



24.08.2021

Paper - 1 (Part - B)
(Geo + Others)

PART - A

(A)

(B) Rome &

(C) Keibul Lamjao National Park
- Manipur
- world's only floating national park (2)

(D) Indira Point
- southernmost point India
- Andaman & Nicobar Islands (2)
- submerged after 2004 Tsunami

(E) Appalachian mountains
- Europe (1)
- ?

(F) P waves & S waves

- Earthquake waves - *similarly P - Sound, Light*

- P - Primary - passes - solid, liq, gas

- S - secondary - passes only solid (2)

- s - secondary - passes only solid (2)

(c) Medium & shallow soil in M.P
- Malwa Plateau (1/2)
- ?

(H) Saurashtra

(I)

(J) Check Dams
- Prevent surface run off
- Prevent soil erosion
- Availability of water post monsoon (1)

(K) cold chain
- Refrigerated passage for perishable

food
(1/2)
- Prevents action of micro-organisms
- Increases life of food products

over?

Gulf of Kutch

- (L) Marine National Park
 - Gujarat, Bhavnagar
 - Protects marine species.

①

mountain

- (M) Shela Forest
 - Tropical Evergreen Forest in western Ghats.

①

- (N) Geo-Tagging
 - knowing exact location of places.
 - It helps in knowing geographical origin

②

Wavelength?
frequency?

- (O) Microwaves
 - In Electromagnetic spectrum after Infrared and before Radio waves
 - They help in communication
 - They are also used as appliance to cook food.

①

(2) (A) Remote sensing *detecting & monitoring*

* A method in which Earth is mapped using satellite.

* It has various use such as weather, agriculture, etc.

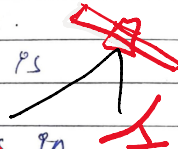
* It takes senses the surface of Earth by sensors which detect the terrestrial radiation emitted by earth's surface.

* National Remote Sensing Institute is in Hyderabad.

* Indian Remote Sensing Institute is in Dehradun.

Diagram

3/2



(B) * when river dries and silt from its bed remains forming desert.

* Desert formation have condition

- low or no precipitation for long period of time.

* usually in the tropical climate in world i.e. 10° - 30° N-S of the equator.

* Here, in the western margins of the continent due to drying up of monsoon winds.

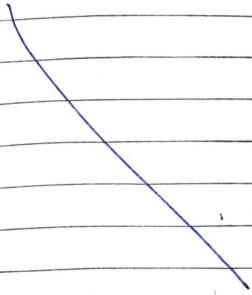
* Monsoon winds enter from eastern margins of continent in tropics.

e.g. Atacama Desert

- Thal Desert

4

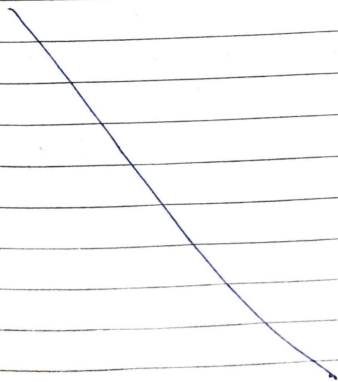
(C)



(D) Methods of stopping soil erosion in Chambal valley.

* Chambal valley form deep gullies and ravines as a result of soil erosion.

*



(E) * BHL is the largest tribe of Madhya Pradesh located in western margin of the state i.e. Ahrappur and Jhabua.

* They celebrate many fairs and festivals as part of their custom & ritual.

* Most famous festival is - Bhagorva celebrated especially in Jhabua.

mini.
2-3.
festivals
as BHL
with
Bhagorva

* It is celebrated for one week prior to Holi and is also known as love-festival.

* Boys and girls get ready and boys put gulal on the face of the girl they like and if the girl reciprocates in same manner they get married otherwise not.

1
30

(F) * Horticulture is the method of growing fruits and vegetables in agricultural land

* Madhya Pradesh has variety of soil and hence different type of fruits & vegetable grows in different places

* Guna is famous for coriander

* Indore - Potato / onion

* Khajuraho - chilli

* Ratlam - Garlic

* Amhindwara - Maize

can give MP map
3
I show fruits

DATE: <input type="text"/>	
(G) Eastern Ghats	Western Ghats
* extend from Mahanadi delta to Kanyakumari	* Extends from Gujarat to Kanyakumari
* They are <u>discontinuous</u>	* <u>continuous</u>
* They are low in height	* They are have comparatively higher

if compare
Scarpment
plateau

✓ They are low in height

✓ They ~~are~~ have comparatively higher height

* e.g. - Palakkada Hills
Nalkamalla Hills
Mahendragiri Hills
Velkonda Hills

* Sahyadri
Nigiri
Cardamom Hills

* Highest peak
Mahendragiri

* Highest peak
- Anaimudi (2695M)

