity ka best conductor : silver

Second best = copper

Copper human k dvara id'd  
entitled first metal tha

Bates & sites

MP : Malajkhand Balaghat

Raj : Vagpur & kheddi\*

JHk : Sinhbloom  
(steeljaisi)

• Cu electricity ka good conductor h

islie electrical coils & wires me

use hota h

• Copper pr hamari import dependency  
h jo americal canadi  
se maastrate h.

India me public  
sector hi copper ki  
mining karta h name  
of sector hindustan  
Co limited.

c. Steel sector me coal  
ka ek special type use  
hota h coking coal jo  
open australia se import  
karte h.

Bauxite is the raw mat of  
the aluminium sector

- Silver : Hindustan Zinc Ltd
- Chromite ore Orissa me milta h.
- Gold : karnatak kolar  
Andhra pradesh Rangiri
- Gold → placer deposits me milta h.
- Note : Palm oil crisis ko dekhte  
hve indi govt reduced custom  
duty fm  $27\frac{5}{100}$  to  $16\cdot 5\%$ .

• Volcanic eruptions me

pyroclastic debris

Sulphur compound

Nitrogen

Ash & dust.

} nikalte  
h.

• keral ki monazite sand me

rare earth mineral - thorium

mita hai.

28 Nov 25

- Chandigarh ~~ek~~ joint capital h  
Punjab haryana & UT of Chandigarh  
ka
- Chandigarh India ka first planned  
city hai.
- Chandigarh me famous rock garden  
h jiske architect Nek Chand h.

- Diamond: Carbon ka upper form h  
Nature ka hardest material h
- MP ka panna me heera milta h.
- Heera kimberlite ki rocks me h.
- Bombay & Surat heere ke bade bazaar h jahaan se
- diamond ornaments banane k lie

Surat & Bombay popular market.

• Popular kohinoor heera golconda  
mines se milta tha jo presently

Telangana state me h.

• Mica : <sup>10\*</sup> Koderma Jharkhand me h

Jahar se mica milta h

Lead: galena ore me

Lead  
Zinc  
Silver } ek saath milta h

Rajasthan ke jhaawad <sup>10\*</sup> mines

me galena ore milta h

Mining rights Public Sector Hindustan Zinc Ltd, pash

Lead non conductor of electricity 28

• iska use steel sector.

• Graphite : Carbon ka upper roop h

jiska use pencil/lead  
is atomic reactor me

retarder/moderator ke roop

me use karte h.

• kuch industries me graphite ko  
dubin cant jaise use karte h.

• Gypsum : Cement industry ka  
raw material.

Top producer Rajasthan

POP ka base Gypsum hota h.

• Limestone : Raw material

of cement to

top producer Rajasthan

• Marbles : Makrana <sup>4\*</sup> Rajasthan

• Radioactive materials : Un materials ko bolte h jo time ke saath

decay hote h & saath hi

$\alpha$   $\beta$   $\gamma$  radiation radiate karte h

Uranium thorium Etc.

\* pucha h.  
• Cobalt 60 ki radioactivity ko

cancer treatment k lie use

karte h..

• Thorium : A radioactive  
material / jo india me keral  
ke coast pr monazite sand  
me milta hai

• Uranium : Jaduguda <sup>10\*</sup> JK  
"metal of hope"

Yellow cakes is a uranium concentrate  
powder produced from

uranium ore is an intermediate

Step in making nuclear fuel.

- Coal: India ka 98% coal is found in gondwana type rocks
- Categories based on carbon %:
  - 1 Anthracite — <sup>best</sup> Carbon 30% +
  - 2 bituminous — 76 to 86%  
India me max mithah
  - 3 Lignite ~ ka production TN  
ke Neyveli lignite  
me hota h.
  - 4 Peat

• Orissa Talcher

• Jharkhand Taria

• MP Singrauli

• Tel Singreni

• WB Raniganj.

Cool  
sites.

• Singrauli ko power house of  
India bolte h.

India me coal mining 1774 me  
Shuru hui - CGPSC

India me coal mining  
Jamodar river valley me  
Start hui first site

Raniganj WB

isliye Jamodar ko India ko  
coal river kehte h.

