

Time Allowed : Three Hours



Maximum Marks : 250

समय : तीन घंटे

अधिकतम अंक : 250

GENERAL STUDIES / सामान्य अध्ययन

Name Of Candidate परीक्षार्थी का नाम			
Roll No./अनुक्रमांक	Medium/माध्यम	English <input type="checkbox"/>	Hindi <input type="checkbox"/>
Center Code/परीक्षा केंद्र	Date/दिनांक		

*Center Code : For Online - 1900 / Delhi : Karol bagh - 1901, ORN - 1902, Mukharji Nagar - 1903 / Patna : Boring Rd. - 2001 / Hyderabad : Jawahar Nagar - 2101

INDEX TABLE / अनुक्रमणिका			INSTRUCTION / अनुदेश	
Q. No. प्र.सं.	Max. Marks अधिकतम अंक	Marks Obtained प्राप्तांक	1. Please do furnish Name, Email, Roll No and Mobile in the answer sheet. कृपया उत्तर-पुस्तिका में नाम, ईमेल, रोल नंबर और मोबाइल नंबर भरें।	
1			2. There are TWENTY questions printed in ENGLISH & HINDI, all questions are compulsory. उत्तर पुस्तिका में अंग्रेजी/हिंदी में बीस प्रश्न दिए गए हैं, सभी प्रश्न अनिवार्य हैं।	
2			3. The number of marks carried by a question/part is indicated against it. प्रत्येक प्रश्न/भाग के लिए निर्धारित अंक उसके सामने अंकित किए गए हैं।	
3			4. Answers must be written in the medium authorized in the admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided. उत्तर प्रवेश पत्र में अधिकृत माध्यम में लिखे जाने चाहिए, जो कि दिए गए स्थान में इस प्रश्न-सह-उत्तर (क्यूसीए) पुस्तिका के कवर पर स्पष्ट रूप से लिखा जाना चाहिए।	
4			5. Word limit in questions, if specified, should be adhered to. Any page or portion of the page left blank in the Question-Cum Answer Booklet must be clearly Struck off. प्रश्नों में शब्द सीमा, यदि निर्दिष्ट हो, का पालन किया जाए। प्रश्न-सह-उत्तर पुस्तिका में खाली छोड़े गये किसी भी पृष्ठ या पृष्ठ के भाग को स्पष्ट रूप से काट दें।	
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Total Marks/कुल अंक :			Mode Of Examination/ परीक्षा की विधि :	Online/ऑनलाइन <input type="checkbox"/> Offline/ऑफलाइन <input type="checkbox"/>
*Examiner's Discretion is the marks awarded at the discretion of the examiner based on your overall impression, on the basis of (but not limited to) your handwriting, presentation, use of diagrams, flowcharts, facts and figures or absolutely anything that he/she liked in your copy. मूल्यांकन कर्ता का विवेक अंक, आपकी लिखावट, प्रस्तुति, आरेखों के उपयोग, फ्लोचार्ट, तथ्यों और आंकड़ों या समग्र रूप किसी अन्य विषय वस्तु, जो मूल्यांकन कर्ता को आपकी कॉपी में पसंद आयी के आधार पर (लेकिन इन्हीं तक सीमित नहीं) पर दिए गए अंक हैं।			For Office Use Only / केवल कार्यालय प्रयोग हेतु	
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Note: Students are expected to incorporate suggestions from the feedback provided in the answers. Discussion classes for the tests are also available online in your portal to aid in your preparation. Further, students are requested to see the good copies of the tests and learn from them. You can also discuss your copy with a Mentor and discover ways and means to improve your answers, or if you have any issues with this test / copy. Ask specific questions, to get specific answers.

EXAMINER'S REMARKS

CRITERIA FOR THE FEEDBACK SECTION AT THE END OF EACH QUESTION

1. **AWIS = Answered What is Asked.** This means whether you have addressed the core demand of the question or not. Addressing the core demand of the question gets you an objectively fair score. It is examiner's perception if you have understood the question and if you know the answer in the first place. Creative answer writing, sometimes missing the core demand, may fetch very high or very low scores, and exposes your answer to the subjectivity of the examiner.
2. **CD & VA = Content Density & Value Addition.** Examiner will evaluate the quality and quantity of your content in the answer. In the same word limit and space limit have you (a) written what is asked (b) gone beyond what is asked (c) enriched answers through combination of (but not all!) suggestions, ideas, quotes, flowcharts, diagrams, facts and figures, data etc. This affects objective components of assessment.
3. **S & F = Structure & Flow** = Whether you have structured your answer properly or not. Whether the answer has been broken into parts and sub-parts and each part has been addressed appropriately or not. Whether the flow of the answer is maintained. Affects both subjective and objective components of assessment.
4. **P & R** = How your answer performs on the criteria of **presentation, ease of read, clarity and apparent effort** in writing the answer. This affects the subjective components of assessment.

① India is often referred to as 'Mother of Democracy'

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due to its civilisational continuity & tradition of participatory decision making. G20 Presidency document (2023) acknowledged democratic legacy from Sabhas to modern Parliament.

Democratic roots in ancient civilisational ethos

1. Vedic institutions -

- Sabha (Council of elders) & Samiti (People's Assembly) were early deliberative bodies involving community participation.
- allowed women participation, making them representative & unique (unlike Greek & other classical forms of proto-democracy).

2. Republics & Ganga Sanghas -

Mahajangpadas like Lichchavis & Mallas were republic setups where decision making process were collective

- Megasthenes & Buddhist texts note them and describe them as proto-democracies.

3. Culture of religious tolerance & peaceful coexistence

- Multiple religious ideologies call Indian subcontinent their home (eg. Buddhism, Jainism).

