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GENERAL STUDIES (TEST CODE : 1066)

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Medium Eng./Hindi	ENGLISH	Registration Number	40764
Center	VISION	Date	19/09/10

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Q. No.	Maximum Marks	Marks Obtained
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Total Marks Obtained:

Remarks:

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, विद्यार्थी 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 (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित 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, 2nd Floor, Above National Trust Building, Bada Bazar Marg, Old Rajinder Nagar, Delhi-110060

M-1/4, Plot No-A-12/13, 1st Floor, Ansal Building, Dr. Vidya Sagar Homeopathic Clinic, Mukherjee Nagar, Delhi-110009

EVALUATION INDICATORS

1. Context 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 cave architecture in India not only enlighten us with information of tradition and customs of ancient times but also illustrate considerable accomplishment with regard to structural engineering and artistry. Discuss.

(150 WORDS) 10

भारत में गुहा स्थापत्य न केवल हमें प्राचीनकालीन परंपराओं और रीति-रिवाजों की जानकारी प्रदान करता है, अपितु यह संरचनात्मक अभियांत्रिकी एवं कलाकृतियों के संबंध में महत्वपूर्ण उपलब्धियों का दृश्य उदाहरण भी प्रस्तुत करता है। चर्चा कीजिए।

Cave architecture in India

has provided us with information about traditions and customs –

- Ajivika Sect was gifted Barabara Caves in Bihar by Dasarath, grand son of Ashoka → shows prevalence of Ajivika philosophy of fatalism i.e. belief in faith.
- Hathigumpha inscription on cave architecture in Odisha → shows importance of elephants and their significance in local customs.
- Ellora and Ajanta cave architecture,

specially Kandariva Mahadeo, Indra
(Hinduism)
Sabha (Jainism) and various Buddhist
caves → Chaityas and Viharas show
the religious tolerance during Gupta
and later times Rashtrakuts and
Chandelas.

→ Elephanta Cave architecture in
Mumbai, shows Brahma-Vishnu-Mahesh
Trimurti and Mahisasur-mardini → showing
prevalence of Bhagvatism (Rashtrakuts)

Various Shalhanjikas and Ganga
Yamuna as cave guards shows
intricacies and accomplishment of
engineering and artistry → Monolithic
cave temple in Ellora

2. While the Battle of Plassey laid the foundation of British Empire in India, it was the Battle of Buxar that proved to be the turning point of British fortunes in India. Discuss. (150 WORDS) 10

यद्यपि प्लासी के युद्ध ने भारत में ब्रिटिश साम्राज्य की नींव रखी, तथापि यह बक्सर का युद्ध था जो भारत में अंग्रेजों की सफलता के लिए निर्णायक सिद्ध हुआ। चर्चा कीजिए।

Battle of Plassey between
Shajuddaula (Bengal) and Clive
(East India Company) in 1757 paved
foundation of British empire but
later Battle of Buxar, 1764
between Hector Munro (EIC) and
Mir Kasim (Bengal) and Awadh
ruler and Mughal ruler on
other side proved to be turning
point because →

→ Battle of Plassey can be considered
a chance or fluke win for Britishers
but Battle of Buxar showed great

Co-ordination and war skills of Britishers with modern weapons & strategies.

- In Buxar, EIC defeated a combined army of 3 prominent rulers at that time.
- After Buxar, huge war losses. Compensations were imposed on all 3 rulers.
- Britishers got Diwani rights of Bengal, Bihar and Odisha and other Nizamat rights (After Treaty of Allahabad)
- Buxar established Britishers as strong administrative - political and economic power in India.

Indeed Battle of Buxar established Britishers as future rulers of India.

3. Among many novel methods and themes, the Swadeshi Movement laid great emphasis not only on boycott but also on self-reliance. Discuss.

(150 WORDS) 10

अनेक अनूठे तरीकों और विषय-वस्तु के साथ-साथ, स्वदेशी आंदोलन ने न केवल बहिष्कार, अपितु आत्मनिर्भरता पर भी अत्यधिक बल दिया। चर्चा कीजिए।

Swadeshi movement launched in

1906 after partition of Bengal by

Lord Curzon in 1905 used many

novel methods and themes →

→ New method of protests adopted
which were proposed by extremists
leaving prayer, petition and propaganda
style of moderates.