(4)

⑤ Landslides is the movement of earth's crust in the form of rocks and boulders down the slope.

causes

Natural

- ✓ Earthquake
- ✓ - volcanic Eruption

Man-made

- construction of roads in hilly terrain
- blowing of dynamite for creating tunnels

Removal of soil
Dam
Reservoir

e.g - Recently in Kinnaur Himachal Pradesh
landslide caused mortality of 40
tourists

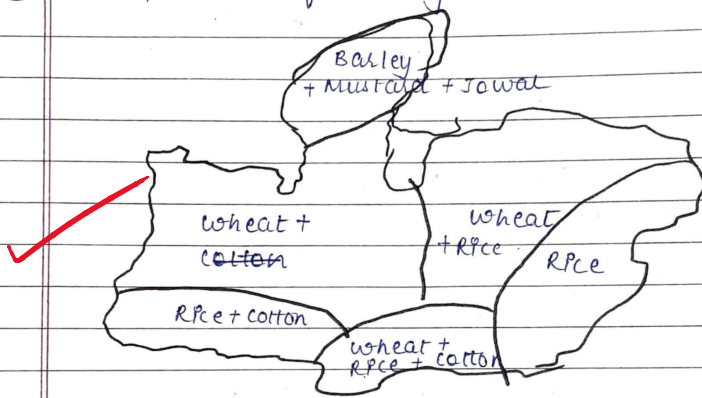
3

* Local blame hydropower stations for
the landslide.

Can give examples where hand
disaster 2013

I II

crop zones of Madhya Pradesh.



* Baghelkhand region - Rice
- Red & Yellow soils high precipitation

* Betul + seoni + Chhindwara
- wheat and Rice both

* North → Alluvial soil + low precipitation
- Jowar, Mustard

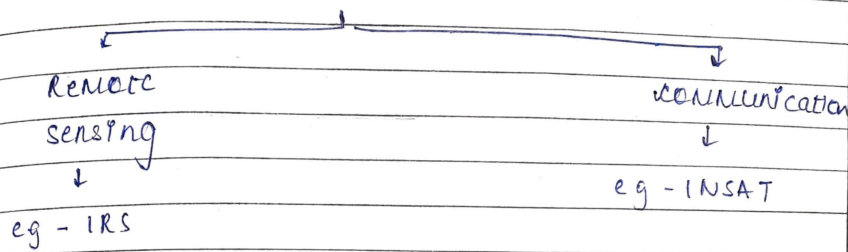
* Malwa Plateau - wheat bowl of M.P.

* NIMOL - wheat and Rice and
cotton.

3

⑦ Satellites have eased the procedure of disaster management.

There are two types of satellites



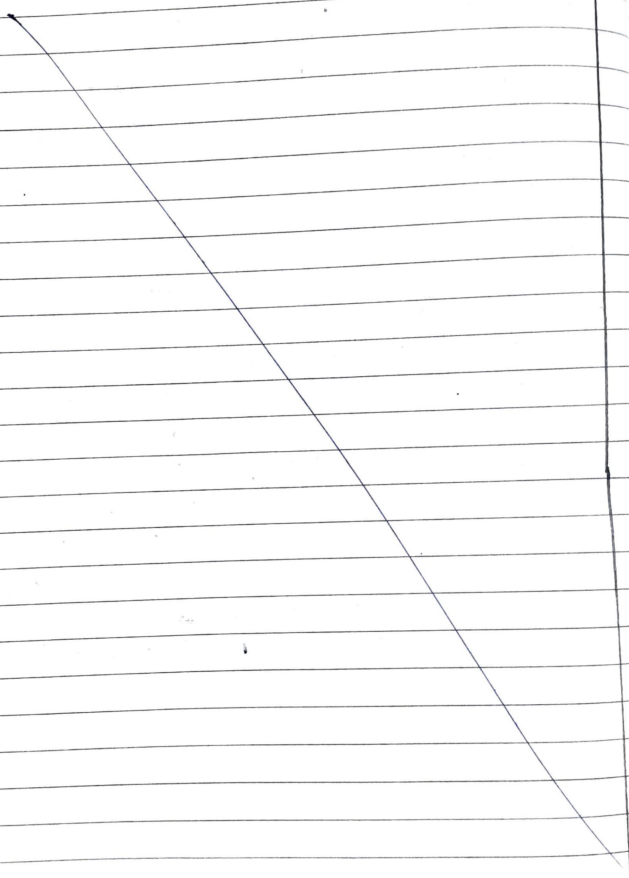
- It has helped in mapping the surface and hence tells us early warning system.

