

# VISION IAS

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GENERAL STUDIES (TEST CODE : 1838)

|                    |               |                     |                           |
|--------------------|---------------|---------------------|---------------------------|
| Name of Candidate  | VEDUSHI SINHA |                     |                           |
| Medium Eng / Hindi | ENGLISH       | Registration Number | 1045416                   |
| Center             | ONLINE        | Date                | 30 <sup>th</sup> Aug 2022 |

## INDEX TABLE

| Q. No. | Maximum Marks | Marks Obtained |
|--------|---------------|----------------|
| 1      | 10            |                |
| 2      | 10            |                |
| 3      | 10            |                |
| 4      | 10            |                |
| 5      | 10            |                |
| 6      | 10            |                |
| 7      | 10            |                |
| 8      | 10            |                |
| 9      | 10            |                |
| 10     | 10            |                |
| 11     | 15            |                |
| 12     | 15            |                |
| 13     | 15            |                |
| 14     | 15            |                |
| 15     | 15            |                |
| 16     | 15            |                |
| 17     | 15            |                |
| 18     | 15            |                |
| 19     | 15            |                |
| 20     | 15            |                |

Total Marks Obtained:

Signature

## INSTRUCTIONS

- Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).  
उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न-पत्र कोड, विद्यापीठ क्रमांक आदि)।
- There are **TWENTY** questions printed in **ENGLISH & HINDI** इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं।
- All questions are compulsory. सभी प्रश्न अनिवार्य हैं।
- The number of marks carried by a question/part is indicated against it.  
प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
- 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. No marks will be given for answers written in medium other than the authorized one.  
प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न-सह-उत्तर (समूचीय) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। अलिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
- Word limit in questions, if specified, should be adhered to.  
प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
- Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.  
उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।

16-B, 2<sup>nd</sup> Floor, Above National Trust Building, Banda Bazar Marg, Old Rajinder Nagar, Delhi-110060

Plot No. 857, 1st Floor, Banda Bahadur Marg (Opp Punjab & Sindh Bank), Dr. Mukherjee Nagar  
Delhi- 110009

## EVALUATION INDICATORS

1. Contextual Competence
2. Content Competence
3. Language Competence
4. Introduction Competence
5. Structure - Presentation Competence
6. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

**All the Best**

1. The Chalukyan architecture uniquely epitomises the grandeur and hybrid characteristic style of temple building. Elaborate. (150 words) 10

चालुक्य स्थापत्य कला विशिष्ट रूप से मंदिर निर्माण की वैभवपूर्ण और मकर अभिलषणिक शैली का प्रतीक है। संविस्तार वर्णन कीजिए।

## CHALUKYAN ARCHITECTURE

is the epitomy of VESARA style of architecture, embodied by Nagara & Dravidian elements.

### Features:

- ① lanchayatan style of Temple building → Nagara Element  
eg: Papanath Temple, Pattadakal
- ② Elaborate and angular shikharas like Dravidian Vimana + <sup>graduated</sup> <sub>like</sub> Nagara  
eg: Lad Khan Temple, Aihole
- ③ Elaborate sculptures and carvings of Chalukyan Temples as seen in temples at Badami.
- ④ Boundary walls decorated with sculptures

- ⑤ Influence of Persian elements  
of Arabesque & jaali works
- ⑥ Temple Pillars are elaborate  
with carvings.

However, Chalukyan architecture  
has distinct features of:

- ① Sandstone and soapstone for  
construction
- ② Mural Paintings of Badami  
caves → distinct features
- ③ Decorated passageways and  
assembly halls.
- ④ Square, stellate & other plans  
of temples.
- ⑤ Distinct Shikharas : both Nagara &  
Dravidian features

The epitome of this architecture is  
demonstrated by its inclusion in  
UNESCO WHS → monuments at  
Pattadakal.

2. The success or failure of a political movement is not always determined by the achievement of its stated goals. Discuss in light of the Ghadar movement.

(150 words) 10

किसी राजनीतिक आंदोलन की सफलता या असफलता केवल उसके घोषित लक्ष्यों की प्राप्ति से निर्धारित नहीं होती है। गदर आंदोलन के आलोक में चर्चा कीजिए।

GHADAR MOVEMENT was an overseas conspiracy designed by Lala Hardayal and others to overthrow the British from India during 1914 - 18.

Ghadar Movement: Success or Failure?

Ghadar movement could not succeed due to:

- ① underestimation of British and resource requirement
- ② haphazard planning
- ③ Failure of loyalty as a person & reached out to British
- ④ lack of consensus of means vs. ends

However, Ghadar movement is still looked with pride as:

- ① First major overseas involvement for Indian liberation
- ② Rise in national consciousness.
- ③ Belief in capabilities of Indians and ATMA-SHAKTI.
- ④ Recognition of British exploitation through Kagarnak Incident.
- ⑤ changing nature of movement to militant nationalism.

Hence, Ghadar laid out the platform for national consciousness of right of SWARAJ.

3. Discuss the ways in which Gandhian conceptualisation of Sarvodaya influenced Vinoba Bhave's Bhoodan movement. (150 words) 10

उन तरीकों की विवेचना कीजिए जिनसे सर्वोदय की गांधीवादी अवधारणा ने विनोबा भावे के भूदान आंदोलन को प्रभावित किया था।

~~GANDHIAN~~ GANDHIAN concept of SARVO-DAYA → means universal welfare or welfare for all. It implies on building capabilities to achieve individual as well as societal welfare.

### VINOBA BHAVE'S BHOODAN MOVEMENT:

Started in 1951 in Pochampally wherein large landowners sacrificed their lands for ownership by poor peasants & tenants. It was in consonance with Gandhiji's Sarvodaya as:

- ① welfare for all: poor were getting social upliftment.

② Village economies: self-sufficiency through equality and fraternity → GRAM SWARAJ

③ Pooling of resources by rich to poor

↳ Gandhiji's 7 deadly sins countered.

④ Common Resource creation in line with Sarvodaya.