→ Participation of masses at such
large extent, missing previously when
only upper-class intelligentsia
participated.

→ Economic as well as political
pressure on Britishers.

Reliance on Boycott and Self-Reliance

Boycott

- Boycott of english goods like textiles, english liquors etc.
- Boycott of english administrative and justice delivery mechanism, educational institutes etc.
- Boycott of British system, ideology and legislative mechanism.

Self-Reliance

- Khadi textiles, usage of domestic handicrafts.
- Educational Vernacular and Indian institutes → universities in Bombay, Bengal.
- Chemical Industry estd. by P.C. Ray.
- Reliance on "Atma shakti"
- Indian Renaissance - Indian paintings by Abanindranath, Song - Vande Mataram and Scientists - Jaydisha Chandra Basu.

4. The idea of linguistic states predated independence, however it took some time even after independence for this idea to be implemented. Discuss.

(150 WORDS) 10

यद्यपि भाषाई राज्यों का विचार स्वतंत्रता-प्राप्ति से पहले का था, तथापि स्वतंत्रता-प्राप्ति के पश्चात् भी इस विचार को कार्यान्वित करने में कुछ समय लगा। चर्चा कीजिए।

Linguistic states demand was raised even before independence →

- After Nagpur Session, 1920 Congress also organised its Cadre according to linguistic states.

- Bombay and Hyderabad States division was asked during constitutional debates as well.

However, leaders did not want fragmentation of states due to maintaining unity requirement. JVP Commission also recommended against linguistic division because.

- Too many languages in India will cause too many divisions (Domino effect)
- Immediate requirement to maintain strong unity of nation.

But in Hyderabad state Potlu Srinulu sat on indefinite hunger strike and died → caused anger across state and put pressure on govt

Dhar Commission established. Which has given that →

- language is not the only criterion but "administrative ease" also and recommended multiple state division.

finally State Reorganisation Act, 1956 was passed and led to formation of 20 states from 14.

5. Dr. B. R. Ambedkar understood that persistent inequalities pose fundamental challenges to the economic and social well-being of the nation and people. In this context, discuss the key contributions of Dr. Ambedkar in the history of modern India. (150 WORDS) 10

डॉ. बी. आर. अम्बेडकर का मानना था कि दीर्घस्थायी असमानताएं राष्ट्र और लोगों के आर्थिक एवं सामाजिक कल्याण के समक्ष बुनियादी चुनौतियां प्रस्तुत करती हैं। इस संदर्भ में, आधुनिक भारत के इतिहास में डॉ. अम्बेडकर के प्रमुख योगदानों की चर्चा कीजिए।

Ambedkar understood by his own experiences that caste-system and untouchability pose strong challenge to socio-economic development and this is impossible without providing political power to people belonging to "lower castes".

Contribution of Dr. Ambedkar

→ Ambedkar is the creator of modern India. He prepared the Constitution of India and provided

adequate safeguards to socially backward castes through reservations.

- He provided representation to Scheduled Caste community and founded All India Scheduled Caste Federation, 1927.
- Poona Pact, He negotiated for reservation in seats in central as well as provincial legislatures.

Independent India

- He fought for passing of Hindu Code Bill and finally left Congress and formed separate party, 1956.
- first law minister of India.
- He converted to Buddhism and thousands followed him to show his grievance

6. It has been pointed out that in recent times, while the proportional share of nuclear households has dipped in urban areas it has risen in rural areas. Analyse the reasons behind this trend. (150 WORDS) 10

यह इंगित किया गया है कि हाल के समय में, जहां शहरी क्षेत्रों में एकल परिवारों की आनुपातिक हिस्सेदारी में कमी आई है, वहीं ग्रामीण क्षेत्रों में यह बढ़ी है। इस प्रवृत्ति के पीछे उत्तरदायी कारणों का विश्लेषण कीजिए।

Number of nuclear households
are increasing in urban areas—

- Globalization and modernisation
brings idea of nuclear family.
- Nature of work i.e. not dependent
on ownership of land / property
collectively → more service oriented
- Nature of role changing for elder
people — Elder people's ~~to~~ traditional
work like looking after kids and
organisation of festivals replaced by
outside agency like creche and

event organisation

→ Cost of living. High cost of living in urban areas

→ In migration of rural population - Where only the working youth comes to urban areas.

Reduction of Proportion of Joint Nuclear Increase in Rural.