• Crude oil : India me

Babse pehle crude oil ki kholj

first Assam ke digboi Nagarkatiya

Area me hui thi

• Ye crude oil ka first source

h jiski kholj Assam me hui thi

Assam me ekavosite h

Burma valley jaha Tea + Crude oil

dono produce hotah

Bombay high Crude oil & Natural

Gas dono produce karta h

Gujarat ke oil fields Gulf of

Cambay & Ankleswar h.

Currently Offshore Pucha h.  
production

max crude oil produce karnika

State h rajasthan jo india ke

total crude oil ka 24% produce  
karta h.

• Natural gas : krishna

- Godavari basin India ka

biggest Nat gas deposit

mahanaya hai.

• Index of industrial production

Indian govt 8 sectors ko

core sectors manti h

jiske adhaar par iip

har 3 month me publish hatah

Ye 8 sectors iss prakar h

1 Coal

2 Electricity

3 Cement

4 Steel

5 ~~Co~~ Coal oil

6 Refinery

7 Natgas

8 Fertiliser

2 Dec 25 Geo

• Earthquake

↗ Seismograph pat Record  
hone ke series me

P S S L waves

me se sabse pehle P waves

record hoti h phir S,

phir last L wave record

hoti h.

Eg ki P waves fastest  
ig bhi L waves slowest chalne  
wali waves h.

In sezn waves ko do  
major cat me divide karte  
h body waves &  
Surface wave.

P & S are body waves  
whereas L are surface waves

L waves as surface waves

• jio max destructive hoti h

• Eg measurement <sup>me</sup> jab  
kabhi magnitude ka measurement

kiga jata h to is scale ko

richter scale bolte h

• jabki intensity measurement

meccelli scale se kiga jata

hai

• Earthquake ki waves se

earth ke structure ko

gamjhne me help mil.

ki koi direction nai

• L waves

hoti ye zigzag move kothh  
par

• P & S Waves jo body waves h

unhe epicentre se  $360^\circ$  par

alg<sup>2</sup> observations par record

kia jata h.

Inke observation me

paya gaya ki  
primary ya P waves

epicentre se  $105^{\circ}$  th

record hoti  $105$  to  $145^{\circ}$

record nai hoti S

$145^{\circ}$  k bad phis

record hoti h.

• Is prakar P waves k  
lie  $105^{\circ}$  to  $145^{\circ}$  area.  
(from epicenter)

• is prakar P waves k  
lie  $105$  to  $145^{\circ}$  = eq shadow

zone bolte h

• P waves ki property h  
ki woh solid lig gas  
beno me travel ke skti h

8 soundwave ki fasah  
medium ki density change  
hote hi ye refract kr  
jati h.

( , isi se scientists ne  
je conclude kia ki crust  
ke neeche molten magma h  
jabki core solid h .

## S waves:

- S waves ki property h ki woh kewal solid medium me propagate kr

Skti h

- . isilye crust / solid medium jahan tk h kewal wahar tk hi unko record kia

Jaya,

jaise hi molten magma

ka area aya s wave

reflected waves ho

gaya

islie S waves ka

observ epicentre

105° the took pulse

bad into observe nail to

skate jise S wave ka

shadow zone kehte h

" p wave ke compared  
badha hai

, agar  $360^\circ$  observation kia  
jaye toh earth surface ka

40% se waves <sup>ka</sup>  
earthquake shadow

zone hai.

trick:

• Mercalli scale = Intensity  
of eq

Green rating for  
integrated habit  
assessment - GRHIA

green rating

Types of Seismic waves

Wavetype	Nature	Speeds damask
P	Longitudinal	travel through solid, liquid, gas
body type	faster	-
S	transverse	only through solids
	slower	-
L	Surface	Most destructive
surface type	Slowest	-

• Transportation & Storage  
comes under tertiary sector

of economy

7 Dec 25 Ge.

- Study of population is known as demography
- British period me 1872 me India me first census hui - viceroy Lord Mayo
- Ye census pehli mani jati h par systematic, inclusive & 10 year census ki shuruaat 1881 me hui.
- iss samay india ke viceroy Lord Rippon the.
- 1881 ke baad har 10 year me census hua.
- 1921 - me India ki population

ghati thi. isilge is year ko population  
ka great dividing year kehte hain.

