J B.	Apogee – farthest position of Earth from sun. perigee – nearest position of Earth w.r.t. sun.
	• This happens due to elliptical movement of Earth around sun.
I F	• largest freshwater lake of India. • located in orissa near Mouth of
I O	• NIDM – formed as per Disaster management Act 2005.
	• To provide institutional support to "National Disaster Management Authority" (NDMA)
I L	• various crops comes under Agricultural export like wheat, rice, spices, raw cotton
	• After Independence, India has greatly increased its exports in Agriculture.
J K	FSSAI – Ensures food safety & security in India, by PDS (public distribution system) Stock Management (To utilize food grains i

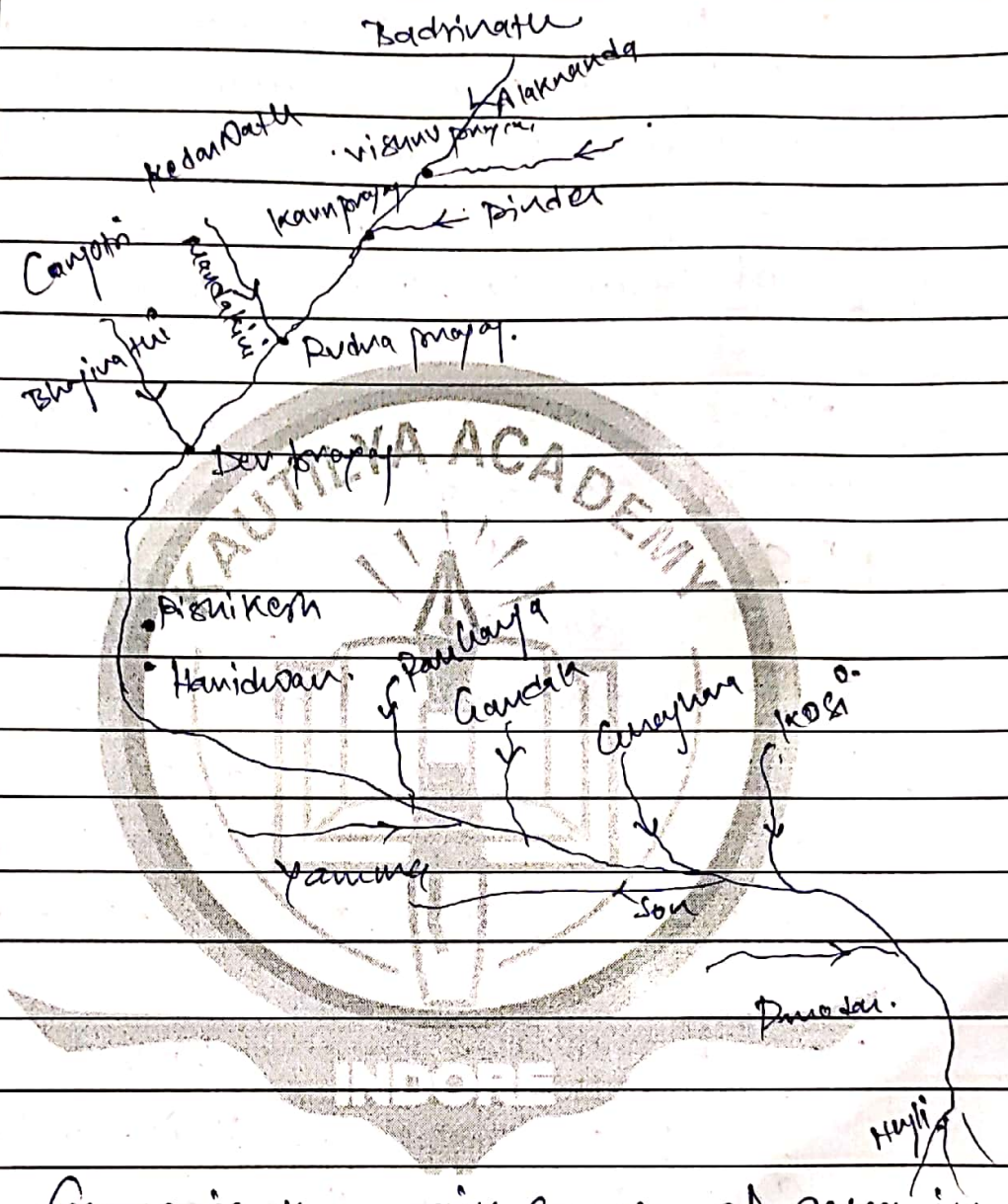
efficiency, specially in scarcity conditions.

1 E
- Dharwad Group is famous for coal mining,
- Ancient rock system of India.
- Mainly in Peninsular region & created during pre cambrian period.

1 a
Lipulekh pass – Located in Uttrakhand.
- B/w India & Nepal.
- In Kumaon Himalayas.