- Despite royal patronage for one religion or another, practice of different religions in society were prevalent. This evidences proto-freedom of religion & secular societies.
 - Ashokan edicts promoted ethical governance, religious tolerance & welfare of all, representing democratic ideals.
4. Panchayati Raj traditions - Uttaramerur inscriptions (Chola era) show existence of self governance systems through elected committees, often with codified qualifications.
- These grassroots democratic practices shaped post 1947 Panchayati Raj Institutions.
5. Bhakti and Sufi movements promoted multi-linguistic, equal, multi-religious coexistence - key values for a democracy.

India's democratic journey is not a recent import, rather a culture long practiced & perfected over time. Modern India draws from their strength to meet aspirations of diverse population today.

Animal motifs form a significant component of artistic & architectural traditions in India & usually depict mythical or divine attributes.

Significance of 'tiger'

1. Indian mythology - vehicle of Goddess Durga, symbol of courage and assertive power.
2. Art - embodied in Chola bronzes.
- found in Pahari miniatures & tribal art (eg. wali)
3. temple architecture & sculpture - carved in temple friezes as 'protectors', often used in South Indian gopurams.
4. Symbolic continuance - folk rituals like Pulikali celebrate strength of tigers & place them as symbols.

Significance of elephants

1. Indian mythology - Maya's dream ties elephant to Buddhist narratives & Itaha tales.

379900_811413_1910111667_(2025-07-21 08:36:50) Ganesha - elephant-headed God - embodies wisdom, auspiciousness

- Indra's vehicle - Airavata - kingly authority.

2. Indian art - central to Ajanta murals, feature in Mughal & Rajput paintings.

3. temple architecture and sculptures - depicted

as 'dwarapals' (guardians) in temples.

- carved at Sanchi, Konark architecture.

4. elephant motifs in Ashokan pillars, symbolised peace post Kalinga war period.

Tiger & elephant motifs embody not only spiritual philosophy but also depict deep seated human-animal symbiosis in Indian thought across time, culture & religious ideologies.

③

Lord William Bentick served as the Governor General of India from 1828 to 1835. His tenure laid groundwork for modern colonial state apparatus.

Contributions made by Lord William Bentick

1. Social reforms - abolition of sati via Bengal Regulation XVII (1829).
 - discouraged infanticide & human sacrifices
2. Educational reforms - Macaulay's minute on Education (1835) advocated for English education.
 - This led to establishment of English medium school & created English educated Indians who later became torchbearers of Indian nationalism.
3. Administrative reforms - laid foundation for codification of laws, this led to Indian Penal Code of 1860.
 - promoted efficiency in civil services.

military expenditure and supported commercial agriculture, laying paving way for later colonial economic policies.

Limitations

- ↳ Selective social reforms, politically calculated & result of massive lobbying from Indian social reformers such as Raja Rammohan Roy.
- ↳ English education aimed at creating 'Brown Sahibs' & ~~was~~ cost cutting effort, neglected mass education & vernacular systems alienated.
- ↳ Cash crops & commercial agriculture promoted by him contributed to food insecurity & famines.

Bentick's tenure was followed by others such as Dalhousie who built upon his efforts. While he contributed towards social reforms, his policies were in the interest of British East Indian Company & strengthened their hold on India.

379900_811413_1910111667_(2025-07-21 03:36:50) ④ The American War of Independence (1775-83)

resulted in the British colonial state losing 13
American colonies.

Loss of first British Empire

1. End of colonial control over North American colonies - Treaty of Paris (1783) marked it.
2. Economic & strategic setback - Britain lost access to profitable trade in tobacco, sugar & tea etc.
- Such a defeat also hurt global image as a successful imperial power. It gave ideological strength to anti colonial movements elsewhere in the world.
3. Political impact - calls for 'no taxation without representation', the main force behind revolt sparked debates about economics of colonialism.

Foundations of the Second British Empire

1. Strategic pivot to Asia & Africa - focused on lucrative markets of India & South East Asia, deepened interests in African colonies.
2. Greater state control over East India Company (eg. renewing license only for 20 years under Charter Acts)
3. Development of new imperial model - more centralised, bureaucratic & inclusive of local elites (to an extent) as safety valve.
eg. Zamindari systems that encouraged partnering with local landlords to avoid Senai like American Civil War.
4. Naval dominance and industrial revolution thwarted local resistance & helped expansion of colonial influence.
5. Penal colonies - Australia and consolidation of Canada - were strategic expansions maintaining loyalty to crown

The American war of independence prompted rethinking on part of British, who employed economic & political measures to prevent another such war within its colonies.

5. Rare Earth Elements (REE) refer to a group of 17 elements (15 lanthanides + Scandium & Yttrium) valued for their unique magnetic, catalytic & luminescent properties.