Azaadi ke baad <sup>pehli</sup> census 1951 me hui thi  
1931 ke census me pehli baar caste  
based census hua tha.

Iss samay india ke viceroy ioriy the.

1971 ke year me censusme india  
ka population badha tha isilie  
ise bhi true sense me great  
dividing year kaha gaya h.

Note C psc ne gn pucha which of these  
is the great dividing year of

indian census: option me  
1921 & 1971 dono diya tha.

Ans 1921 ko lie.

- 2011 ki census latest census h.

- 2021 me agli census honi thi jo  
ab tak nahi hui h jislie 2011

, ke hi numbers ko hi survey me  
skh ke padhna h.

- India ki pop 2011 ke numbers ke  
anusaar 121 crore h jo ki  
world pop ka 17.5% h.

Most populated countries of  
the world = China India America.

World census report k anusaar

2045 tk. India most populous country

to jayegा

Total population in india  
2011 census

Max populated state = UP  
min pop state = Sikkim.

Max pop  
—  
min pop

• 2001 ke comparison me

2011 tak india ka pop. 17.7%

Growth se bahri h. jise

decadal population growth

rate kehte h.

• Maximum growth rate increase

wala state Meghalaya h

• Tabki minimum growth rate

wala state h Nagaland.

Note Nagaland ka growth rate  
-ve h = -0.58% jo hi Chintu  
janak hai.