⑤ Constitutional Values: DPSP (Part IV) upheld. This movement was further

supplemented by GRAMDHAN Movement and Land Reforms undertaken by government through abolition of zamindari, tenancy reforms, ceiling laws, etc.

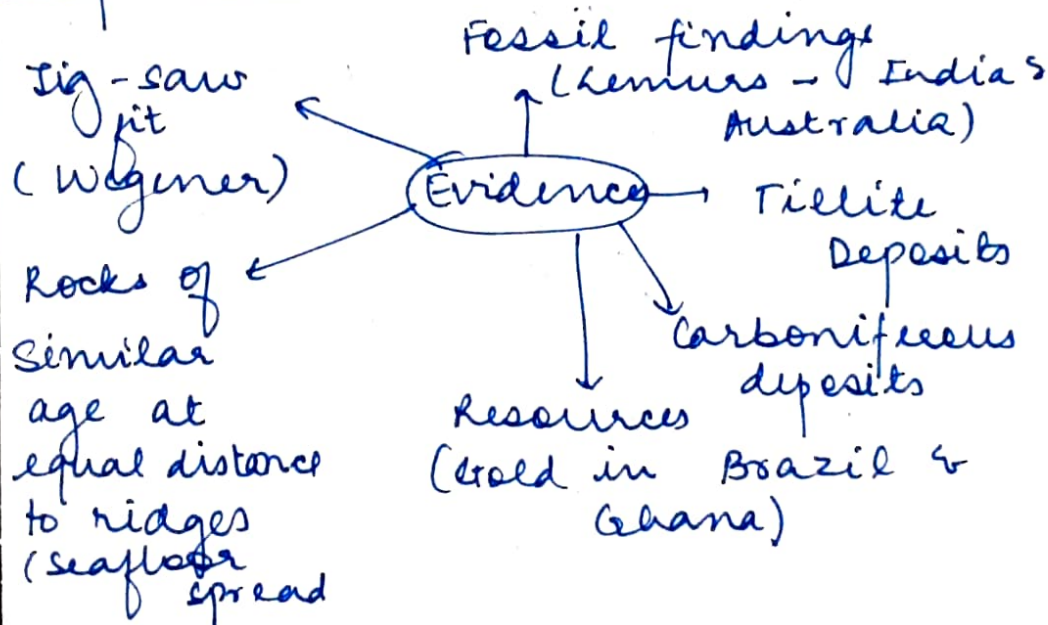
4. Bring out the evidences, which led to the Plate Tectonics Theory. Also, discuss how this theory explains the movement of plates.

(150 words) 10

उन साक्ष्यों को उजागर कीजिए जिनसे प्लेट विवर्तनिकी सिद्धान्त का प्रतिपादन हुआ। साथ ही, विवेचन करें कि यह सिद्धान्त प्लेटों के गति को कैसे समझाता है।

### PLATE TECTONICS THEORY evolved

through previous continental drift, Convectional current, and seafloor spread theories.



According to Plate Tectonics theory, Earth's crust is divided in consolidated, slabs of uneven rocks, which moves above ASTHENOSPHERE) (Convectional current

- plates are divided into 7 major and several minor plates.

(eg:) Antarctic Plate, Arabian Plate, etc.

- plates movements are

① Diverging



(eg:) Sea floor spread

or ~~cont~~ constructive in nature

② converging



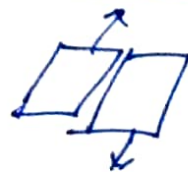
(eg:) Indian-Eurasian Plate

or destructive in nature

→ Ocean-ocean, continent-ocean or continent-continent convergence

③ Transform:

↳ nothing happens.



eg: San Andreas Fault

Reasons of movements

Cyclic Flow

Tectonic Activity

→ Earth's radioactivity  
→ Earth's primordial heat  
→ Seafloor Spreading (Arthur Holmes)

5. Give an account of the formation of Abyssal Plains and highlight the relief features found on these plains. (150 words) 10

विस्तृत मैदानों के निर्माण का विवरण दीजिए और इन मैदानों पर पाए जाने वाले उच्चावन संबंधी लक्षणों पर प्रकाश डालिए।

### ABYSSAL PLAINS or deep sea

Plains are a major ocean relief feature. These are characterised by silt & clay deposition, 3-6 km in depth and cover ~50% of earth's surface.

### Formation of Abyssal Plains

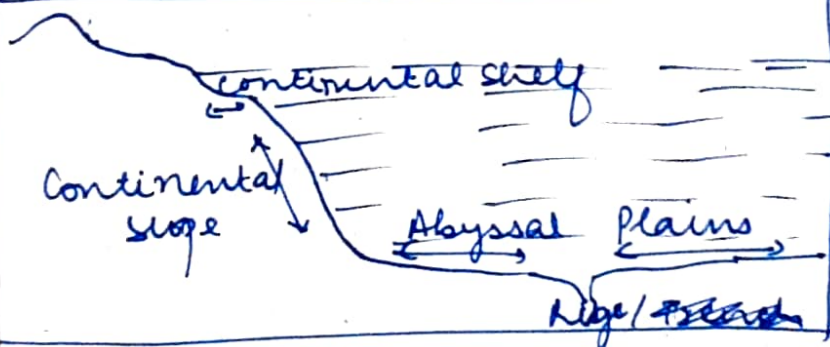
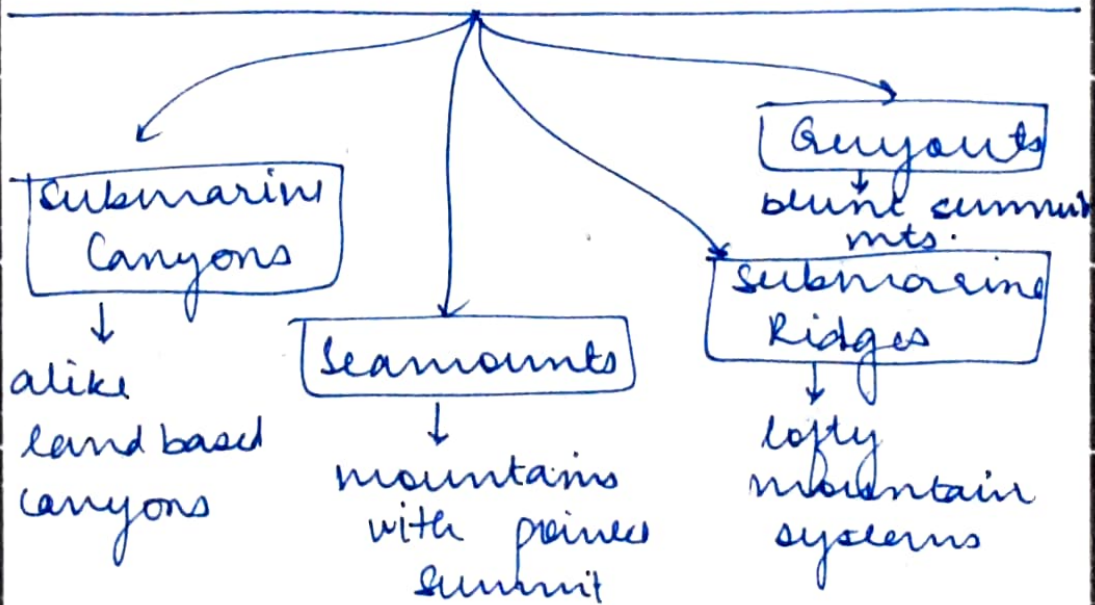