1 1
Express way – Six or Eight line highways to travel larger dist. in lesser time.
- Greatly helpful in improving economy.
- In case of emergencies, express ways are also used by Indian Air force for emergency landing of Aircrafts.

Q3 B



- Ganga is the main source of water in Punjab and Northern plains. It is an Antecedent river.
- Right bank tributary → Yamuna, Son & Damodar.
- Left bank tributary → Ram Ganga, Gomati, Ghaghara, Kosi.

• As North-plain is smooth, canals irrigation played important role in irrigation b/c it is easier to construct canal in smooth surface than surface of peninsular plateau, harder than clay-plain

• Its right bank tributary is Yamuna & Son which consists of important river of M.P.

1) Chambal – trib. of Yamuna – originating from Janapav hills, Indore & merged in Yamuna near Etawah UP.

2) Son – trib. of Ganga – originating from Amarkantak & merged into Ganga near Danapur, Bihar after travelling 780kms.

• This area is having highest population density – reason is that it is historically settled region like NI in vedic or later vedic region & when people began to settle, Magadh empire established & we all know the prosperity of that period at Magadh.

- Though, being historically so enriched, but still poor population / cheap labour intensive population still belong to this region only.

- This region has vast potential to camp Green Revolution II as soil is very fertile & cheap labour to work on field is also available.

- Kosi, one of tributary of Ganga, is continuously changing its course because of which area in Bihar came under flood-prone & probably Every year flood in Kosi river has devastating effect in Bihar — Reason is Kosi river with itself bring lots of sediments / silt which gets deposited in course of river & flooding takes place.

- Ganga river system is largest river system in India but still underdeveloped in terms of prosperity. Govt. should look into these potential & should frame schemes & policies Accordingly.

3 D.

Ground water — Water which when deposited inside the aquifiers beneath earth surface through porous & permeable soil, is called as Ground water.

- India consumed 70% of GW & As per NITI Ayog Composite Water Mgmt Index, 21 cities will go out of water by end of 2020.

- This condition has arised because,

1) people having misconception that ground water is unlimited & can be used forever with same quantity.

2) Irigation in peninsular areas mainly in Western & central parts greatly depends on Ground water because in peninsular area, tank & canals is not easy to construct & maintain.

Therefore, people greatly depends upon ground water resources. Benefits of it is — No evaporation losses, No seepage losses from canals, No need

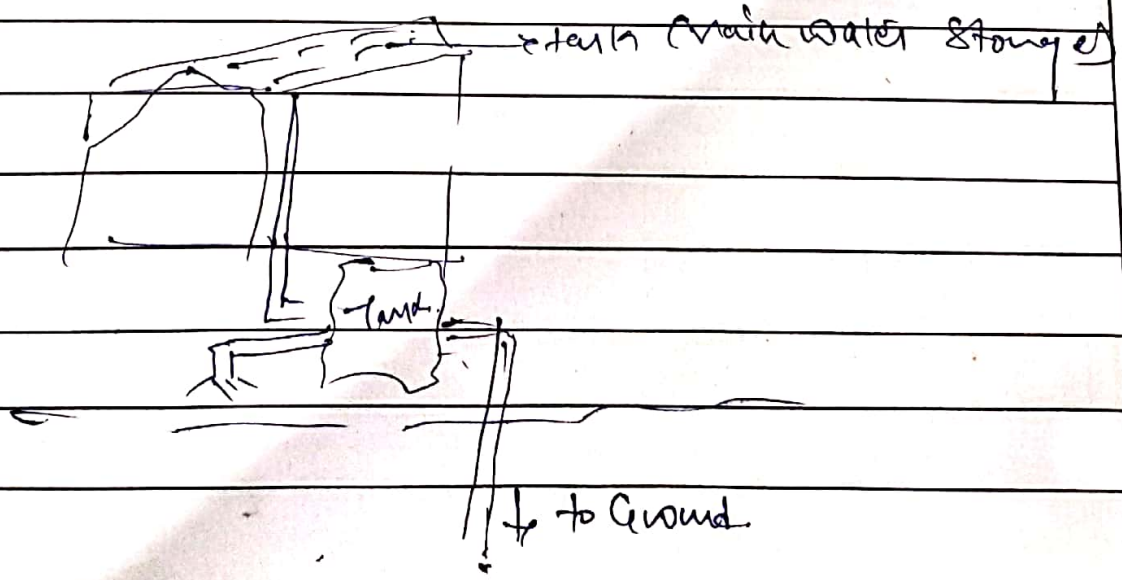
of Network channel. Therefore, Approx. 65-70% of irrigation is done by Ground water in M.P. also - mainly in Malwa region.

- But in recent years, dependency on ground water is greatly increases - reasons are -

1) Urbanization.
2) Demand more than supply.
3) Polluted Surface water.

- Therefore, in order to maintain sustainability it is required to utilize ground water efficiently.