pop growth rate = 17.7%

Max growth rate

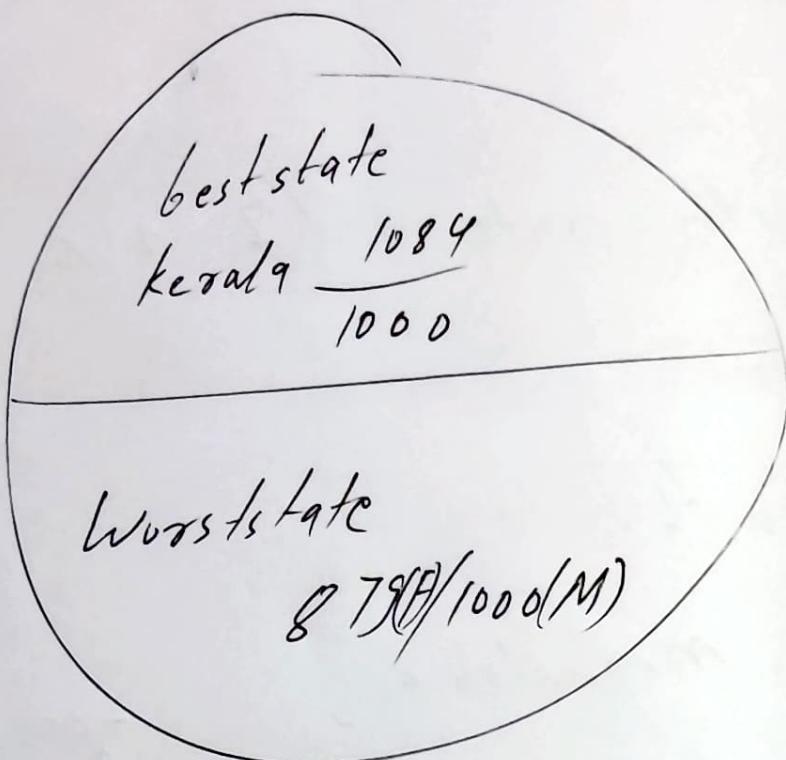
state = Meghalaya

-0.58%

Min pop growth rate

State = Nagaland

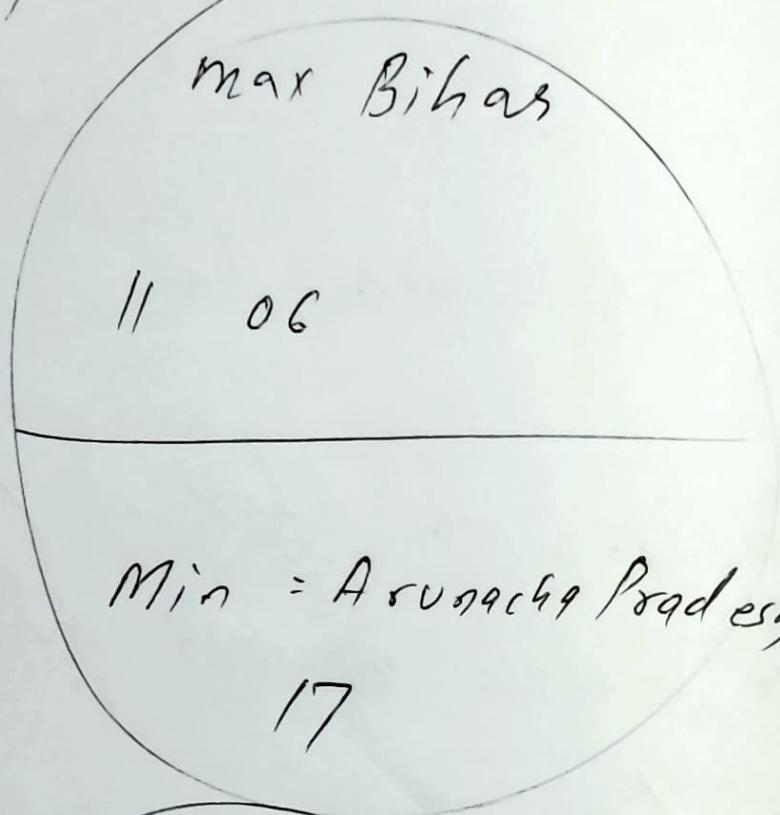
• Sex ratio:  $\frac{943}{1000}$  =  $\frac{\text{Women}}{\text{Men}}$



• population density: Per km<sup>2</sup> me kitne Log achte h. ise pop density bolte hai.

- India ki pop density 382 person per km<sup>2</sup> h.
- Max pop density Bihar ki h 1106 person per km<sup>2</sup> followed by WB 1023 person per km<sup>2</sup>.
- Note : 2011 ke census me WB most pop density wala state tha.
- 2011 ke census me Bihar ne pop density ke mame me WB ko peeche kar diya.
- Min pop density wala state h Arunachal pradesh 19 person per km<sup>2</sup>.

- UT of delhi ki pop density  
11,320 persons per  $\text{km}^2$ .
- pop densit<sup>y</sup> india = 382 p/ $\text{km}$



Note UT of Delhi has  
pop density of 11,320 of  
per  $\text{km}^2$

## Literacy

India me 7 years se above

ke person ke dvara khul

ka naam ~~lilch~~ lena & padh  
lenा education mane jyāh.

\* azadi के bad <sup>osa ko edubt kore chhattisgarh</sup> evening classes <sup>ko</sup>  
<sup>puchh</sup> n. androgogy ka hagyā

India me 2011 census ke anusar

total literacy rate 73%. h

jisme male literacy 80% se

upar female literacy

64% se upar.

• Max educated state

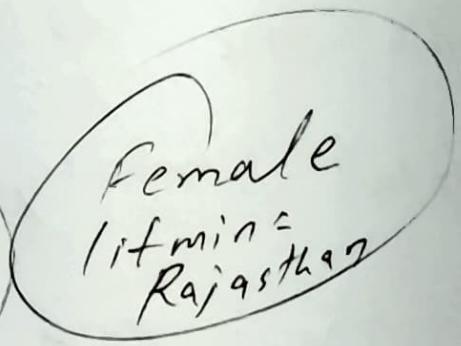
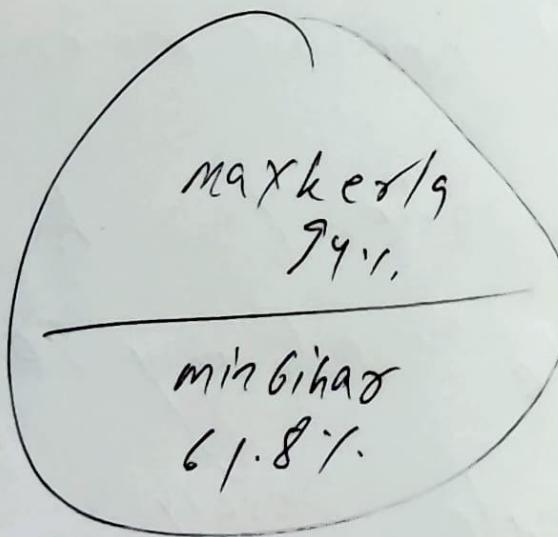
Kerala literacy = 94%.