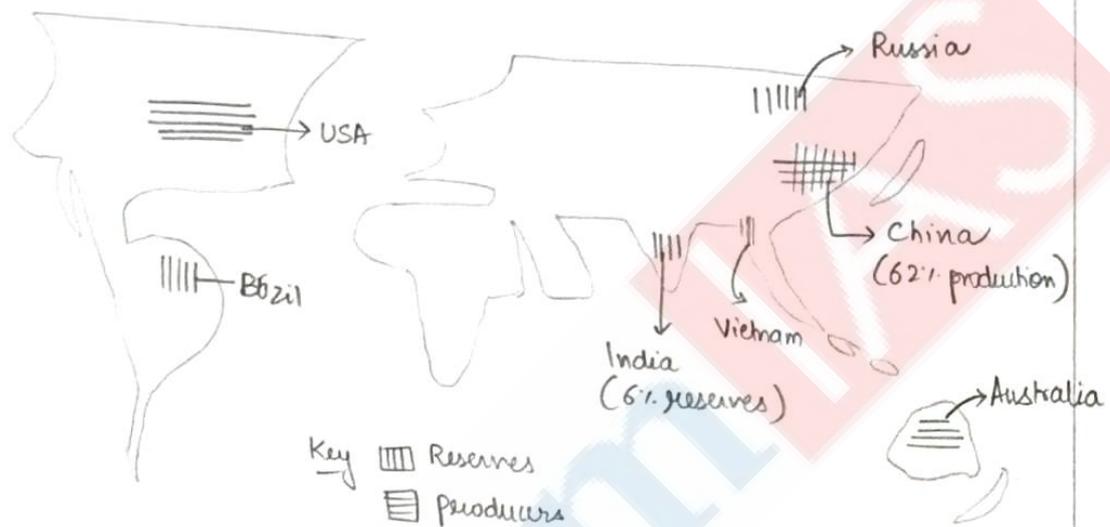


Fig: global distribution of REEs

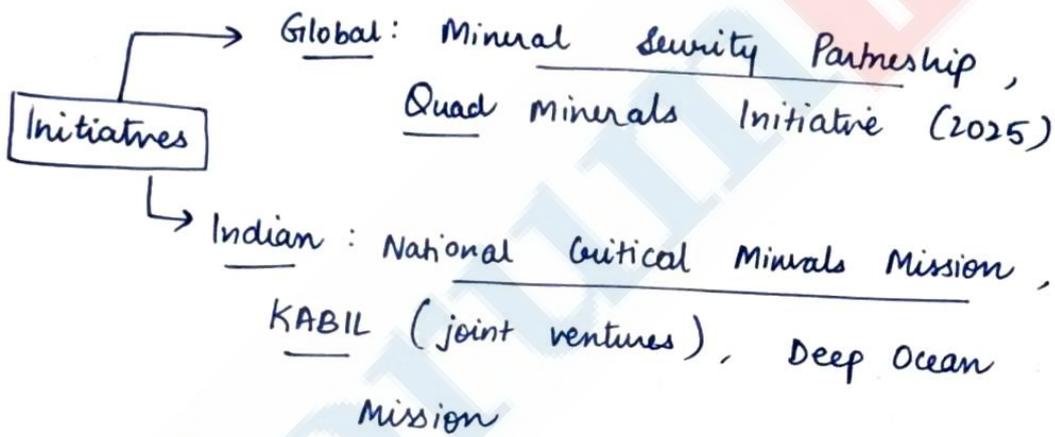
Impact because of uneven distribution:

1. Concentration in few hands may lead to sudden supply shock, price volatility and huge import dependence.
2. widens gap between Global North & South - as Global north can procure REE (better economic position), while Global South lacks economic position and possess technological lacuna even with reserves.

3. Hinder development of high-tech industries which may impact economic sovereignty because of weaponisation of supply chain eg. China's export bans & conditional exports in automobile sector.

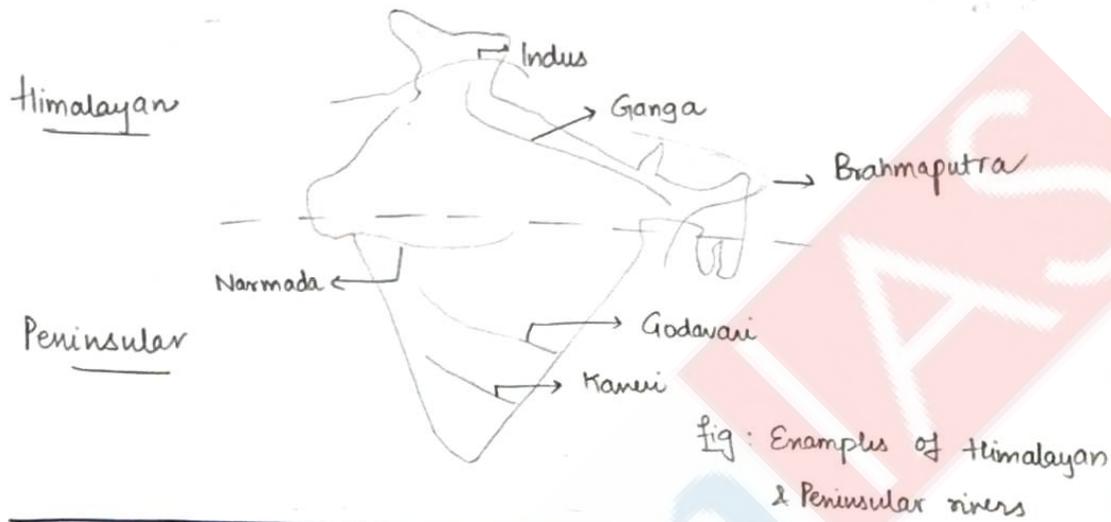
4. Geo political rivalries fueled eg. US - China

5. Sudden supply shocks may hinder climate change commitments



REE, referred to as vitamins of modern industry are a strategic asset, unequal distribution poses multidimensional challenges. India must develop sustainable policies for long term resilience.

India's drainage system is broadly divided between Himalayan (northern) & Peninsular (southern) based on origin & characteristics.



Differences between the two drainage systems

Feature	Himalayan rivers	Peninsular rivers
1. origin	- snow fed, glacial melt	- rain fed
2. permanence	- perennial	- seasonal - reduced flow in dry seasons
3. Age	- older	
3. Course	- meandering, forms floodplains	- straight & a fixed course
4. gorges	- deep gorges & canyons common	- less common
5. <u>deltas</u>	- large deltas eg. Ganga & Brahmaputra	- small deltas eg. Krishna.