→ $\frac{\text{Total Joint families}}{\text{Total families}} = \text{Proportion}$

→ Total families are decreasing due to outmigration to urban.

→ Division of land cause very small fragments so to keep land consolidated

Joint families → interdependence increasing

→ When young ones migrating to urban rest family together as joint to work

7. Separation, and not divorce, is the dominant form of marriage dissolution for most women in India. What could be the possible reasons behind this? Also, discuss why there are striking differences in divorce rates between the different regions in India. (150 WORDS) 10

असाहचर्य, न कि तलाक, भारत में अधिकांश महिलाओं के लिए विवाह विच्छेद का एक प्रमुख रूप है। इसके पीछे संभावित कारण क्या हो सकते हैं? साथ ही, चर्चा कीजिए कि भारत में विभिन्न क्षेत्रों के बीच तलाक की दर में सुस्पष्ट अंतर क्यों हैं।

Women get separated but
not take divorce →

— Social Stigma of getting divorced

— Long and arduous judicial
process to go through divorce
paperwork

— In case of filing divorce, problem
of alimony allocation comes to fore,
husbands deny giving alimony which
causes a judicial battle ground but
due to pendency of cases women
prefer separation only.

- Financial Independence of women
so do not care about alimony.

Regional Variation

- Divorce rates are higher in
urban areas than rural areas.
- Because urban areas more
independent and educated, aware women
so do not buckle down before atrocities.
- More divorce in Southern states
than Northern states.
 - due to better socio-economic
indicators.
- North Eastern states before rates
were less because matrilineal
but now divorces increasing because
males are asserting themselves (meghalaya)

8. Giving an account of their impact, mention the reasons for increased frequency of dust storms as observed in the last few years. (150 WORDS) 10
- धूल भरी आंधियों के प्रभाव का विवरण प्रस्तुत करते हुए, पिछले कुछ वर्षों में अवलोकित धूल भरी आंधियों की वर्धित आवृत्ति के कारणों का उल्लेख कीजिए।

Dust storms — The fast
movement of winds close to
surface specially in warmer
climate and contains substantial
dust particles.

Impact of dust storms

- Bad impact on agriculture as
crops get destroyed
- Causes accidents on the roads
because dust particles blind
drivers.
- felling of trees and blockage of roads.

→ Health hazards due to PM 2.5.
and PM 10 particles.

→ Sometimes causes seariffull also
so sometimes good for agriculture.

Reasons for increasing frequency

→ Average temperature has increased.

→ Occurrence of extreme weather
events due to climate change.

→ formation and meeting of
cold air and warm air

Eg: dust storms in Delhi.

→ Increased denudation of hills.

→ Construction activities increased,
sand mining in Ahmedabad.

9. Elaborate on the factors responsible for the evolution of the current drainage system in Indian sub-continent, with special emphasis on the characteristic features of Himalayan and Peninsular rivers. (150 WORDS) 10

हिमालयी और प्रायद्वीपीय नदियों की अभिलाक्षणिक विशेषताओं पर विशेष बल देते हुए, भारतीय उपमहाद्वीप में वर्तमान अपवाह प्रणाली के विकास के लिए उत्तरदायी कारकों का सविस्तार वर्णन कीजिए।

Factors ~~are~~

Formation of Himalayas caused multiple perennial rivers -

Eg. Brahmaputra, Ganga, Yamuna.

Tilt of Indian landmass on eastern side so drainage of complete India i.e. Himalayan as well as peninsular rivers.