• Min literacy = Bihar = 61.8%.

• Mahila me min literacy waqt  
state = Rajasthan.

Literacy 73%.

Male = 80% + female L = 64%.



SC Y. = 16.6%.

STY. = 8.6%.

Max pop

UP

MP

Max Y.

Punjab

Mizoram

Min  
pop

Nagaland

Punj & Haryana

LS 84 seats  
reserved  
in LS

47 seats  
reserved in LS

GBS

10

4

JVs

29

- Urban pop ratio
- All india UPR = 31.14%.
- Max urban ~~pop~~ ratio wala state = Goa
- Min " " " " " " = Himachal prad
- Jabhi pop ke base pc  
max urban pop state = MH
- min ~~urban~~ pop state = sikkim.

## Toda tribe

- found in settlements in Nilgiri range of TN
- Barrel Shaped or half barrel shaped huts
- Buffalo rearing & dairy work katch
- buffalo ko sacred mante h &
- embroidery me geometrical patterns use  
hote h.

09-Dec-25

Yellow revolution : Oilseed revolution,  
(not pink rev)

Red revolution : Meat  
tomato

pink : Onion  
prawns  
pharma.

Round revolution : potato

Fertilisers  $\leftrightarrow$  Grey revolution.  
Golden fibre revolution : Jute

- Evergreen revolutions MS swamianathan ka Odisha terminology - for all fields related to agriculture me max production lena.
- World me milk <sup>ka</sup> <sup>largest</sup> produced India.
- Cattle ke numbers me max India me hai.
- Animal census har 5 saal me hoti hai.

Tiger census har 4 saal  
me hota hai world ke

13 countries me tigers wild  
me milte h

ab inta 75% india me  
milta hai.

UP maximum milk produce  
karta hai followed by  
Rajasthan & MP.

Weightages ke basis पर

Refinery 28.04

Elect 19. 85

Steel 17.92%

jabki minimum weightage

Cement 5.37%

Fertilisers 2.63%

Investment to basis per

industries cat Micro Small

Medium

Indian govt to encourage aise

industry investment less than

25 lakh = micro

bill 5 crore = small scale

bill 10 " : medium "

Note :: Indian govt dwaarा industries  
related MUDRA 8 Apr 2015

Start ki gayi  
Micro units development &  
Re finance agency.

Udyam registration padh lena.

FMCG :: fast moving consumer  
goods

Footloose industry :: aise industry

jo easily place transfer kar skte hain  
& aisa kone k bad bhi koi loss  
nai hota er Computer Indust, BPO, <sup>Telecom</sup> in diamond indust

India me first iron & steel  
plant 1870 WB ke kulti me  
start kiye

1907 me first modern

iron & steel plant by Jamshed

Tata @ Jamshedpur.

1923 me M G Visvesvarayya k

dwarा Chadravati steel

started

Public Sector ke imp steel plant

① RINL Rashtriya Ispat Nigam

Vishakhapatnam (Vizag Steel)

② BISPL

③ Bokaro SP

④ Rourkela SP

⑤ Durgapur SP

⑥ Balco SP TN (Kaveri river)

Note: Odisha ke Paradeep port  
me South Korea ki private

Steel company posco Ludwarka  
ek plant banne the ~~the~~ hai.

Note : Azadi ke baad  
india ke resources & growth  
ki planning k lie 15 March  
1950 ko. planning commission  
form kie jo Russia ke Gauss  
model pe based tha.

1 April 1951 India ki  
first FYP start central  
topic tha agriculture

Model / Harald Doonee model

PC Mahalanobis ke leadership me

\* 1949 me National Income

Committee bani thi

Second FYP bhi inhi

ke mode/ pe banayi jayi thi

1956-1961 Note : targeted sectors  
heavy industries. Isi FYP ke  
Dauranam India ke famous  
Steel plants banaye gaye.

PC Mahalanobis ka bday

29 June ko Padta h

jise Indian govt k dwara

National Statistics day

ke saap me manate h

Inkedwara CSO ki thi

Bharpa ki gayi thi.