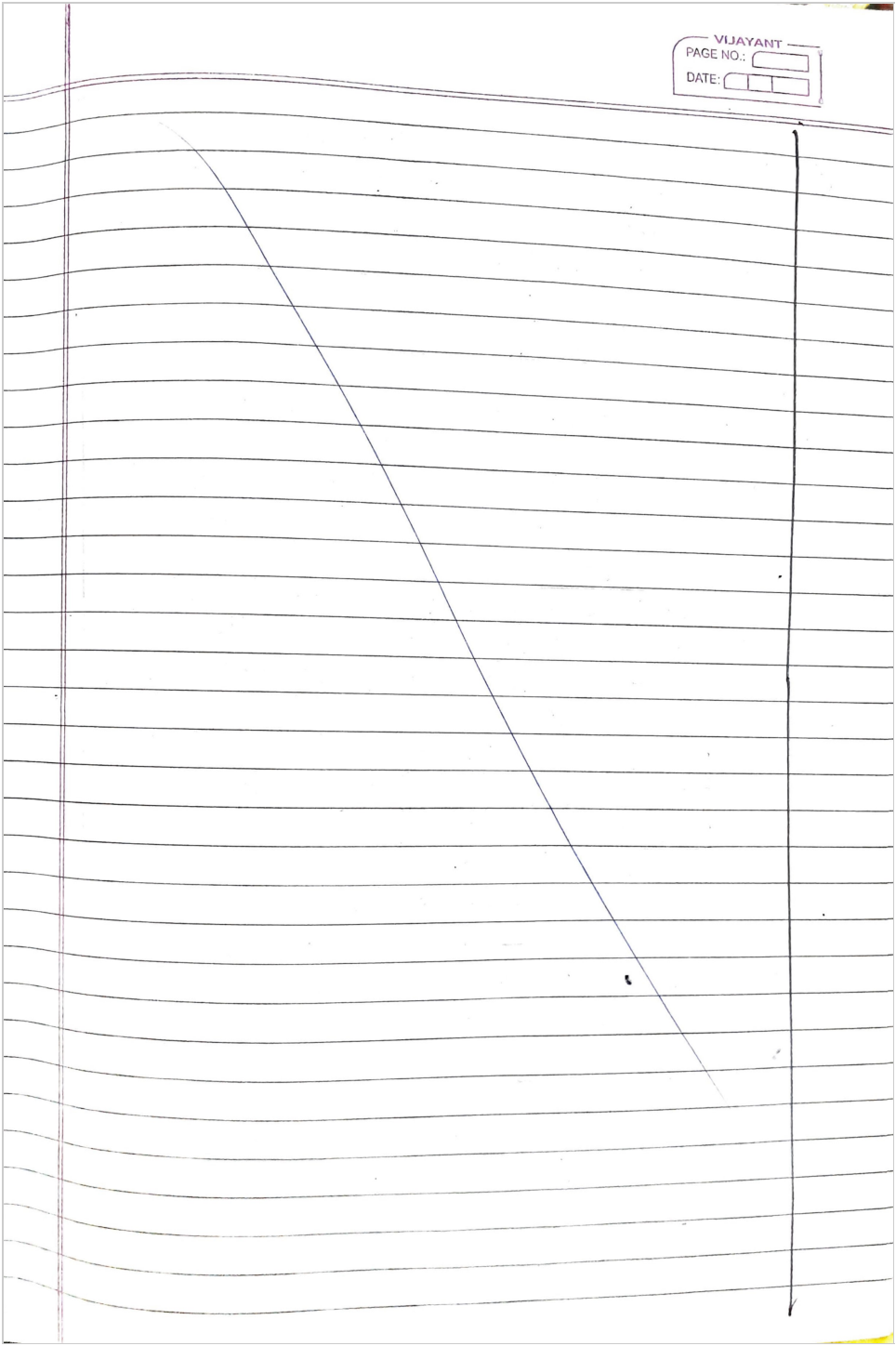
→ It helps in communication between different levels of govt and organizations involved in disaster management - NDRS, NCHM, YUKA, etc.

→ They are helpful in the process of relief and rehabilitation.