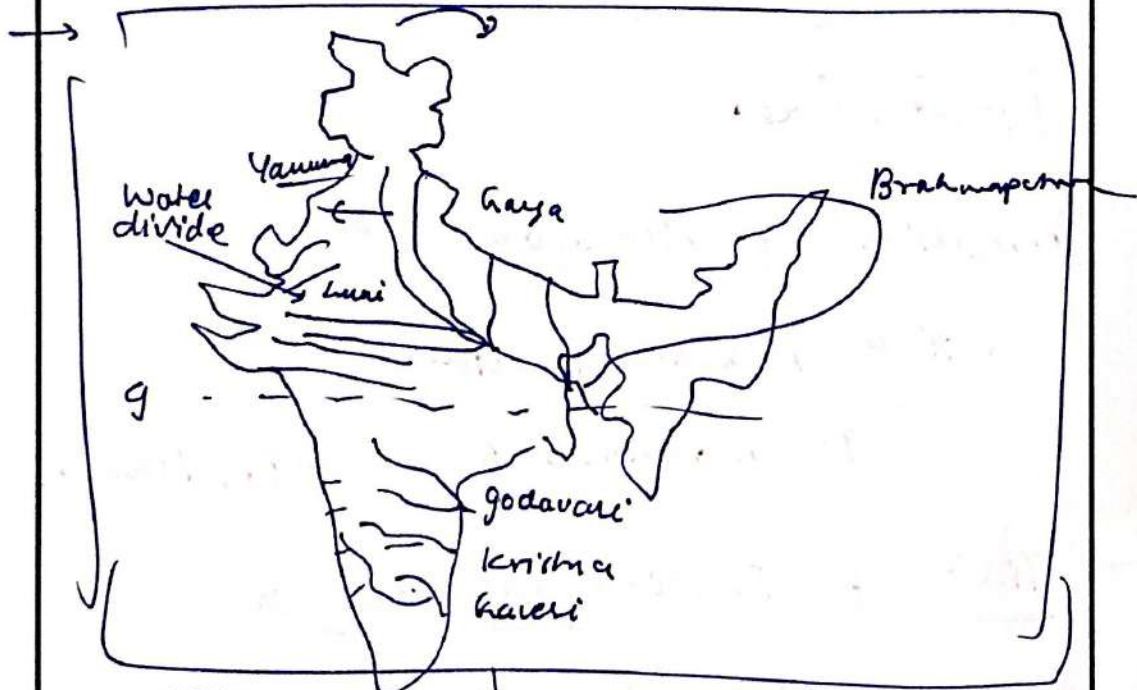
on western eastern side.

(when western ghats subsidence happened western part uplifted and eastern went down)

The water divide of Afavalis

Satpura.

→ Rift valleys → eg. Narmada,
Damodar etc.



Himalayan

- Perennial
- young rivers
- forms fertile
alluvial soil

- formation of Delta

- High volume

- navigable.

Peninsular

- seasonal
- old rivers.
- other soils, less
alluvial due to plateaus.

- more estuaries.

- less volume

- not navigable

10. Enumerate the features of Plantation Agriculture and the problems faced by them. Given the fact that area under cultivation of palm oil has been increasing, discuss the benefits and challenges associated with it.

(150 WORDS) 10

बागानी कृषि की विशेषताओं और इसके समझ आने वाली समस्याओं को सूचीबद्ध कीजिए। इस तथ्य को देखते हुए कि पाम ऑयल की खेती के अंतर्गत क्षेत्र में वृद्धि हो रही है, इससे संबद्ध लाभों और चुनौतियों की चर्चा कीजिए।

11. Bring out the distinctive features of Gandhara, Mathura and Amravati schools of art that flourished towards the first century CE. (250 WORDS) 15