Fig:  
Abyssal Plains

- ① Seafloor spreading leads to creation of landmass and increased deposition along the Ridges leading to extension of plains.

- ② weathering of relief features such as volcanoes, guyots & seamounts  $\Rightarrow$  Abyssal Plains
- ③ Tectonic Movements  $\rightarrow$  creates plains  
 (eg.) 1814 Kutch earthquake altered landform

### Relief Features in Abyssal Plains



Abyssal Plains have vast expanse and features and are of huge economic & ecological significance due to flora, fauna & minerals in the region.

6. What are the geographical and climatic conditions required for tea cultivation? In this context, discuss the reasons for the introduction of tea cultivation in the Duars region of the Himalayas by the British.

(150 words) 10

चाय की खेती के लिए आवश्यक भौगोलिक और जलवायविक दशाएं क्या हैं? इस संदर्भ में, अंग्रेजों द्वारा हिमालय के दुआर क्षेत्र में चाय की खेती शुरू करने के कारणों की विवेचना कीजिए।

TEA is a native Northern China crop, introduced during medieval times.

Geographic and climatic condition

- Tropical and subtropical climate + frost-free weather (150-300 cm)
- Moderate Rainfall with moist / frost free days and sunshine.
- well-drained soils with high fertility
- Temperature : 20-30°C

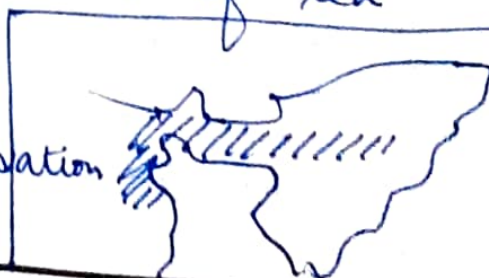
Reasons for plantations in DUAR Region :

Duar Regions are Darjeeling & Sikkim Himalayan Region, which are fit for tea cultivation as:

- High fertility + well-drained soil
- Frost-free region
- Hill slopes provide ample sunlight
- Temperature moderate → does not exceed  $30^{\circ}\text{C}$
- High Rainfall →  $> 200 \text{ cm}$

Therefore, Assam and Bengal (750%) are leading regions of tea cultivation in India. India is 2<sup>nd</sup> largest producer of tea after China.

(Fig) → Tea cultivation area



7. Briefly bring out the distinction between flash droughts and conventional droughts. Also, examine the reasons behind the increasing vulnerability of India to flash droughts. (150 words) 10

आकस्मिक सूखा और पारंपरिक सूखा के मध्य अंतर को संक्षेप में स्पष्ट कीजिए। साथ ही, आकस्मिक सूखे के प्रति भारत की बढ़ती संवेदनशीलता के कारणों का परीक्षण कीजिए।

**DROUGHT** is a condition wherein lack of water ~~leads~~<sup>fails</sup> to satisfy need of water for agriculture, livestock, human consumption, etc.

### FLASH

- Rapid Drought conditions within a few weeks

- Rapid fall in yield and production

⇒ more destructive to food security

- Affected more by weather patterns

### CONVENTIONAL

→ Prolonged drought condition due to scarcity of moisture or water

→ Gradual fall in production

⇒ Takes a lot of time and creates DISTRESS

→ Affected more by agricultural practices & anthropogenic causes.

Increased susceptibility to  
Flash Droughts : REASONS :

- ① Climate change : due to global warming, GHG emissions, have affected weather patterns.
- ② La Nina : more than proportionate impact on Rain-Shadow Area. With consecutive 3  
La Nina years  $\Rightarrow$   $\uparrow$  vulnerability to flash droughts.  
 $\downarrow$  HEAT WAVES
- ③  $\uparrow$  Desertification and Deforestation  
(eg: Punjab to be a desert in next 25 Years (Punjab Vidhan Sabha Report))
- ④ Lack of water retention due to land & soil degradation. ⑤ lack of prediction  
With  $>68\%$  of area as drought prone, it is pertinent to use water judiciously to evade menace of droughts.

8. Though various initiatives have been taken to ensure social security for informal workers in India, there still exist gaps which need to be plugged. Discuss. (150 words) 10

हालांकि भारत में अनौपचारिक श्रमिकों के लिए सामाजिक सुरक्षा सुनिश्चित करने हेतु विभिन्न पहलें शुरू की गई हैं, फिर भी कुछ कमियां मौजूद हैं जिन्हें दूर करने की आवश्यकता है। चर्चा कीजिए।

Informal Workers in India are ~89% of the workforce. With the code on social security, 2020, social security measures for informal workers have been taken. However, certain gaps still exist. Other initiatives → e-shram portal, ONDRC, AFDW, CRAPS in Social Security for Informal Workers :

- ① Exclusion Error needs to be corrected with better targeting
- ② According to Swaminathan Commission, Operational and Conceptual Issues exist in definition of Informal workers.