6. catchment area	large & extensive basin	relatively smaller
7. erosional activity	- young & active, V shaped valleys	- mature, broad valleys, more depositional
8. <u>tributaries</u>	- many perennial tributaries	- fewer, seasonal tributaries
9. <u>Examples</u>	- Ganga, Indus, Satluj	- Narmada, Mahanadi, Godavari
10. <u>flooding</u>	- more prone to annual floodings	- flash floods
11. <u>navigation</u>	- higher potential	- restricted due to seasonal flow & <u>sedimentation</u>

Both Himalayan & peninsular river systems not only differ in their origin & evolution, but also hydrology, impact on human settlements.

Earth's crust is made up of various types of rocks - formed via different geological processes over time.

These rocks can be classified into 3 major types, based on origin & formation. Together they form basis of rock cycle.

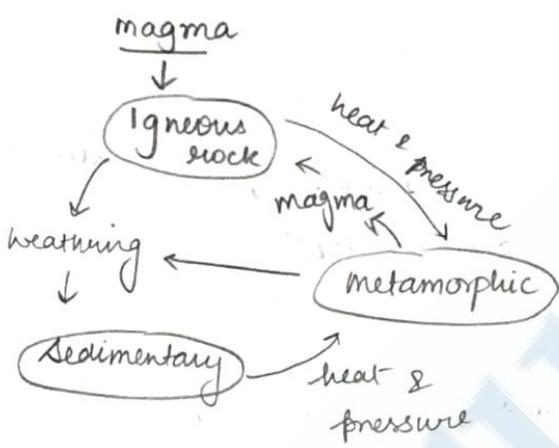


fig: rock cycle

1. Igneous rocks :

- formed via solidification of magma.
- formed either below the surface (intrusive) or above (extrusive) through volcanic activity.
- hard, crystalline, compact rocks.
- eg: granite, gabbro, basalt (extrusive - decan)

significance - minimal composition - eg. feldspar, quartz, mica.

2. Sedimentary rocks - formed by deposition, compaction & lithification of sediments.

- Types Class = (sandstone), chemical (limestone) & organic (coal).
- Significance - fossil records, groundwater aquifers, petroleum reservoirs.
 - key to landform denudation & soil formation.

3. Metamorphic rocks - formed from pre-existing rocks under high pressure & temperature.
- types - foliated (eg. schist, gneiss) & non foliated (eg. marble)
 - Significance - often rich in minerals, used in construction & sculptures.
 - found in orogenic belts, influence relief intensity.

The nature of rock influences soil formation (eg. black soil from basalt), control drainage pattern, affects landslide susceptibility & resource distribution eg. metallic ores (igneous) & hydrocarbons (sedimentary).

8.

Modern lifestyles, driven by consumerism, urbanisation and technocentric worldview have increasingly alienated man from ecological roots.

How modern lifestyles are alienated from nature

1. Overconsumption - has replaced minimalist, harmonious & sustainable way of living.
2. Isolation because of digital & screen-based living has reduced physical connection to nature.
3. High ecological footprint (per capita emissions) & loss of traditional indigenous knowledge undervalued or lost.

Environmental crisis linked to alienation

1. Air pollution - sky rocketing AQI figures because of vehicular onruse, construction in urban spaces.
2. Water stress - overextraction of groundwater for agricultural & industrial purposes to gain

- material success
3. environmental degradation & loss of biodiversity - fueled because of little to no importance for forms of lives other than humans. eg. wildlife trade, poaching, destruction of habitats.
 4. climate vulnerability - rising frequency & intensity of urban heat islands, marine heatwaves & GLOFs.
 5. wetland encroachment in cities (Bengaluru, Chennai) fueling urban floods.

Reverting alienation

1. mainstreaming life mission to return to mindful consumption.
2. Nature based solutions, circular economy (reducing waste) & organic and natural farming.
3. Implementing COPENPay - incentivising sustainable behaviour at individual & community levels eg. reducing private transportation & meat consumption.

Behavioural nudges & use of technology (influencers) can help restore balance between growth & guardianship of planet.

9. Urbanisation of poverty refers to the increasing concentration of poverty in urban areas, either due to migration or growing informalisation.

Urbanisation of poverty

- ↳ As per World Bank & UN-Habitat, urban poverty is growing faster than urban population itself.
- ↳ triggered by
 - push factors - landlessness, agrarian distress
 - pull factors - search for jobs
 - in situ factors - falling below poverty line eg. because of medical expenses

Differences between urban & rural poverty

1. manifestation - Urban poverty largely 'monetary' i.e. lack of cash to afford necessities. While rural - is multidimensional - lack of assets, education agrarian distress etc.
2. shelter - Urban - housing poverty, poor quality housing, slums
Rural - often own land / house - even if poor quality.
 - Even in CPI calculations housing criteria not

used to calculate rural ~~inflation~~ inflation basket.

3. Cost of living - Urban - much higher
Rural - comparatively lower because of lesser dependency on market economies for food etc
4. Social protection - family & extended caste members provides safety nets in rural areas. While urban areas are characterised by nuclear families & individualistic culture, worsening poverty impact.
5. Nature of work - informal, casual labour & gig work marks urban poverty.
Rural - largely agrarian, seasonal.

Situation in urban areas is often worsened due to climate change eg. urban heat islands that disproportionately impacts the poor & can often push reverse migration.

Addressing urban poverty requires targeted policies (PMSVANidhi, PMAU-U) & a focus on inclusive & livable cities. This aligns with SDG 11, aimed at safe, inclusive & resilient cities.

Globalisation refers to increasing mobilisation, connectivity & cultural flows between societies. It has altered traditional & cultural institutions forever, including idea of community & kinship.