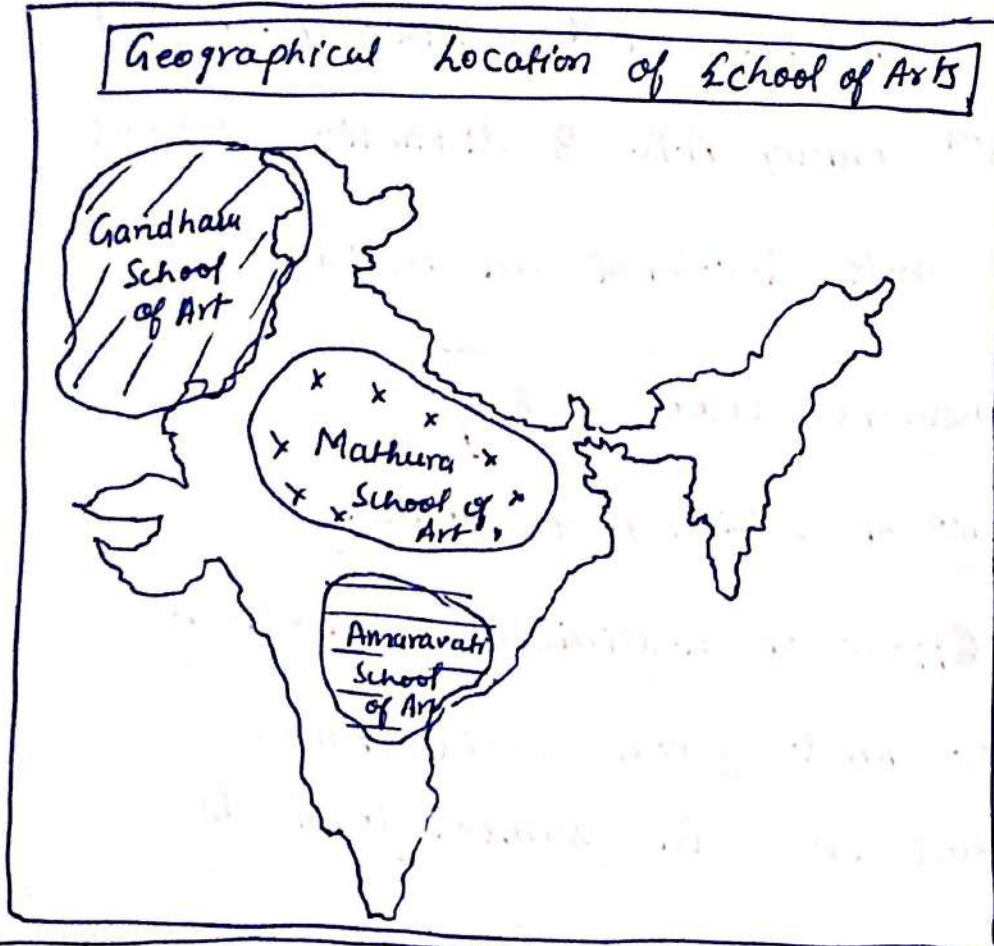
प्रथम शताब्दी ईस्वी के आसपास विकसित होने वाली गंधार, मथुरा और अमरावती कला शैलियों की मुख्य विशेषताओं को प्रस्तुत कीजिए।

During 2nd century B.C. and 3rd century A.D. 3 distinctive school of arts developed in India.

Gandhara School of Art

- Use of schist, grey stones.
- Effect of hellenistic architecture
i.e. Indo-greek architecture.
- Buddha's in symbol form is missing (present in Mathura because Mathura older → Heeryan hence symbols)
- Lean Buddha with curly hairs and exuberance in face with slight smile. (Clothes are loose)
Eg. Sitting Buddha found in Gandhara.

Spread → Gandhar region, afghanistan,
Eastern Iran and Pakistan etc.



Mathura School of Art

- use of red stone and crystal; somewhat black shades also found.
- Buddha found in symbols i.e. tree for nirvana, Stupa for parinirvana etc.
- Buddha found in human form as well.

- eg. Iconic sitting Buddha with eyes
→ Kushanas and Shakas (Kanishk statue) closed.
→ more Indian features - muscular body,
Calmness is visible on face, clothes
are tight and where standing Buddha
transparent clothes and lean on one leg.
→ Jain Hrthankars and Hinduism also found.
→ Totally indigenous in character.
Spread → Northern India → UP, Bihar
MP etc.

Amaravati School of Art

- White marble → sandstone is used.
→ Amaravati Stupa is best carved.
→ 5 Ayata pillars depicting 5 main
life events of Buddha is found.
→ Indigenous in character
→ Patronage of Sathavahana
Spread - Maharashtra
AP.
Telangana
All 3 school of arts have distinctive
and rich art characters.

Along with above, they were motivated by Whiteman's burden theory of Rudyard Kipling and hence were on Cultural mission to civilize. Manifestations —

- Changed Administrative System for better law and order by Cornwallis.
- Releasing Rs. 1 lac. for education in Charter Act, 1813.
- Maucaulay and Wood's commissions for English education.
- Passed Sati Abolition Act, 1823.
- opened India for Missionaries Charter Act, 1813 because they despised Hindu religion and wanted to propagate Christian religion.
- Judicial administrative system treated

"upper" and "lower" castes equally
making dent on caste system. In
military also recruitment of all
castes.

→ By travelling overseas, crossing seas
old belief of loosing castes became
weaker.

→ Widow Remarriage Act, 1856 removed
widow atrocities.