- ③ migrant workers are ignored largely (eg: → highlighted during COVID - lockdown)
- ④ Care Economy: large contribution of >3% to GDP but paid only 1% of GDP to care workers  
⇒ underappreciated work  
(eg: overburdened ASHA workers.)
- ⑤ Labour laws implementation has been slow  
(eg: 4 codes passed in 2020, but not operationalised)
- ⑥ large multidimensional poverty and lack of access and affordability
- ⑦ lack of extension support  
→ only 30% under Insurance cover
- ⑧ lack of awareness  
therefore, UBI - universal basic income can be rolled out as recommended by Economic Survey 2019-20.

9. Critically assess the government's move on raising the age of marriage of women in India from 18 to 21 years. (150 words) 10

भारत में महिलाओं के विवाह की आयु 18 वर्ष से बढ़ाकर 21 वर्ष करने के सरकार के कदम का समानोचनात्मक मूल्यांकन कीजिए।

Recently, after following the recommendations of Jaya Sainley Panel, Government proposed to raise marriage age for women from 18 to 21 years to be at par with male counterparts.

### BENEFITS

- ① Right to equality upheld → U/A 14  
by providing equality in age for males & females
- ② Women empowerment
  - Better education prospects with a higher age.
  - Better reproductive health.
  - Action on child marriage
    - eg: 1/3<sup>rd</sup> of global child brides are in India
  - Relieving pressure from society to get married.
  - Equality in opportunity

③ Spillover effects:

- Better nutritional outcomes for women due to absence of early reproduction
- Increased economic opportunities for women

CHALLENGES① Requires attitudinal change

eg: Even after strict rules, 785 cases of child marriage (NCRB 2020)

② Empowering through education

eg: Average age of marriage for women = 22 Years (↑ by education & awareness)

③ Law commission recommended to lower marriage age for males to 18 yrs.④ Person can vote at 18, but not choose to marry → Infringes A-218 19.⑤ Increased burden on Judiciary

Therefore, this measure needs to be supplemented by building behavioural change to promote women empowerment and achieve SDG-5.

10. Reservation for locals in private sector has again brought the debate around regionalism into focus. In this context, examine whether regionalism is a threat to national integration. (150 words) 10

निजी क्षेत्र में स्थानीय लोगों के लिए आरक्षण के मुद्दे ने क्षेत्रवाद के इर्द-गिर्द होने वाली बहस को पुनः केंद्र में ला दिया है। इस संदर्भ में, परीक्षण कीजिए कि क्या क्षेत्रवाद राष्ट्रीय एकता के लिए खतरा है।

Regionalism refers to the tendency to identify greatly with interests of a region rather than nation ~~or culture~~ ~~or any other~~. Reservation for locals, recently with Haryana government reserving 75% jobs in private sector → shows trend of 'jus soli' proliferating.

Regionalism : Threat to national integration

- ① Tendency of putting regional interests before national interests

(eg.) sons of soil theory impacting productive development in Goa and Maharashtra

- ② Secessionistic Tendencies

(eg.) NSCN's agitation for NAGALIM

- ③ Aggravating radical forces  
     eg: CAA Riots in 2020
- ④ Impacting constitutional values of  
fraternity and equality  
     eg: Ayedhya Verdict → divide  
         between Hindus and Muslim

What should be done?

- ① confidence building measures to  
 instill and bridge trust deficit  
 among regional communist  
 tendencies.
- ② Cooperative Federalism fostered  
 through centre's role as a  
 facilitator to help meet regional  
 aspirations.
- ③ Using freedom struggle's ideals to  
 instill patriotism as seen in  
 Azadi Ka Amrit Mahotsav.

'Unity in Diversity' is pertinent for  
 India to profess development in Amrit  
Kaal.

11. Explain how agricultural surplus, growth of crafts and trade, and growing population led to the second urbanisation in ancient India.

(250 words) 15

व्याख्या कीजिए कि किस प्रकार कृषि अधिशेष, शिल्प और व्यापार की वृद्धि तथा बढ़ती जनसंख्या के कारण प्राचीन भारत में द्वितीय नगरीकरण हुआ है।

### Second Urbanisation in Ancient

India refers to rise of MAHAJANA-  
PADAS in later Vedic Age circa.

500 BC, after  
the Indus Valley  
Civilisation  
(First  
Urbanisation).

Factors responsi-  
ble for second  
Urbanisation:



Fig: Mahajanapadas

#### ① Agricultural Surplus:

→ IRON AGE: use of iron helped  
in creating cultivable lands to  
generate agricultural surplus.

→ RIVER SYSTEMS: settlements near

river systems (eg: Ganga, Indus, etc. provided fertile alluvial soil for generating surplus.)

- KINGDOMS: with rise in monarchy from the early tribal society in Vedic Age, elaborate taxation and administration systems were established to generate agricultural surplus.

## II Growth of Crafts and Trade:

- This period witnessed NBPW (Northern Black Polished Ware) Pottery phase, with humble beginnings in crafts and architecture.
- contacts with Romans, Greeks were established

(eg: Pepper known as YAVANPRIYA  
↓  
Romans)

- Imports of Gold from Oman, Minerals from W. Asia, etc. provided resources for urbanisation.
- Shrenis and guilds established to increase trade.
- Beginning of lunch-marked coins and cash economy.

### III Population:

- Development of towns and cities helped create alternative employment.
- Iron supplements and agricultural surplus led to prosperity and population growth.
- Expanding population led to initiation of new ideologies  
(e.g.) Buddhism, Jainism, etc.

Therefore, second urbanisation was an interplay of several factors and paved the way for unification of sub-continent.

12. India of the 18th century failed to make progress economically, culturally and socially at a pace, which would have saved the country from collapse. Comment (250 words) 15

18वीं शताब्दी का भारत आर्थिक, सांस्कृतिक और सामाजिक रूप से उन्नति करने में विफल रहा, जो देश को पतन से बचा सकता था। टिप्पणी कीजिए।

India of the 18<sup>th</sup> century was characterised by a delapidated Mughal empire, with rise of regional kingdoms, internal infightings and increased role of Europeans in politics.