India ka first aluminum plant  
1937 WB ke asansol me lagaya = Jh

Nagar. Other in plants

① Balco korba 1965 USSR + hungary

② Nalco France ki help se odissa  
Koraput & domrajpodi

③ Hindalco : USA : UP ke zewakoot me

④ INDAlco : Canada :: WB JhK kera'

⑤ MALCO :: ITALY :: Chennai;  
Mettur  
Salem . TN

Fertilizer: India ka pehla TN 1906 Ranipet

Venaprodan JHK Sindri · Phosphate O<sub>3</sub>S

paradeep. Potash: totally imported.

Cement industry DAP: fertiliser :: Diammonium

phosphate :: has major content of

Nitrogen & Phosphorous .

Barson or Mustard ko max production

: Rajasthan karta hai.

Cement ka max production: Rajasthan

10 Dec 25

Periyar lake is not a lagoon.

India me present me 23 refineries hai

jinme se kuch refineries private  
halo me h jaise jaamnagar gujrat.

Assam me first india ke context  
me crude oil mila & 1901 me

first refinery Assam ke digboi me  
Shuru hui.

India ka oldest oil shodhan area:

Digboi Naharkatya Assam.

Total 23 refineries me se 3

private 1  
Gujarat DTA 8  
Jamnagar SEZ } by Reliance

③ Gujarat Wadinar - ESSAR oil. Ltd.

Cotton : India me max employment  
deewa wala sector h textile ye unorganised  
sector h but isme max ppl working  
h.

India ki export income me bhi  
bada part textile se ata h

IVC ke log cotton produce krene

wale wooldi ke first log the.

, <sup>cotton</sup> isko sindon kaha gaya.

ancient & medieval period me  
india cotton ka ek bada bazaar  
tha pr colonial period me britain  
ne india ko cotton ka raw mat  
market banा diya &  
british kaal me india ke hastkashaa  
& cotton industry ka deline h.  
gaya jise 1de industrialisation  
bolte hai.

India me 1818 me calcutta ke  
foot gloster me pehla cotton mill  
shuru hui jabki (imp) 1854 me  
panjikarabhai de dvara pehli  
modern cotton mill start ki gai.

Azaad, ke baad mumbai ahmedabad  
coimbatore & kanpur cotton ke  
bade ventres bane.

kanpur : " north india ka manchester bolthe  
jhi ahmedabad ko India ka manchester  
or East ka boston bolthe.

- Gujrat ka ankhleshwar ek industrial hub h jock boda oilfield h operated byONGC iske alawa pharma dyeing & chemical vdyog bhi h.
- India me centre of production jo India me hota h = offshore boltchisme mar Rajasthan followed by Gujrat & Assam.
- Rajasthan total production  $\approx$  23.2% produce kr dha h.
- India me tsunami warning centre hyderabad Indian nat centre for ocean info service, works under ministry of earth sciences.

- AQI Scale Air quality index.
- Good - 0 to 50
- Satisfactory - 51 to 100
- Moderate - 101 to 200
- Poor - 200 to 300
- V Poor - 300 to 400
- Severe - 400 to 600.

• AQI key pollutants are below to include kabeh

1 Particulate matter 2 SO<sub>x</sub> 3 NO<sub>x</sub> 4 CO  
5 Groundlevel Ozone 6 Ammonia and lead

• PM2.5: Refers to fine particles whereas PM10 refers to larger particles.

## El Nino & La Nina effect

• El nino → South America ke western coast me ocean currents ke dvara apna nature chng kiya jata h ye cold current warm current me badal jati h Iska effect south asia pe hota h including india isko el nino bolte h jab 4-5 years ke interval me indian monsoon adversely affect hota h avr rain cum ho jati h.

• Jki iske opposite lanina effect h jiske effect se india me ptn b'dhta h & thand excess padta h.

• La Niña effect causes a stronger southwest monsoon potentially wetter than normal rainfall & simultaneously leading to colder & harsher winters.

• Groundnut / moonfall = Max Gujarat

• Gorakhpur Rapti nadi ka bank pe h yahan famous geeta press hai.

• Tharu tribe ka relation Uttarakhand se h.