①
22

3 A

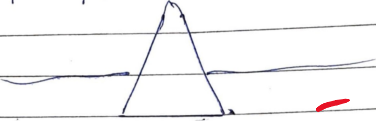




geological process

① Mountains are the rocky upliftment of Earth's surface with pointed top and steep slopes

Size? in meters

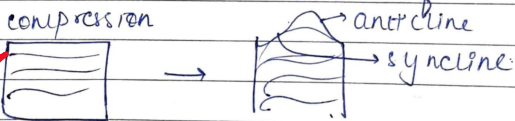


There are different types of mountains

fold block residual volcanic

* fold mountains

- * - also known as mountain of elevation
- It is formed as a result of stress on earth's surface

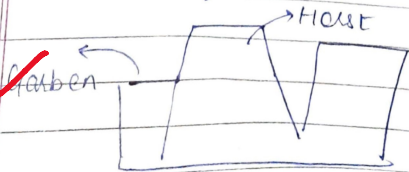


- stress
- ┌ weight of rocks
- ├ magma flow
- └ expansion / compression

- e.g. - Himalayas

* Block mountains

- It is formed as a result of faulting



- faulting can be due to compression or tension
- if the blocks enclosed remains and other subsides block mountain is formed
- e.g - satpura and vindhyachal.

* Residual rocks

- also known as mountains of denudation
- when other areas are denuded and lowered, the resistant rocks remain.
- These resistant rocks form residual rocks
- E.g - Aravalli

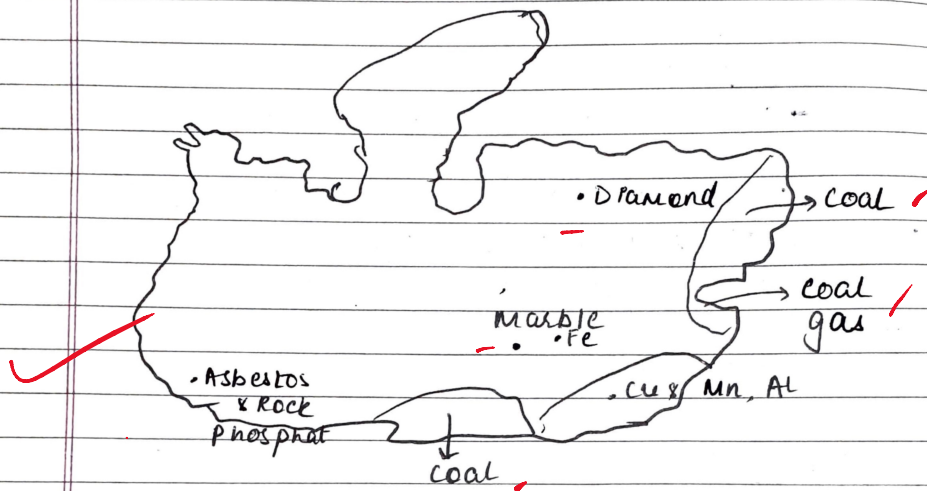
* volcanic rocks.

- also known as mountains of accumulation
- when volcano erupts the magma which flows down as lava for cools and settles and the evolving structure is known as volcanic mountain.
- E.g - Mt. Kilimanjaro (Africa).

please
give basic size
& mountain
in definition
& add.
contain

5 1/2

© Madhya Pradesh is a part of Deccan Plateau formed due to volcanic eruption and hence is rich in mineral composition.



various minerals found in M.P are :-

- ① Coal :- found in sedimentary rocks
:- mostly bituminous
:- 4th largest producer in country

Open site is
detour 2.

Western coal fields

→ Panakhera
- Betul

→ Mchapani

→ Chhindwara

Northern coal fields

→ Singrauli

- thickest
coal bed

→ Shandel

→ Umaria

② Copper
- Malajkhand mines in Balaghat

③ Manganese
- Bhaeruli mine (Asia's largest open mine) in Balaghat

④ Asbestos
- Jhabua
- used in making sheets

⑤ Marble
- Green, Red - Gwalior
- White - Jabalpur
- Coloured - Balaghat, Chhindwara, ~~Shajapur~~

⑥ Dolomite
- Rewa, Katni

⑦ Diamond
- Panna

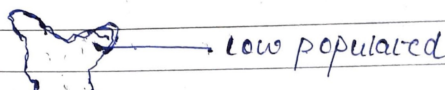
U.P is 4th state in India in terms of mineral distribution

- It is the sole producer of diamond in Kimberley region of Panna, Chhatrapur.
- state receives its maximum revenue from coal production.
- sand mining in Narmada valley is also prevalent.