How globalisation has redefined kinship & community

1. Joint to nuclear to transnational families -
 - 1.1 - increased migration for work & education has led to transnational kinship networks.
 - 1.2 - Even nuclear families are emotionally joint with help of communication & technological advancements.
2. Individualism over collectivism - rising individual autonomy eg. occupational choice, mate selection, religious ideology; promoted by globalisation.
3. Emergence of 'fictive' kin & community - online communities, professional networks & interest groups eg. fandoms function as alternatives to traditional kinship networks.
4. Increasing trends of inter caste & inter religious marriages - as traditional ideals of endogamy take a backseat & class & idea of

- homogamy (marriage between individuals of similar thinking, values & ideas) predominate.
5. Democratisation of families - higher role of women in decision making, equal respect as patriarchal notions get dismantled by ideals of equality.
 6. Adoptions & IVF treatments have redefined biological ~~explained~~ notion of family.
 7. Recognition of non-heteronormative kinship forms due to global discourses on gender & sexuality. This has fostered visibility & legitimacy of LGBTQIA+ identities in India. eg. increasing demand for same sex marriage.

However, many rural & semi urban areas still retain traditional kinship norms where caste & patriarchy dominate. Further technology often supports traditional ideology & practices (eg. caste marriage sites & online pujas).

Kushana period (1st century CE) was witness & propagator of flourishing art & architecture, especially under the ruler Kanishka

The period witnessed the rise of syncretic art forms such as Gandhara and Mathura schools of sculpture that reflected confluence of Greek, Central Asian & indigenous elements.

Socio-cultural insights from art forms

1. Religious pluralism - Mathura school sculptures depict coexistence of different religious ideologies prevalent during the time. eg. Hindu & Jain sculptures in addition to Buddhist - Gandhara school under patronage of Kanishka, supporter of Mahayana Buddhism depict Buddhist themes.
 - Insight: Society religiously pluralistic, tolerant rulers that supported diverse religious beliefs - rudimentary freedom of religion.
2. Cosmopolitan culture - Gandhara art show Greco-Bactrian and outside influence eg. curly hair & humanistic depiction of

Buddhism in Kushan Art school depicted indigenous styles.

- Insight: Kushan empire was a melting pot of culture, links to Silk trade route support this.

3. Royal patronage - Kushana rulers issued coins inscribed with Greek, Indian, Persian deities
eg. Devo (Shiva), Serapis.

- Kanishka's stupa at Peshawar - one of the tallest of the time.
- Buddhist Council patronised by Kanishka - in support of Mahayana Buddhism.
- Insight: Ruler universal sovereign - beyond religious lines, i.e. political purpose of art.

4. Representation of Social life - sculptures depict court scenes, musicians, dancers, Yakshis.

- Common attire, ornaments etc depicted.
- Insight: Art forms help understand gender roles, class distinctions & importance of performative arts in social life.

Continuity with present:

↳ Elements of Kushana art, especially Buddhist

in sculpture continues to influence modern day
sculptures. Sites like Mathura & artifacts
from Grandhara are now vital part of India's
cultural diplomacy.

Their artistic heritage preserved under schemes
like 'Adopt a Heritage' & ICCR's outreach
programs continue to symbolize India's ancient &
civilisational continuity.

The Civil Disobedience Movement was initiated by Mahatma Gandhi & Indian National Congress on 6th April 1930. The roots of movement lay in increasing nationalist sentiments.

Events leading to Civil Disobedience movement-

1. Appointment of all-white Simon Commission in 1927. It lacked Indian representation & led to mass protests & calls for 'Simon Go Back' across the length & breadth of the country.
2. Lahore session (December 1929) - where Purna Swaraj was declared as the ultimate goal of national movement under Nehru's presidency.
 - 26 January 1930 - celebrated as first Independence Day.
3. Viceroy's Deeparati Declaration (1929) - failed to placate nationalist demands. It promised Dominion status - somewhere in the distant future.
4. Gandhi's 11 point Charter (January 1930)
Viceroy Irwin rejected negotiations which led to Gandhiji launching the movement.

5. Growing disillusionment & resentment against the British rule, precipitated wide participation in national movement & necessitated a large scale event to push back against foreign rule.
6. Nationalist fervor of revolutionaries, peasant & labour movements - their energies could be positively channeled into one movement.

Outcomes of Civil Disobedience movement

1. Political outcomes - widespread participation of women, youth, peasant, tribals & with brutal repression by the British.
 - First Round Table Conference - rejected & boycotted by INC.
2. Gandhi - Irwin pact - Congress suspended movement to participate in Second Round Table Conference. In exchange, British agreed to release non-violent prisoners, withdraw ordinances.
3. Renewal of movement post Second Round Table Conference's failure - but weakened by Communal Award (1931), harsher suppression & large scale arrests.

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4. long term gains & impact :

- eroded moral supremacy of British rule
- enhanced position of INC as all India party.
- Radicalised the masses, especially the youth
- pressurised the British to eventually announce Government of India Act, 1935, and enhance Indian representation.
- However, the movement also inadvertently lead to alienation of Muslims & laid ground work for communal consciousness.

While the movement did not succeed in so far as immediate 'panna swaraj' was considered, it freed the Indian masses from ideological supremacy of British & unified masses for ~~not~~ moving towards complete political freedom.

13
Mahatma Jyotirba Phule was as a 19th century social reformer who laid the ideological groundwork for social justice & equality.

Role in laying foundation for inclusive national movement

1. Anti caste movement & social equality -

- he authored 'Gulamgini' and critiqued the varna system, comparing it to racial slavery.
- he inspired anti caste movements & thinkers, including Dr. BR Ambedkar and anti caste Brahmin movements.
- he established Satyashodhak Samaj - a society that worked for emp emancipation of Dalits & promoted the ideal of equality.

2. Education - Along with his wife Saheb Bai Phule he opened the first school for girls & lower castes.

He believed in the emancipatory power of education & the role it can play in breaking shackles of caste.

- This inspired later nationalist discourse under Gandhi & Nehru.

3. Women's rights - campaigned against child marriage, sati & widow oppression and he advocated for widow remarriage.

- This promoted equal rights & dignity for women.