Factors leading to collapse in 18<sup>th</sup> century India:

### ① ECONOMIC:

→ lack of trade and stagnation of exports and imports

(eg.) India was an exporter of primary goods only.

→ Rising scientific temper of ~~some~~ European countries, while India still stuck with irrational superstitions.

- Invasions of Afghani and Durani kingdoms trampled the economy  
(eg) Nadir shah & Ahmad shah Abdali's invasions.
- Backwardness in Agriculture led stagnant production with unscientific techniques
- Decline of Indian cities led to pauperisation of urban population.

## II CULTURAL:

- Lack of scientific renaissance
- Prevalence of backward superstitions  
(eg) Tantrism
- closed cultural systems with lesser contacts with foreigners, as happened during ancient & early medieval ages.

## III SOCIAL:

- Plight of women: purdah, sati,

widow ostracisation, gender discrimination, etc hindered <sup>their</sup> development

- Backward education in chatuspa
- this and tabs as well as madarsahs
- Increased inequalities with rich living in luxury and poor suffering from poverty.
- Rigid caste system
- Feudal social system created inefficiencies

Therefore, these factors compounded with problems in mughal success-  
-ers in terms of weak and continuous infighting created a foundation for European colonisation of India, which could have been avoided, if India <sup>had</sup> experienced ~~social~~ & cultural development.

13. The withdrawal of the Civil Disobedience Movement triggered a two-stage debate on the strategic course of India's freedom struggle. Elucidate.

(250 words) 15

सविनय अवज्ञा आंदोलन की वापसी ने भारत के स्वतंत्रता संघर्ष की रणनीतिक कार्यप्रणाली के संबंध में दो-चरणों वाली बहस को आरंभ कर दिया। स्पष्ट कीजिए।

In the aftermath of Gandhi-Irwin Talks, while agreeing to attend the 2<sup>nd</sup> RTC, Civil Disobedience Movement (CDM) was withdrawn temporarily. After withdrawal of CDM, a 2-stage debate regarding council entry or continued constructive work emerged.

### 2STAGE DEBATE

#### (First stage debate)

Constructive work on Gandhian lines

Constitutional Struggle and elections

Continuation of CDM

→ Council entry after the Government of India Act, 1935 was in order to constitutionally empower

Indians <sup>and</sup> suppress British exploitative practices → supported by M.A. Ansari and others

→ Gandhiji advocated struggle-Truth <sup>(STS)</sup> struggle strategy, to opt for constructive work through upliftment of 'HARJANS'

→ Nehru advocated 'struggle-Victory Strategy', to opt for continuing CM.

Second stage debate:

→ ~~leftists~~ <sup>socialists</sup> like Nehru and Bose advocated no council entry and opposed office acceptance

→ leftists proposed office entry with aim to create deadlocks.

→ Gandhiji disapproved council entry earlier, but agreed later on conditions of council

members to not be used by  
the way of British, but for  
welfare of the people.

Finally, a trade-off, with  
council entry and continued  
constructive work emerged,  
following Gandhiji's S-T-S  
strategy.

14. Throw light on the causes, course and outcomes of the Civil War, which followed the Russian Revolution. Also, bring out the reasons behind the Bolshevik victory. (250 words) 15

रूसी क्रांति के बाद हुए गृहयुद्ध के कारणों, गतिविधियों और परिणामों पर प्रकाश डालिए साथ ही, बोल्शेविक विजय के कारणों को भी स्पष्ट कीजिए।

After removal of Tsar from February Revolution and Bolshevik's victory from October Revolution, a CIVIL WAR engulfed Russia well until 1921-22.

Causes of Civil War

→ 'Modest' Performance of Bolsheviks in elections to Constituent Assembly due to large opposers of Lenin → democrats, monarchs, & etc.

→ 'Red Terror' by Red Army which was led by Bolsheviks against its opposers.

- 'White Army' - the opposers being supported from French & US → led to negative perception of foreign interference.
- Economic conditions after war (WW-I) and revolutions were dilapidated.

### Course of civil war

- From the end of October Revolution (1918) to 1921-22.
- RED TERROR and crackdown on White Army by the Bolsheviks.
- Allies supporting 'White Army' to engage Russia again in World War-I.
- Finally, Bolsheviks could suppress the civil war by 1921.

### Outcomes of civil war:

→ Famine with death of around 15 million people.

→ Economy in shambles due to excessive resources used to suppress the rebellions

→ Economic Policies by LENIN

→ Centralised Planning

→ Increased State Role in Heavy Industries

→ State as commanding heights of the economy.

Russia could emerge from the setback of civil war from its economic restoration, leading to be an inspiration for India in the future.

15. What are Glacial Lake Outburst Floods (GLOFs)? Highlighting the susceptibility of the Himalayan region to GLOFs, state the measures required to address them. (250 words) 15

ग्लेशियल लेक आउटबर्स्ट फ्लूड्स (GLOFs) क्या हैं? GLOFs के प्रति हिमालयी क्षेत्र की सुशेयता पर प्रकाश डालते हुए, इनके समाधान के लिए आवश्यक उपायों का उल्लेख कीजिए।

### Glacial Lake Outburst Floods

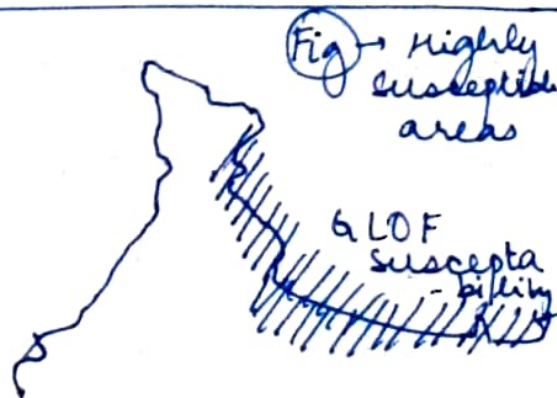
(GLOFs) are floods caused by outburst of glacial lakes

(eg:) Joshimath GLOF in Feb 2021.