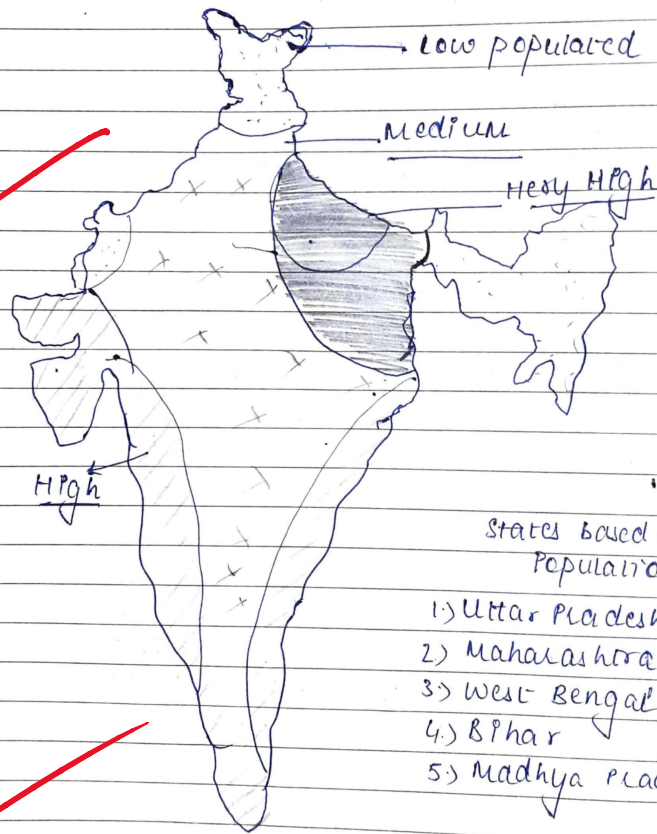
data ? or % of minerals

⑥

⑧ India is a country of diversity. Physiographic diversity throughout the country with respect of mountains, plateaus, plains, etc decides the population distribution.



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- In ancient times, the civilizations established around river valleys as continuity in water source throughout the year. In the absence of drainage system

→ Hilly terrains are difficult to sustain life as the physical conditions are extreme and harsh to adjust

→ Hence plains are the foremost choice.

→ The northern plains drained by mighty Ganga is hence the reason for high population in Uttar Pradesh, Bihar and West Bengal.

→ Maharashtra has high population due to urbanization. e.g. - Mumbai.

→ states having lowest population

- SIKKIM.

As it is situated in Himalayan region and also owing to its small size and difficulty in connectivity, Sikkim along with north-east states are sparsely populated.

Hence, distribution of population depends on no. of factors

- Terrain i.e. physiological conditions
- Availability of water
- Urbanization.

population data?

2011

4 1/2

(E) Water is the most essential part of living organism composing 90% of their body.

Earth's surface is 71% covered with water but 97% of this is in oceans, unfit for consumption and out of remaining 3%

Drinking water →

2% is trapped in ice caps as glaciers

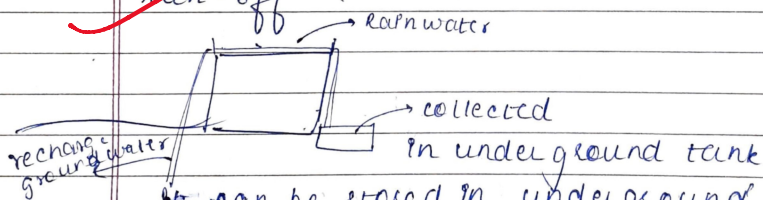
0.1% is available as surface and ground water for human consumption.

Hence we need to conserve this essential source of our very being.

various methods of water conservation

- Rain water Harvesting

- Rain is the purest form of water and we need to store it and prevent its sun-off



It can be stored in underground tanks or as to recharge the ground water.

- This is very important way and has been made compulsory in Tamil Nadu and largely practiced in precipitation - low regions such as Rajasthan.

- Dams

- The rivers usually recharged in rainy season (peninsular rivers) only flows in that season and remains dry all year around, specially peripheral rivers originating from Himalayas flows and deposit all water into oceans.

specially in water-deprived regions we must build dams to stop wasting water by just letting it flow in to oceans and can be used in all seasons

- for drinking water
- for irrigation
- for industries.
- for generating electricity
- check dams can be built in hilly terrains to prevent soil erosion.

- Public Awareness

- People must be made aware about the availability and importance of water so that they use it judiciously.

- systematic metering system must be installed to check the misuse of water

- water treatment plants should be established so that domestic water can be reused for irrigation and gardening purpose.

please conclude properly

6

Part - B

① (A)

Prime Meridian

imaginary line drawn from N. to South as half circle

→ 0° longitude passing through Greenwich, London

→ It joins the base line of time as Greenwich Meridian Time (GMT)

→ India is 5:30 ahead of GMT

2

→ ... is 0.30 ... of 4 m /

(B) Russia

(C) Mount Mayon

(D) Paleo Magnetism

(E) Igara tribe
→ Ironworkers subtribe of Gonds
→ they worship Lohdev
→ they are first one to use iron
~~and steel~~ as metal.