→ Changing minimum age of marriage
Britishers changed customs and values

Although they have done some
positive work but they themselves
were driven by ethnocentric bias
and showed Racism character, always
driven by single motive of imperialism
and used whiteman burden as excuse

13. Despite Jawaharlal Nehru and Mahatma Gandhi being close associates, there were significant differences between the two regarding the role of state and the control that it exercised. Comment. (250 WORDS) 15

जवाहरलाल नेहरू और महात्मा गांधी के निकट सहयोगी होने के बावजूद, दोनों के बीच राज्य की भूमिका और इसके नियंत्रण की सीमा के संबंध में अर्थपूर्ण मतभेद थे। टिप्पणी कीजिए।

Jawaharlal Nehru was close associate of Gandhi even before Non-Cooperation movement. They had many differences in approach.

Close Associations

- Jawaharlal Nehru participated in Home Rule movement and late youth wing of Congress came in contact with Mahatma Gandhi.
- Participated along with Gandhi in NCM, Civil Disobedience, Individual Satyagrah etc.
- Close associate of Gandhi during constructive works like Khadi, work

against untouchability etc.

Significant Differences

- Gandhi adopted Struggle-truce-struggle method while Nehru Struggle and win strategy.
- Differences in support to Britishers during 2nd world war.
- Role of state and control over resources.

Role of State and Control

- Nehru was in favour of State taking larger role while Gandhi believed in strength of masses.
- Nehru opined state should control the resources and manage economy while Nehru said State should only act as trustees of resources.

Owned by citizen.

→ Nehru believed in industrialization through putting all resources at use ; Gandhi believed that more reliance be put on Khadi and indigenous village industries.

→ Nehru believed education should be decided by state ; Gandhi proposed activity based learning based on vernacular models

Although both have significant differences over the way state should Act but both had same objective in their heart i.e. welfare of Citizen of India.

14. Enumerating the reasons behind Sino-Soviet split in the second half of the 20th century, analyse its impact on the Cold War. (250 WORDS) 15

20वीं शताब्दी के उत्तरार्ध में चीन-सोवियत दरार के पीछे उत्तरदायी कारणों को सूचीबद्ध करते हुए, शीत युद्ध पर इसके प्रभाव का विश्लेषण कीजिए।

Rise of Soviets in Soviet Union in 1917 made it inter-national leader of Socialism. Third International organised in 1917, China also participated.

But later in second-half of 20th Century Sino-Soviet split happened →

→ Under autocratic regime of Stalin Russia observed woes of Socialism so took a softer approach to socialism i.e. farmers were allowed to sell excess in

retail markets and labourers were also given incentives.

While China took harder communist stand and total nationalisation of state resources and control over agriculture as well.

- Territorial issue going on between China and USSR.
- Small war and standoff b/w both
- China wanted USSR to continue full fledged war against western bloc of NATO while USSR refused.
- China was against cold war.

idea which resulted in division
of fund for militarisation without
any "Action" i.e. real war.

→ China wanted USSR to take
advantage of weak post war
and post-economic-depression
economy of western Europe and
USA.

USSR and China ideological
split happened which resulted
in small conflict, was also
later on as result of cold
war economic drainage and other
socio-cultural reason USSR split
in 1991.

15. History has disproved the prediction that democracy would not succeed in India. In this context, critically assess the achievements and challenges of democracy in India since Independence. (250 WORDS) 15

इतिहास ने इस भविष्यवाणी को नकार दिया है कि भारत में लोकतंत्र सफल नहीं होगा। इस संदर्भ में, स्वतंत्रता-प्राप्ति के उपरांत भारत में लोकतंत्र की उपलब्धियों और चुनौतियों का आलोचनात्मक आकलन कीजिए।

After India got independence less than 15% literacy rate, famines, riots, poverty and hunger spread everywhere. Partition riots and further ^{secessionist} ~~secessionist~~ tendencies of princely and border states, Western thinkers, political theorists and media written off India as long-term-democracy.

But India not only belied their assessment and emerged as one of the most successful and in fact largest democracy in world.

Achievements

- largest free and fair election in history in 1951 by Election Commission
- Voter turnouts have been increasing showing the acceptance of democratic ideals
- fairly stable governments till 1909 specially during congress era
- Betterment of social-economic indicators like health, literacy, reduction in poverty, food security etc
- Huge growth of gdp.
- Inclusive growth and development.
- Safeguarding of FR by judiciary Keeping check on legislature and

Executive.

- freedom of expression, important feature of democracy through - free media - paper, electronic and social

Challenges → After globalization, MNCs undermine decisional sovereignty.