- India went on to become one of the few to grant eq^u universal adult franchise at independence.

4. Peasant consciousness - he called for agrarian justice & called for reforms in the agricultural sector.

- This shaped peasant resistance movements such as Deccan riots & later Kisan Sabhas.

"If you want to serve humanity,
begin with the oppressed" - these are
the words of Mahatma Phule that
demonstrate his philosophy completely.
He laid the foundation of egalitarianism
that the later leaders built upon.

National River Linking Project aims to transfer water from surplus to deficit basins through a network of canals & reservoirs.

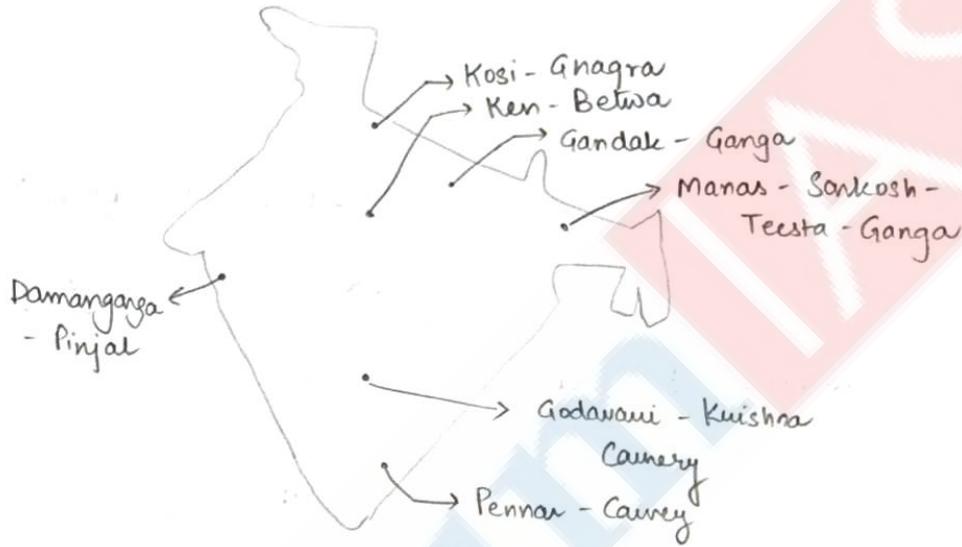


Fig: proposed river linking projects under NRLP

Benefits of River Linking

1. Water stress management - via redistribution of water from surplus to scarce areas. eg. Ken-Betwa.
2. Enhance irrigation potential & therefore ensuring food security eg. Godavari-Krishna link proposes irrigation expansion.
3. Flood & draught mitigation - balancing extreme weather events, increasing with

increasing climate vulnerability .

4. Hydropower generation - empower ensuring meeting of Panchamit targets & phasing down fossil fuels .
5. Inland navigation - diversifying cargo movement , currently overdependent on roads .

Socio - Economic concerns

1. Displacement of locals due to land submergence .
2. Inter state disputes - conflict over water sharing & control .
3. High initial costs & issues of long term funding - NRLP projected to cost over ₹10 lakh crore .
4. Impact on livelihood because of loss of forest based & riverine livelihoods eg. fishing & farming .
5. technological uncertainties regarding long - distance water transfer .

Environmental concerns

1. Loss of biodiversity because of habitat destruction & submergence . eg. Ken - Betwa

Implications Panama hydro reservoir with submergence.

2. Altered river ecology - changed flows, disruptions, sedimentation.
3. Navigation & vicious loop of emissions, contributing to climate change.
4. Incomplete understanding of long term impact on local ecology.

Way forward

1. Ensuring detailed & independent social and environmental impact assessments for proposed projects.
2. Pilot testing to precede full implementation.
3. Building federal consensus to thwart inter-state disputes.
4. Ensuring participatory planning, implementation & monitoring of projects.

While imperative to address water asymmetry, proactive measures must ensure balancing SDG goals (6 - clean water, 13 - climate change) so as to not worsen present 'extreme water stress' situation.

(15)

'Rain shadow' effect refers to topographic phenomena wherein mountain range blocks moist area causing heavy precipitation on the windward side, This causes dry, arid conditions on the leeward side.

Mechanism of rain shadow effect



1. moist air from sea / ocean approaches mountain range.
2. As it rises over the windward side, it cools, condenses & causes orographic rainfall.
3. After crossing the peak, dry air now descends on the leeward side & warms up, reducing chances of precipitation.
4. This is referred to as rain shadow effect - region marked by arid conditions.

Impact on distribution of precipitation

1. windward side - heavy rainfall -

due to uplift of moist air, i.e.,
orographic rainfall.

eg. western ghats windward side receives
> 200 cm of rain.

2. leeward side - low rainfall because
of descending dry air.

eg. Eastern side of western ghats,
northern slope of Himalayas.

Impact on Vegetation

1. windward side - dense forests,
tropical vegetation eg. evergreen forests
in Kerala & Konkan ranges.

2. leeward side - characterised by scrublands
thorn forests, grasslands. eg. Vidarbha,
Rayalseema regions.

Global examples

1) Andes mountain range (South America)

↳ western side is wet & ~~the~~ eastern side arid which leads to suitable conditions for Atacama desert.

2) Cascades mountain range (USA) - western side wet, eastern arid & dry.

The rain shadow effect is crucial in understanding local climates & biomes.

It assists in agricultural planning, settlement patterns, preparing disaster management plans (eg. cloudbursts likely on windward side).