1/2

(F) kaolinite

(G) Deenbandhu Yojana

1/2

- For poor, marginalized society
- Their uplifment is prime focus

(H)

RO → Reverse Osmosis water Purification
→ through a semi-permeable membrane
→ wastes a lot of water

UV → Ultra violet water Purification

- They kill micro-organisms by overlight
 - They are better
- (1) word limit

(I)

MEO → Middle Earth orbit

- used as satellite launching station orbit
 - between LEO and GEO
- (1)

(J)

Chernobyl disaster

→ Nuclear disaster

- 26 April 1986, Ukraine
 - due to dev. of high pressure in core chamber, it exploded.
- (2)

(K)

Geo MGNREGA

- Using of Mahatma Gandhi National Rural Employment Guarantee Act to build infrastructure helpful in Geography
 - Dams, Rehabilitation centres
- (1/2)

(L) ground water conservation
↳ scarce resource →
↳ ground water table depleting **D**
↳ Arsenic and Fluoride concentration

(M) Umling La Pass

(N) Mount Thullax

(O) GPS
- Global Positioning System

(2) (A) → Coral reefs are hard calcareous dead remains of polyps belonging to group coelentrata of Animal Kingdom ✓

→ coelentrata have two forms polyp and medusa

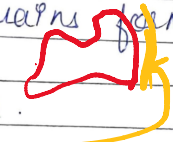
→ Polyps form hard calcareous colourful shells around them throughout their life time.

→ When they die the calcareous remains and many such calcareous remains form coral reefs

→ Eg. Great Barrier Reef, Australia.

1
3/2

map →



(B) → GIS stands for Geographical Information System.

→ It collects the data from satellites such as IRS, INSAT, etc.

→ Then it arranges the data in useful form so that it can benefit others.

→ It is used in disaster management, planning of government policies.

→ It is used for understanding geography (3) : better in educational system.

(C) → Tundra vegetation is found in highest latitudes

→ It is also found in top of mountains, i.e. in high altitude ranges

→ They are characterised by no vegetation (2) except moss and lichen

→ Polar bears are found as animals

→ Eg - Antarctic and Arctic circles.

(SP)

(NP)

includes world bios. 5 marks Q.

(D) Different components of remote sensing

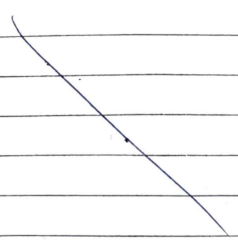
- (E) - cement is the basis of development
- It is made up of limestone, water, gravel, etc.
 - In M.P. cement industry is located in Katni Belt ✓
 - Katni is also known as lime city due to abundance of cement industry ✓
 - ACC, Diamond, etc many companies have established their plant here. (1/2)

- (F) → Mahi river originates from Dhar district ✓
- It flows south-west forming delta in Gulf of Kutch.
 - It drains M.P., Rajasthan and Gujarat
 - It crosses Tropic of Cancer twice ✓
 - The Dhar Dhar National Park (fossil) is located on its bank. (4)