- Ground water needs to be conserved by Rain water harvesting.



In this method, rain water is stored in tank which can be utilized locally or when it is of no use, can be feed to ground so that Aquifiers gets recharged & water-table level goes up.

- Ground water is precious gift of God & as a citizen, it is our duty to consume it judiciously & also inspire other for the same so that sustainable utilization can be done.

Q c

• During British period, three major land settlements are used —

1) Zamindari system
2) Ryotwari system
3) Mahalwari system

In Zamindari system, Zamindars was allocated for particular fragmentation of land i.e. he is the ultimate authority to pay taxes to Govt. & also to earn his livelihood. In this system nearly 1/11th part was left to farmer after all deduction — suppressed the condition of farmers in countries.

After Independence, Govt. has certain thoughts regarding improvement of land settlement & therefore land reforms took place. Its need is —

1) Unbalancing in distr. of land.
2) Poor became more poor & rich became richer with such kind of land distri.
3) uneven in Area of land allocated.

प्रश्न संख्या

मुख्य परीक्षा उत्तर पुस्तिका
(Mains Answer Sheet)

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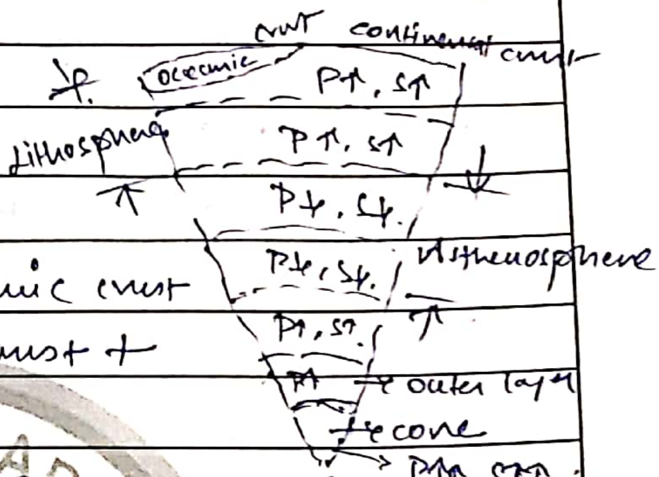
- According to reforms, land ceiling was decided in order to distribute land uniformly.
- Id.
- Identification of land took place in terms of productivity which depends upon, soil, rainfall, topography etc.
- Special care was taken to develop area of low productivity as Green Revolution took place & Govt. is keen to increase productivity in Agri. also.
-

2 A

• Litho



• Lithosphere = oceanic crust + continental crust + upper mantle.

• This lithosphere flows over semi-molten or plastic type Asthenosphere in which convection cells develop.

→ To know the internal structure of Earth, Primary & secondary waves are passed.

• These waves have following properties–
P wave → passes through S, L, G.
S wave → passes through S, G.
Speed of waves → S > L > G.

• When these waves are passed as shown in figure, there speed increases in Lithosphere as it is solid — decreases in Asthenosphere but S wave passing that means it is a semi molten solid — then speed increases — then in outer layer of core, as it is liquid, P wave passes but S ~~not~~ cannot. then at core, speed of both waves tremendously increases — hence highest density of core.

Q K

Methods of Efficient irrigation system -

1) Use of Vermi compost :-
- It is a mixture of Earthworm with decomposed food & vegetables.
- Increase the humus in soil & also fertility.
- Greatly affects the depth of roots also.
- Increase moisture retentivity capacity of soil.

2) In canal irrigation, problem of seepage can be removed by lining the canals.

3) Dry farming - in areas of water deficit

4) Development of Agro-climatic zones. by which -
- Productivity can be increased to by only growing crops suitable for that particular soil & climate.
- Tech. Intervention can also be utilized.
- Preparing farmer to produce with profitability & also provide like other s town.

6 A

2 B.

Land Breeze — wind flows on land due to localized heating of land.

Sea Breeze — Develops over sea due to differential temp.

- During night time in summer — Breeze flows from land to sea
- During day time in summer — Breeze flows from sea to land.
- Wind flows due to differential temp. Created due to shape of Earth in which temp is high in Equitorial region / tropical region where as heat is deficit in polar & subpolar region due to which air ascends at Equator & Expands & move towards poles but their movement is affected by coriolis force.

Q. 2 A.

Petroleum → Great formation takes place due to decomposition of plants & animals inside Earth under high temp & pressure when submergence of that area took place.

- Bombay high — Source of petroleum in India.
- Petroleum reserves also found from Ali Bet — at near the mouth of Narmada river in Gulf of Cambay.
- This region of coast of Guj & Maharastra are rich in petroleum reserve because when Indian plate was moving towards north, ~~th~~ submergence of western coast of Guj took place several times due to which animals & plants gets decomposed under high temp. & pressure for million years — todays comes out in form of petroleum.