These are caused by melting of glaciers, or inefficacy of dams & embankments leading to flooding of low-lying areas at the foot of mountains.

Susceptability of Himalayas to GLOFs:

According to GSI, as many as 76 glaciers in Himalayas



are receding / melting at a fast pace.

→ Moreover, Himalayan glaciers have been reducing by a foot and a half each year, increasing the risks of GLOF.

→ Himalayas along with adjacent mountain Ranges in Hindu Kush are the THIRD POLE of <sup>the</sup> world, which have lost 15% of initial glaciation.

→ ↑ tourism + land degradation ⇒ Fragile Ecosystem

Reasons for GLOF:

→ landslides, earthquakes, tectonic activity  
→ climate change: According to

IPCC, poleward movements of atmospheric variables has occurred.

↳ ENSO, La Nino, El Nino Modoki, Indian Ocean Dipole, all affect Himalayan Region

- Increased pollution → reducing albedo of Himalayan Glaciers
- Global warming → ~~due to~~ <sup>due to</sup> CO<sub>2</sub> emission

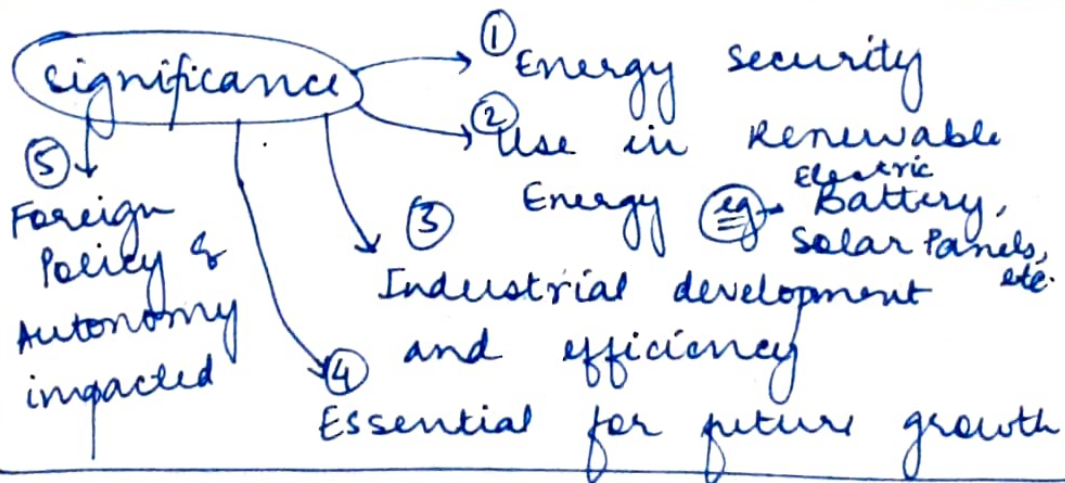
### Measures that can be taken:

- ① Hazard Mapping & Flood Plain Zoning to measure the impact
- ② State disaster management Plans in consonance with NDMA
- ③ Enforcement of capacity and Capability creation to mitigate the hazard
  - (eg: Relying on local knowledge ~~the~~ Shajji Divari in J&K)
- ④ Structural & Non-structural Measures by NDMA for Flood Prevention
  - (eg: Embankments and Mapping Glacier Atlas by ASI has helped in mapping vulnerable areas. This must further be supplemented to develop Disaster Risk Reduction in lines with SENDAI FRAMEWORK)

16. Highlighting the significance of critical minerals, provide an account of their distribution in India and the world. (250 words) 15

महत्वपूर्ण खनिजों के महत्व को रेखांकित करते हुए, भारत और विश्व में उनके वितरण का विवरण प्रस्तुत कीजिए।

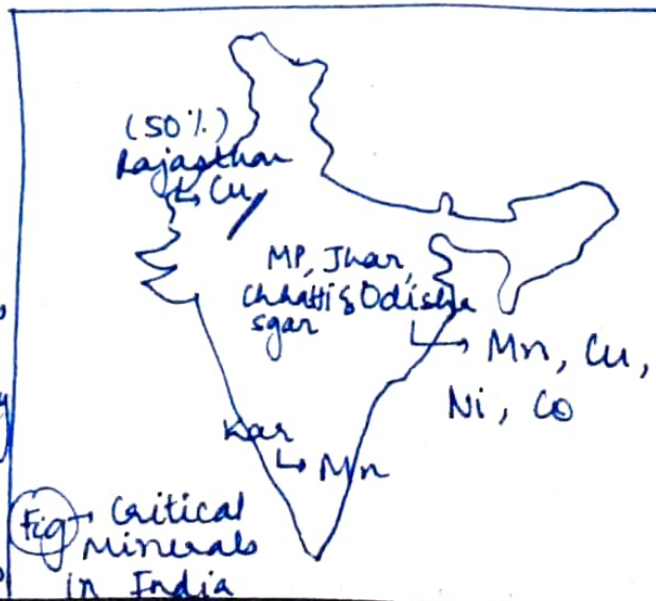
CRITICAL MINERALS are minerals used in strategic and critical development of industries → Copper, Nickel, Cobalt, Rare Earth minerals, etc.



### Distribution of Critical Minerals:

#### ① INDIA

India has traces of critical minerals and is heavily dependent on foreign countries



for its supplies.

- Nickel : 92% found in Odisha
- Copper : ~50% reserves in Rajasthan's Aravallis
- Manganese : ~50% in Odisha, and other states → MP, Karnataka, Jharkhand.
- Rare Earth Minerals : Traces in Southern Indian Ocean and near Mineral Belt.

## II WORLD



China → major player in Rare Earth

Minerals as well as Cobalt  
managed in Congo

Cobalt → majority in Congo

Nickel → Indonesia, Philippines, Russia

Molybdenum → China, USA, Peru

Copper → Chile, China, Australia

The distribution of Critical minerals

is very erratic and creates  
dependencies on foreign nations.