MP
MAP

(G) watershed management

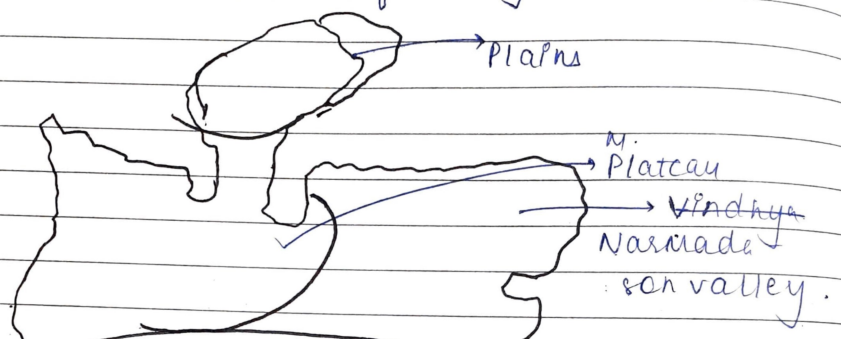
④ water shed management



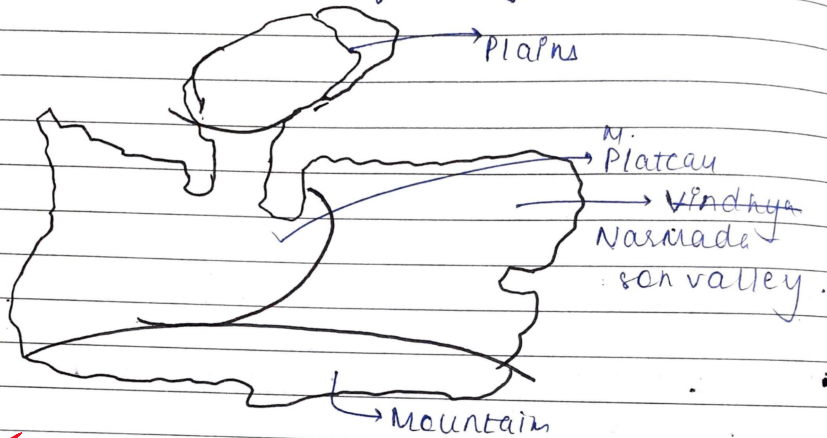
- ① → Epidemic Disease Act was enacted by colonial British Govt in 1897. ✓
- It deals with government administration during epidemics.
 - It gives govt to control and take necessary measures to limit population exposure to endemic.
 - It can direct hospitals for required arrangement.
 - It was widely used in the management of COVID-19 pandemic. (3)

① Malwa Plateau & central.	Bundelkhand Plateau
- western region of M.P.	→ North region of M.P.
→ Black soil	→ Mixed soil - Red, Yellow & Black
→ crop - wheat	→ crop → Mustard, best in agriculture
→ River - Chambal, Mahi, Parvati	→ River - Betwa, Ken
→ lowest place - Bhopal	→ Sdaha baba → Highest peak
→ Highest peak → Sigar	(4)

⑤ ⑧ climate distribution of Madhya Pradesh.

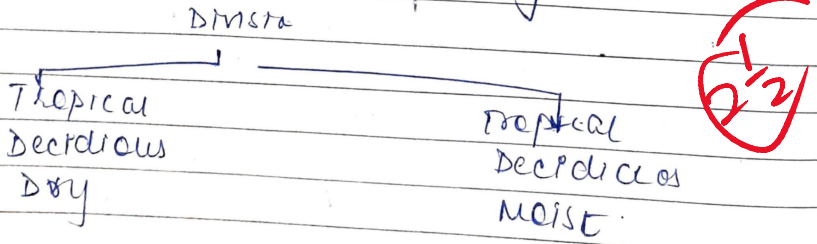


5) Climate distribution of Madhya Pradesh.



On the basis of climate MP can be divided into 4 regions

- Hot dry climate → Northern Plains
- Moderate [Malwa, Narmada-son valley]
- Mountainous → Satpura & Windhyachal.

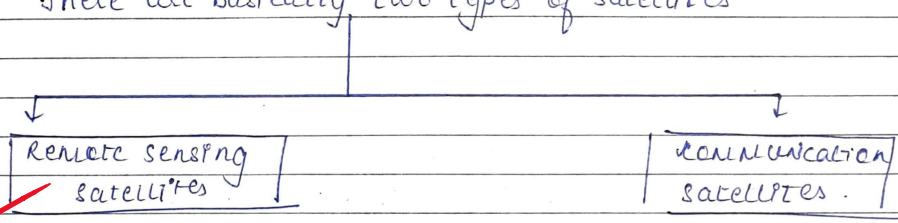


⑤ (A) satellite is a body which rotates around the central body in a well defined orbit.

- Eg - Earth is a satellite for sun
- Moon is a satellite for Earth.

Human science has developed so far that we now with the help of artificial satellites rotating in well defined orbits study and communicate.

There are basically two types of satellites



→ REMOTE SENSING SATELLITES

→ These satellite clicks pictures of Earth and sends it to space centres.

→ space centres combine the images and other information gathered and produce a useful information with the help of GIS.

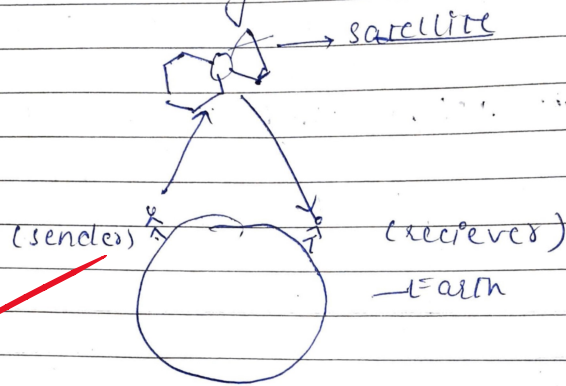
→ They are helpful in various ways

- climate prediction - helpful in agriculture
- soil moisture
- disaster prediction - cyclones.

→ India has launched its own remote sensing satellite → IRS → Indian Remote Sensing Satellites.