- Emergency Era - 1975-1977 is blot on such democracy of India.

- Judicial pendencies has denied timely and due justice.

- Violations of fundamental rights

- Personality cult can be a challenge to democracy like happened during Indira Gandhi's era.

- Lack of internal democracy and prevalence of dynastic politics.

We should learn from challenges and rejoice achievements.

16. Enumerate the key issues faced by working women in contemporary Indian society and the steps taken by the government to address them. Also, critically examine the key features of Maternity Benefit (Amendment) Act 2017. (250 WORDS) 15

समकालीन भारतीय समाज में कामकाजी महिलाओं द्वारा सामना की जाने वाली प्रमुख मुद्दों और उनसे निपटने के लिए सरकार द्वारा उठाए गए कदमों को सूचीबद्ध कीजिए। साथ ही, मातृत्व लाभ (संशोधन) अधिनियम, 2017 की प्रमुख विशेषताओं का आलोचनात्मक परीक्षण कीजिए।

After 1991 liberalisation and globalisation the number of working women has increased. But there are several issues :

→ Modernised but Orthodox society

Caused Indian women to balance between both

[example] → Working women in joint (modernised) family' (orthodox) restrictions.

→ Managing work and household

chores together causing double burden.

→ Stigmatisation of working outside

→ Glass ceiling effect in offices

Where women are not allotted
significant positions.

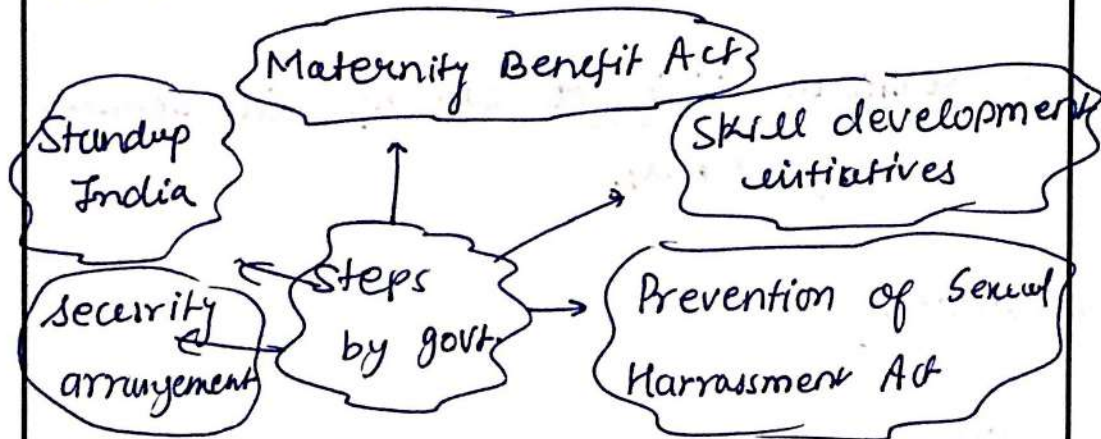
→ Sexual harassment in offices

Patriarchy roots and modernisation

branches are stretching Indian working

women from both sides. There are

various steps taken by govt:



Maternity Benefit (Amendment) Act, 2017

various advantages -

- Maternity leave extended to 26 weeks from 14 weeks.
- 12 weeks in case of adoption.
- facility of creche if no. of

employees more than 50.

- Provision of work from home if nature of work and employer allows.
- Promoting companies and employees to take further constructive efforts.
- Multiple visits to crèche in between working hours.

However,

- Not recognising father's role and no provision for paternity leave.
- Might reduce the prospects for hiring females because of economic burden. (Female participation Rate-24%)

Although spirit is right but the lacunas must be addressed to holistically address working class women issue.

17. State the factors which have led to India being categorized as a water-stressed nation. Also, identify sustainable solutions for averting the crisis at hand. (250 WORDS) 15

उन कारकों का विवरण प्रस्तुत कीजिए जिन्होंने भारत को एक जल-दबावग्रस्त राष्ट्र के रूप में वर्गीकृत होने की ओर अग्रसर किया है। साथ ही, इस संकट को टालने के लिए संधारणीय समाधानों की पहचान कीजिए।

India is endowed with large water bodies and perennial rivers but still categorised as water stressed -

→ Distorted Cropping pattern leading to water guzzling crops where water tables are already receding eg. Rice - Telangana. Sugercane - Maharashtra.