With discovery of Polymetallic

Nodules in sea floor, India

has launched Deep Ocean Mission

to explore them. Further, India

has established KABIL to

get into foreign collaborations for  
supply of critical minerals as

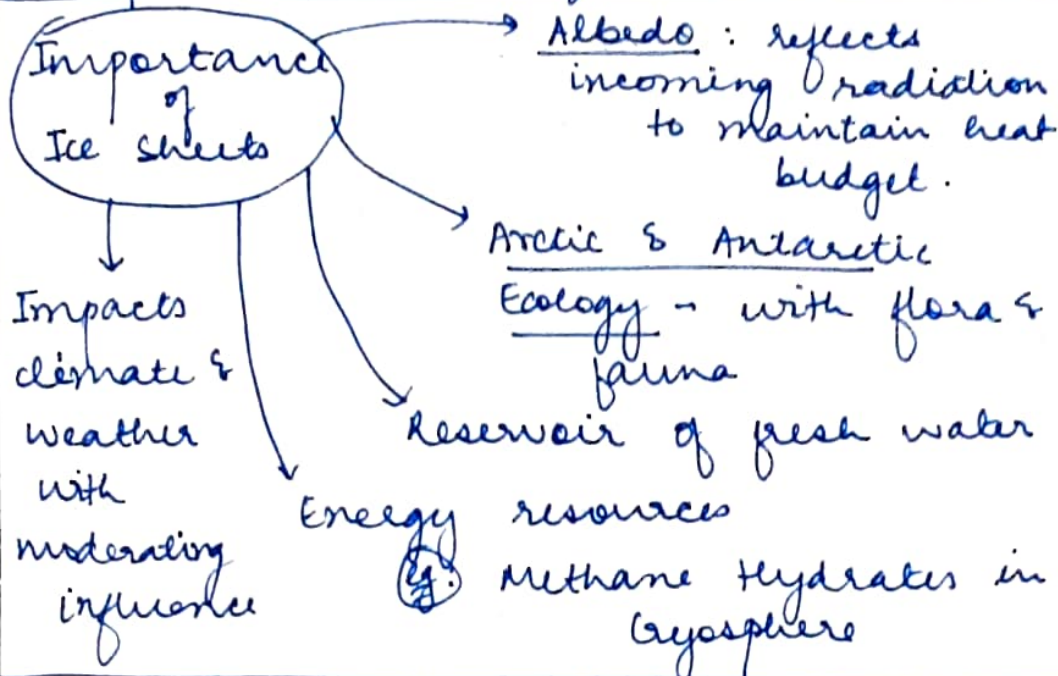
seen recently in MOLU with

Argentina.

17. Highlighting the importance of ice sheets, discuss the likely impact of their melting on the planet with special focus on India. (250 words) 15

हिम चादरों के महत्व पर अक्षांश दानों के रूप में, भारत के विशेष संदर्भों में पृथ्वी पर उनके गिरने के प्रभाव की विवेचना कीजिए।

ICE SHEETS are largest reservoirs of fresh water in the world. They have a huge impact on ecological balance.



Impact of melting of ice sheets on India:

The Third Pole of the world → Hindu Kush mountain ranges has depleted by 15% → hinting

at increased melting of glaciers. Further, according to GSI, as many as 76 glaciers in Himalayas are descending. The likely impact will be:

① Increased intensity of GLOFs and Flash Floods

(eg): ~~Floods~~ <sup>GLOF</sup> (Flood) in Jeshinath in February 2021.

② Water security impacted due release of pollutants trapped in ice sheets.

③ Coastal Population affected adversely due to rise in mean sea level.

Coastal submergence along with erosion will lead to displacement of 400 million population living in coasts.

④ World's 15 major cities are on

Including → Mumbai & Chennai  
coasts ~ Their inundation will  
impact economic performance  
& indicators.

⑤ Increased climate migrants

(eg:) WB estimates ~140 climate  
migrants globally.

⑥ Rise in unemployment and  
retrogression in socio-  
economic sphere.

⑦ Variability in Weather patterns

(eg:) Breakdown of AMOC  
→ heatwaves in Europe &  
La Nina in India

⑧ Threat to Biodiversity → IPCC  
highlights poleward migration

⑨ Food & Energy Security  
impacted due to infrastructural  
breakdown

Therefore, DRR and climate goals →  
Panchamitra to life are <sup>the</sup> way forward.

18. What are twin cyclones? Discuss the role of Rossby waves and Madden-Julian Oscillation (MJO) in their formation. (250 words) 15

जुड़वों चक्रवात (ट्विन साइक्लोन) क्या होते हैं? उनके निर्माण में रॉस्बी तरंगों और मैडेन-जूलियन दोलन (MJO) की भूमिका की विवेचना कीजिए।

TWIN CYCLONES are cyclones emerging from same parent circulation.

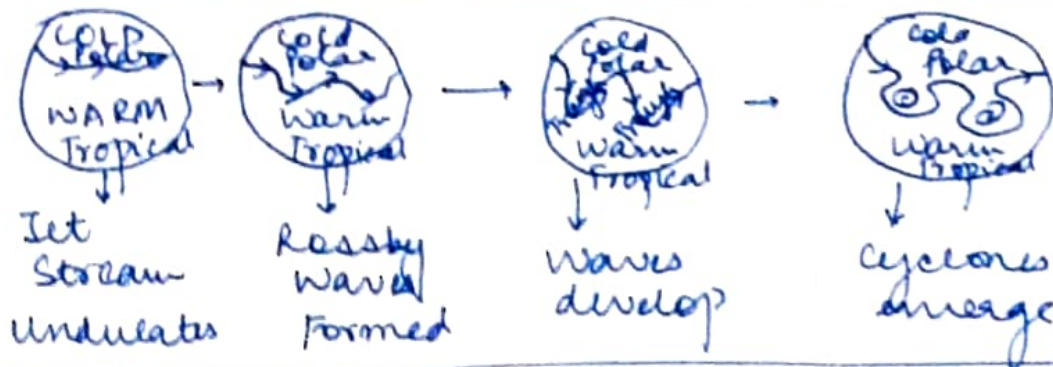
eg: Recently, Cyclone Asani (Northern Hemisphere) & Cyclone Karim (Southern Hemisphere) originated from Madden Julian oscillation at the same time

Fig: Twin Cyclones Asani & Karim



Role of ROSSBY WAVES in their formation :

Oceanic and Atmospheric Rossby Waves are responsible for formation of twin cyclones.