→ COMMUNICATION SATELLITES

- These satellites take signals from earth and transduce, located on it, amplify and send signal to receiver.



- They help in television, radio, mobile communications.

- They use electromagnetic spectrum.

- They are specifically beneficial for comm. at disaster times when normal communication steps using satellite phones.

satellite is the most intelligent development of human race, which has eased the life and shortened the distance between two places.

5

(B) Lakes are form of water bodies surrounded by land on all sides.

They can be of many forms

- crater lakes - Lonar Lake, Maharashtra
- Fresh water - Wular Lake
- Blackish - Chilka Lake.

- Lakes are beneficial for mankind because

- source of drinking water
- pisciculture
- tourism
- sports
- physiological benefits
- ~~transport~~

* source of drinking water

- Lakes form an important source of drinking water in case of fresh water lakes.

- E.g. Upper Lake of Bhopal distributes for water to the city.

- It must be passed through water

~~Treatment~~ plant before distributing so that it clean and hygienic.

* Pisciculture

- Lakes form an important source of economic activity.

- Fishes and other aquatic organism thrive in still waters

- It gives ~~employment~~ ^{work} to large section of society.

- Tourism

- Recreational activities such as boating, para-gliding, sight-seeing, etc are very common in lakes.

- Street vendors establish shops of food and various items.

- These promote economic activities.

- Sports

- At present, many sports such as canoeing, kayaking, etc are done.

- They are of both recreational as well as economic value.

- Physiological benefits

- Due to differential heating of water and land, during daytime in hot weather, the lakes give cool sea breeze.

Geological & Climatic benefits

- Transport

- Big lakes are used as transport channels from one place to another.

- They are cheap and economical mode of transport.

6

Lakes are very beneficial to mankind be it Caspian sea or lakes of America.

They are only beneficial.

Transport lakes Example

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③ Energy gives power to derivate other activities.
It can be renewable or non renewable.

Renewable source

- The source of energy which is inexhaustible in near future and replenishes itself quickly.

e.g. solar energy

- hydro energy

- geothermal energy

... minerals and resources rise quickly.

- e.g. solar energy - geothermal energy
- hydro energy -

Non-renewable source

- The source of energy which is exhaustible in near future and its replenishable rate is far more than its using rate.

- e.g. - coal
- petroleum
- natural gas

→ Madhya Pradesh is rich in both the sources of energy i.e. renewable and non-renewable.

Non-renewable sources

Coal :-

Western coal

Fields

- Betul
- Hoshangabad
- Chhindwara

Northern

coal Fields

- Singrauli
- Shajdol
- Umaria
- Anuppur

- Petroleum refinery
- Bina - Agard - sagar ✓

- shale gas
- shahdol ✓

- Renewable source of Energy

- Solar Energy

- Tropic of cancer divides the state in two half.
- summer - sun shines brightly over tropic of cancer -
- Ample solar energy potential
eg - Rewa solar plant - 750 MW

- wind energy

- Jamodan - Dewas ✓
- Indore

- Hydro power plants

- Chambal River valley project -
- Narmada
- Indira Gandhi
- Omkareshwar

Hence MP is rich in energy sources both renewable and non-renewable.

*its my
que so
give mp &
highlight
P. & N. Rem.
Sentences.*

9

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① Food processing refers to modification in agricultural products in such a way that it increases its shelf life and value of money.

Food processing industries

- Dairy - butter, cheese, paneer
milk powder

- spices - powdered

- ready to eat snacks

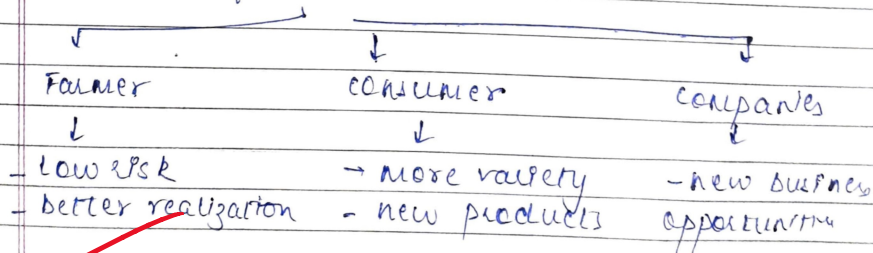
Milk powder

- spices - powdered
- ready to eat groceries
- meat and poultry
- snacks, namkeens, biscuits etc.

* Good processing helps in

- easing market & distribution
- check post harvest losses
- add extra nutrients like vitamins
- product available - off season
- store perishable foods

* st benefits



- India being largest producer of food in world and variety of agro climate factors. Is a great market for food processing industries.

3