• Udaypur <sup>Rajasthan</sup> = City of Lakes

• Sequence of rivers

kisheoganga North  
Banga  
Wainganga  
Perganza South

- . Saddle peak 724 m North Andaman
- . Barak river manipur se nikalkar bangladesh jati h & jamuna(Brahmaputra) se milte jule produce max koi h
- . Note Bangladesh world me jute ka biggest producer hai.
- . Calcutta port new name Bhayama Poosad Mukherjee 2020 me hua.
- . TN me ennore port: New name = Komraj port

11 December 25

Haldi ka biggest Producer Maharashtra (not Rajasthan) hai

Haldi = Bagbag in chhattisgarh.

Dhaniya ka biggest producer MP hai correctly

Dhoodh ka biggest producer UP

Brehu Wheat largest producer UP

Western disturbances se thand ke samay

Punjab & Haryana me tayar gehu ki fasal ko fayda hota h. Western disturbance ko Punjab me Maharat bolte h.

Onset of monsoon se pehle premonsoon rainfall hota hai. Isko ~~the~~ Bengal area me kaal baisakhi bolte h jabki

Karnataka & Kerala me is rain se

mango fasail ko fayda hota h 8  
mangoes ripe hota : sliye in area  
me isko mango showers bolte hai.

. India ki pehli marine sanctuary jiske  
antargat coral mollusca tortoise dolphin  
etc animals dekh skte h gujrat ke rann  
of kutch me banah ocean sanctuary.

- . How CFCs damage ozone layer
- 1 Human activities (Refrigeration industries)  
Se nikalne wala CFC decree<sup>2</sup> atmosphere  
me accumulate hua
  - 2 theek that amount me jama hone  
k bad UV radiation isko bad  
jisse C/ka free atom banajio oxygen  
Se react bhi kr skta tha ozone ko

break down ho skताहै

3 Is prakar O<sub>3</sub> & O<sub>2</sub> ko tada & oxygen  
ke sath interact कर ye chain  
reaction chala.

4 Ultimately chlorine O<sub>3</sub> → O<sub>2</sub> → O<sub>2</sub>  
me badal diya. aur ye cycle thousands  
of time repeat hua

5 Is prakar cfc ke chote se amf  
ne stratosphere me ozone layer ko  
damage kiya.

• Phularnāt = Punjab.

• India m paper ka first use  
Berampur Missionary WB me kia gya.

Presently Newsprint printing k lie  
MP ka Neponagar main centre h  
jabki Securities ppd = MP ka hoshangabad

Sugar producing top states  
(not Sugarcane)  
MP > UP > Andhra > TN

Pharma industry india ka ek imp  
industry h. Jiska exports income me  
ek baada hissa. Start UK Rishikesh  
hardwar k aspas hu.

Ranbaxy india ki multinational pharma  
company hai.

- firecracker industry Sivakasi TN
- Gems Jewellery & Diamond polish Surat
- Tala udyog Allahabad UP
- kacca Mirzabur Shadai banaras UP
- Chudi Ferozabad UP
- India me 18 railway zones h jinme  
biggest Northern Rwy → HQ N Delhi:  
16<sup>th</sup> SECR Rwy → HQ Bspz G
- 17<sup>th</sup> Calcutta Metro
- 18<sup>th</sup> South coast Rwy → HQ Vishakhapatnam

• konkan any ke project Head E Shridharan

Jc western ghat ke along MH se  
karnatak tak bichayi gayi any  
line h jiske lie Western Ghat ke  
kai pahado me tunnel banaye h.

• E Shridharan ne age chlkr <sup>delhi metro</sup> DMRC  
project kya usiye unhe metro man  
bolte h

• Delhi se Rajasthan chanc wali tourist  
train : Palace on wheels

• Narrow gauge trains Run for tourism  
POV included in unesco world heritage list

Darjeeling Himalayan Rwy

Kalka Shimla "

Nilgiri Mountains "

- Passengers ke max transit k lie

VT terminal ya Chatrapati Shivaji  
Terminal, <sup>bombay</sup> Unesco WHS Site me  
included hai.

- ~~algae~~ North eastern frontier Rwy  
HQ : Hornbills Assam

- Study of algae: Phycology } 10\*
- " " fungi: Mycology }
- " " Cell = Cytology }

## Nuclear accident

1 6 Aug 8 J Aug 1945 America  
d wara