Rossby Waves are large horizontal undulations, naturally occurring in rotating fluids. They occur due to Earth's Rotation.

### Cyclone Formation:

Undulating effect of Jet Streams creates Rossby waves, which lead to larger wave action. With clear formation of crests and troughs (low pressure), low pressure areas are divided into two and creation of <sup>Twin</sup> cyclone occurs.

Role of MJO

Madden Julian Oscillations are periodical eastward movements of atmospheric circulation in  $30^{\circ}\text{N}$ - $30^{\circ}\text{S}$  within 30- to -60 days. Their

enhanced phase leads to uplift of moisture and heavy rains and aid cyclone development ~~the~~ near India.

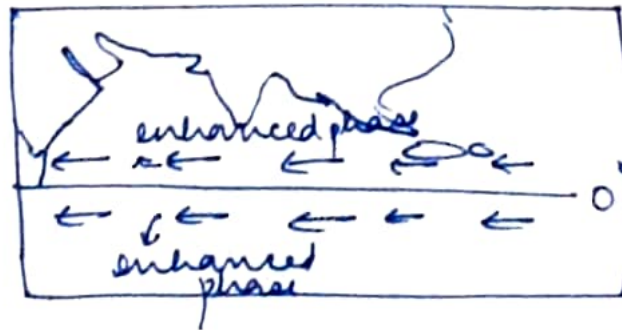


Fig:  
MJO

Hence, MJO along with Rossby waves, together create Twin cyclones which have disastrous impacts when <sup>they</sup> hit the shore.

19. Since independence, planning strategies for women's upliftment has evolved from welfare to development to empowerment. Elucidate. Also, discuss the role played by voluntary organizations in this context.

(250 words) 15

स्वतंत्रता के पश्चात्, महिलाओं के उत्थान के लिए नियोजन रणनीतियाँ कल्याण से लेकर विकास और सशक्तीकरण तक विकसित हुई हैं। स्पष्ट कीजिए साथ ही, इस संदर्भ में स्वयंसेवी संगठनों द्वारा निभाई गई भूमिका की भी विवेचना कीजिए।

WOMEN ISSUES have been at the core of social issues since pre-independence period. Humble beginnings of women's upliftment were seen in works of Raja Ram Mohan Roy, Vidyasagar, Pandita Ramabai, etc.

Post-independence : Women's upliftment & planning

① WELFARE → by recording equality  
→ 1st - 5th FYP → Trickle down development through growth  
→ Immediately after independence, the need to acknowledge equality of women genders was recognised

eg: Article 14, 15, etc.

→ provisions for safety of women were made eg: Article 24 (Human Trafficking)

- Further, marriage age was increased to 16 years after independence, then later to 18 years.
- Hindu Succession Act accorded women equal status to inherit property.

② Development → by removing hindrances

- 8<sup>th</sup> FYP: Women Reservation in PRT & ULB
- Women-centric issues → 19: lack of equal pay & opportunities
- ⇒ Equal Remuneration Act

- Sexual Harassment highlighted
- ⇒ POSH Act + Vishakha Guidelines

③ Empowerment → by building capabilities

- Gender-based budgeting in 10<sup>th</sup> FYP.
- 9<sup>th</sup> FYP → Women empowerment as a plank of development.
- 11<sup>th</sup> FYP → inclusive growth as the main objective.

## Role of Voluntary Organisations:

→ 1970s - 80s: Highlighted role of unequal remuneration, maternity leaves, etc.

(eg): CB Muthamma Case → gender discrimination in MEA

→ MeToo Movements recently highlighting voice against sexual harassment.

→ Vishakha Guidelines by SC under Vishakha v. State of Rajasthan judgement.

→ Abortion Rights activism, Bodily autonomy, marital rape activism, LGBTQ activism → several voluntary organisations.

→ NGOs like CARE & FORCE have worked for women empowerment.

Therefore, Voluntary organisations have leveraged democratic freedom to indulge government for taking steps towards SDG-5.

20. How far do you agree with the view that globalisation has aggravated the challenges faced by the poor in India? (250 words) 15

आप इस विचार से कहां तक सहमत हैं कि वैश्वीकरण ने भारत में निर्धनों द्वारा सामना की जाने वाली चुनौतियों को और बढ़ा दिया है?

Globalisation is the economic integration of nations through movements of people, capital, and culture. Globalisation has impacted every sphere & every segment of the population.

Globalisation : aggravating poor :

- ① ~~the~~ Increased casualisation due to proliferation of Gig Economy

eg: (90%) of workforce is in unorganised sector

⇒ Lack of SOCIAL SECURITY

- ② Increased competition of domestic firms with MNCs which use more technology than labour

⇒ ↑ Jobless-growth ⇒ ↑ unemployment  
(~ 6% in 2021)

### ③ Increased inequality and Poverty:

~27% of Indian population is multidimensionally poor (MPI<sub>2021</sub>) while top 10% of Indians hold ~57% of total income. Globalisation's benefits have been disproportionate.

### ④ Increased Volatility → rising inflation with world economy ⇒ Poor impacted more.

⑤ climate-unfriendly activities lead to wide displacement & migrations, >40% of displaced are poor and vulnerable.

⑥ Urbanization induced by globalization ⇒ ~17% urban population in slums  
⇒ Poor living conditions & multidimensional poverty.

However, globalisation has also had +ve impacts:

- ① Increased choices of poor with higher quality products at cheaper rates

(eg:) Soaps, equipments, etc.

- ② Alternative employment other than agriculture

(eg:) Gig Economy rising (~77 lakh in gig economy)

- ③ Acculturation

Further, there is a need to ensure the benefits of globalisation reach the poor proportionately by removing hindrances and opting inclusive growth. This can be done by providing alternative employment opportunity brought about by Globalisation, UBI, Urban employment programme, etc.