16. Indian monsoon is a seasonal wind system that reverses directions between summer & winter.

Major features of Indian monsoon

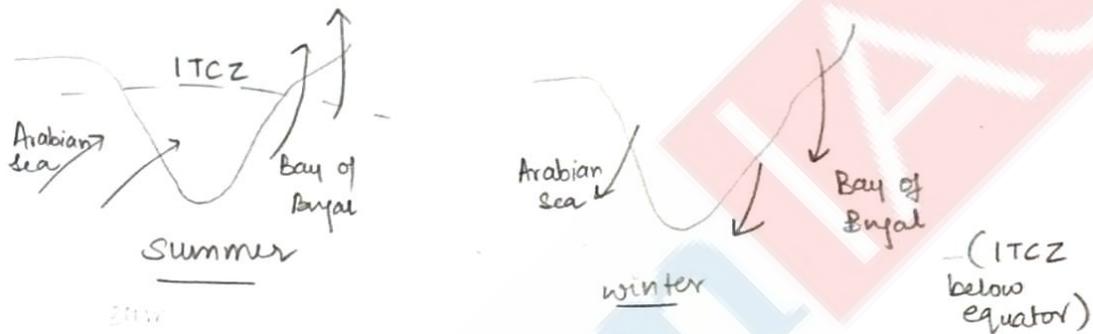


Fig: Seasonal reversal of winds

1. Seasonal reversal of winds - winds blow from sea to land in summer & land to sea in winter.
2. Two branches - Bay of Bengal & Arabian Sea.
3. Uneven distribution - both spatial & temporal (Mawsynram v/s Jaisalmer)
4. Retreating monsoon - begins in ~~monsoon~~ September & causes NE monsoon in Tamil Nadu.
5. Monsoon breaks - decline in rainfall

(3-15 days) because of shifting of trough.

Causative factors of Indian monsoon

1. Differential heating of land & sea leads to low pressure zone over land & high pressure over oceans. This gradient drives moist winds to Indian subcontinent.
2. Tibetan plateau heating - strengthens monsoon trough.
3. El Nino - leads to rainfall deficit (eg. 2015) & La Nina causes stronger monsoon winds & above normal rainfall (eg. 2012).
4. Indian Ocean Dipole - positive IOI (warmer western Indian Ocean) strengthens monsoon.
5. Madden Julian Oscillation (MJO) - if it present over Indian Ocean intensifies low pressure system & increases rainfall.
6. Jet streams - Subtropical westerly jetstream & tropical easterly jetstream (Summer / Winter) influence monsoon.
7. Bay of Bengal & Arabia Sea - sea surface

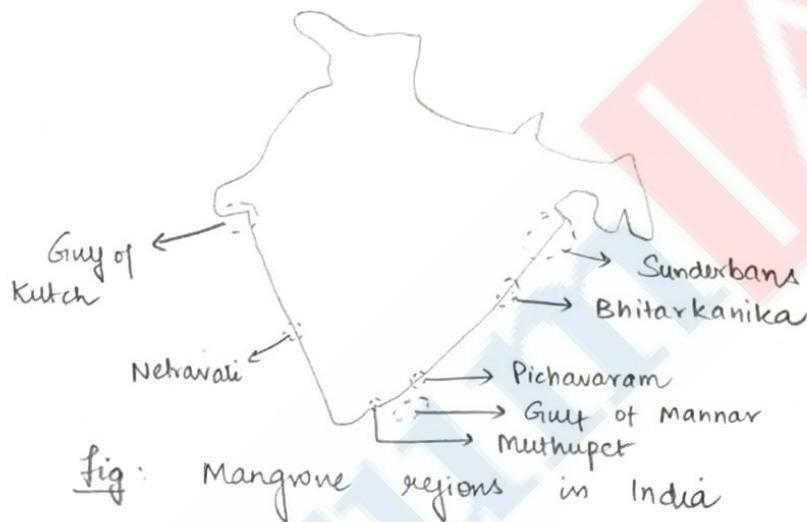
379900_811413_1910111667_(2025-07-21_08:36:50) temperature increases evaporation & thus fuels monsoon

8. Arctic amplification - warming Arctic impacts monsoon trough, may delay onset of rainfall.
9. Orography & topography - Himalayas blocks cold air, Ghats cause orographic lifting - higher rainfall on windward sides.

while Indian monsoon remains central to climate & agriculture, climate change is altering its character - leading to intense short spells & long dry spells. This leads to increase in extreme weather events like cyclones challenging disaster preparedness & lack of food security.

(17)

mangroves are salt tolerant, emergent vegetation found along tropical & subtropical coastlines thriving in intertidal zones. India has the 4th largest mangrove cover in the world.



Geographical factors influencing mangrove growth

1. Salinity levels - mangroves thrive in brackish waters
2. Sediments & fertile alluvial deposits in deltaic regions eg. Mahanadi & Bhitarkanika region.
3. Tropical & sub tropical climates provide optimal thriving conditions - along with

high humidity and adequate rainfall
(~ 200 cm)

4. Tides - moderate tidal ranges help regular inundation & aeration of soil.
5. Freshwater inflow - inhibits excessive salinity, maintains good brackish levels.
6. Continental slopes - gentle, allow intertidal spread.

Role of mangroves in coastal ecology

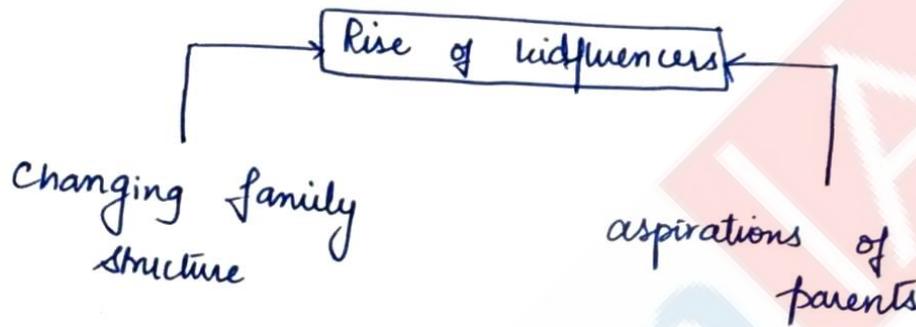
1. Biodiversity hotspot - habitat to species like Royal Bengal Tiger, migratory birds.
2. Carbon sink - stores carbon in both biomass & sediment, aiding climate regulation.
3. Water filtration - improves coastal water quality by trapping heavy metals & nutrients.

4. Act as natural barriers against storm surges, cyclones, tsunamis.
5. Reduces instances of coastal erosion & property damage.
6. Maintain genetic diversity of species (estuarine ecosystem)
7. livelihood support to fisheries, honey collection and eco-tourism.

With increasing instances of extreme weather events in the Indian Oceans, particularly tropical cyclones it becomes imperative that mangrove ecosystem be protected. Initiatives such as Mangroves for future & MISHRI are good steps in this direction.

(18)

Kidfluencers is a term used to refer to children (under 18 years) who gain social media prominence as influencers - i.e. content creators.



Changing family structures & rise of kidfluencers

1. Shift from joint families to nuclear structures, that is collective to individual identities.
2. Parenting models shifting from authoritarian to democratic that allows for space for children to make their own decisions.
3. Blurring of public - private dichotomy - 'home' increasingly the backdrop of

- content created for the internet and 'influencing' starting as hobby & not a job.
4. It provides space for self expression, encouraged in nuclear households that support children.

Parental aspirations & monetisation of childhood

1. Grey zone of digital child labour - ILO's definition of child labour mentions work that 'deprives children of childhood'. Content creation includes brand deals, adult expectations & commercial pressure perpetuated by parental aspirations.
2. Middle class parents may view social media as an alternative path to economic success.
3. Global consumerism culture has shaped parents' view of success & means to attain it (eg. technology penetration)

Factors beyond family

1. Proliferation of ~~to~~ kid friendly content (eg. parenting videos, toys reaction) create demand for kidfluencers.
2. Corporates promote kidfluencers to facilitate digital materialism.
3. Subconscious participation - may begin as self expression spiralling into influencer gigs without conscious decisions.
4. Rise of affordable smartphones, data plans has made content creation accessible beyond urban areas.

Moving forward, India must consider child labour laws, digital rights & ethical content creation to ensure dignity & autonomy of children. Australia's efforts to limit time the young spend online are a good measure in this line.

Ever since Chipko movement & even beyond Indian history is reminiscent of role played by women in grassroots social, environmental movements.

Women as the backbone of grassroots movement

1. Environmental movements - Chipko (1970s)

where rural women protested against felling of forests. Such act would've had direct impact on their survival concerns.

- Recent, Narmada Bachao Andolan is also a woman led resistance.

2. Rights based movements - Meira Paibis

of Manipur formed to secure human rights against alleged AFSPA violations.

3. Dalit and tribal movements - women

have championed land rights, anti-liquor campaigns.

4. Traditional networks of women - eg. SHGs (Kudumbashree Kerala), mahila parishads, allow rapid mobilisation.
5. Moral authority due to role as caregivers & nurturers lends them credibility.

Exclusion from decision making

1. Patriarchal nature of society - limits perception of women as legitimate decision makers & forces them into secondary roles. eg. early social reform movements, even when aimed at women's emancipation were led by men.
2. Symbolic participation - even though 1.4 million women are elected to Panchayats, the phenomena of 'Sarpanch pati' reigns over decision making at local levels.
3. Women led movements lack funding or NGO support.
4. Dual burden - shackles public participation, relegating them to voluntary actions as they are remain responsible for household

which limits contribution to public issues.

Way forward

1. Leadership training & mentoring for women at grassroots level.
2. Ensure gender sensitive fndij & visibility for women led initiatives.
3. Recognition of unpaid care work would bolster their position.

The paradox of low influence in decision making while playing a pivotal role in marginalised mobilisation reinforces structural inequalities that prevents attainment of SDG 5 - gender equality & women empowerment.

The growing influence of social media apps such as X (formerly Twitter), Instagram has forever transformed communication, social expression & self identity. However, it is seen as a 'double-edged sword'.

Positive impact of social media on Indian society

1. Democratisation of information and public spaces - social media allows for greater participation in public concerns, fact checking information & speaking truth to power.
2. Gives voice to marginalised - revival of Dalit narratives, campaigns such as #MeToo & the 4B movement (South Korea) gives marginalised sections a platform.
3. Role in disaster & crisis response - eg. use of social media during COVID-19 for hospital requests, oxygen needs, donations for charity work to help during floods & earthquakes.

- Boost to local enterprises & handicrafts
(Vocal for Local) - social media has driven up sales of khadi apparel, jewellery & handicrafts, sustaining local livelihoods.
5. Cultural expression - art, music, creative exploration.
 6. Avenue for self expression - eg. transpersons & LGBTQIA+ community's use of social media has helped sensitise greater society.

Negative impacts of social media

1. Anonymity offered by digital platforms has led to increasing instances of bullying, sexual harassment, and has created unsafe space for children.
2. Amplification of regional & communal divides eg. Muzafarpur riots & lynching prompted by whatsapp forwards.
3. Misinformation & fake news takes a life of its own on the internet eg. vaccine hesitancy rhetoric during COVID.

Radicalisation of youth and increasing instances of anti-state ideologies propagated via social media platforms.

5. Mental health crises & body image anxiety among teenagers.

Way forward

1. Fact checking infrastructure.
2. Digital literacy campaigns (included as part of NEP 2020).
3. Enabling inclusive access to internet, bypassing digital divide.

Social media is both a mirror & megaphone, a responsible & ethical digital int culture is necessary to harness its potential.

An important step to ensure the same is to enhance responsibility of platforms while enhancing transparency.