→ Subsidies - water and electricity subsidies cause overuse of tubewells and flood irrigation

→ Monsoon pattern - Spacial and temporal variation i.e. rainfall occurs in patches

time period and in particular
region causing less storage

- Misuse of Water - Agriculture,
industry and domestically misuse
- Huge population.
- Lowering water tables
 - Punjab
 - Uttar Pradesh etc.
- Climate Change - Extreme rainfall
events i.e. cloudburst in UK,
floods in Kerala - water do not
seep and recharge but flow into
ocean.
- Unplanned urbanization
- Sustainable Solution
- Sustainable Urbanization and
land use pattern, cropping pattern -
- Integrated Watershed development.

- Large scale afforestation, forest.
- Data collection and water mapping of aquifers and their recharge analysis.
- Rationalise subsidy, promote organic agriculture and sustainable climate smart agriculture.
- Promote Community based water management i.e. Ralegan Siddhi, Anna Hazare, Jalgaon Shikri, Maharashtra.
- Rainwater Harvesting and traditional tanks, baolis, Johads etc.
- Make check dams for more recharge of water.

Only sustainable development can solve the water shortage problem. We should not forget water is life.

18. Arresting the deterioration of soil health is key to achieve food security. Discussing the regional variations in soil quality, mention some measures taken by the government for its improvement. (250 WORDS) 15

मृदा स्वास्थ्य के ह्रास की रोकथाम खाद्य सुरक्षा की प्राप्ति के लिए अत्यावश्यक है। मृदा की गुणवत्ता में क्षेत्रीय भिन्नताओं पर चर्चा करते हुए, सरकार द्वारा इसके सुधार के लिए उठाए गए कुछ कदमों का उल्लेख कीजिए।

food security is connected to soil productivity hence soil health deterioration needs to be checked.

Good fertile soil of eastern U.P. and Bihar is very fertile and productivity is increasing whereas soil quality and health is deteriorating in Punjab, Haryana etc. Causing threat to food security.

Regional Variation in Quality

→ Rich alluvial soil — Rich alluvial

soil of new flood plains is good for all kinds of crops → Ganga-Brahmaputra system, Godavari system.

→ Poor Soil of Bundelkhand and Uidharbha region → formed by Kankars and calcite deposits → not good for agriculture.

→ Hilly soils - Due to leaching, more acidic soil so not good for pulses and cereals but good for plantation crops like tea, coffee, dry fruits etc.

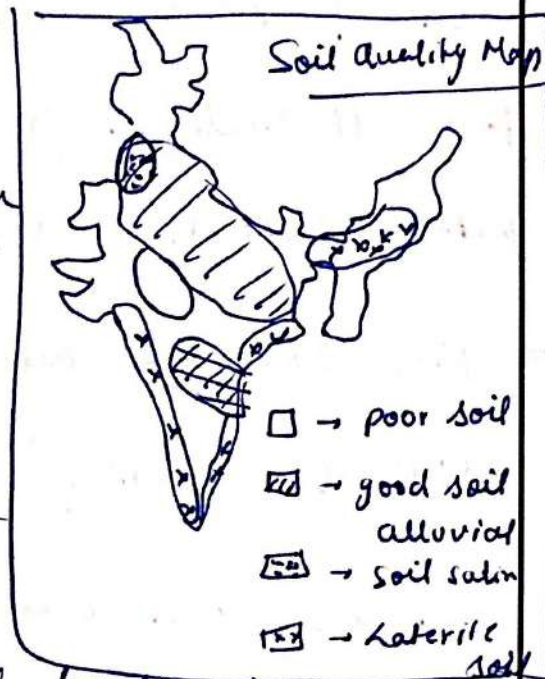
→ Laterite soil - Not conducive to such agriculture, but variety of crops.

- Punjab, Haryana.
soil salinization
due to our irrigation

Various Measures

- Soil Health Card
scheme for detecting
and addressing soil health issue.
- Changing cropping pattern through
procurement increase of non-cereals.
- Promotion to National Horticulture mission
- Promotion to organic farming.
- Organic fertilizer and other
fertilizer subsidy.

Maintaining soil quality
is necessary to increase productivity



19. Give a brief account of the following phenomenon and their influence on Indian Monsoon: 15

निम्नलिखित परिघटनाओं और भारतीय मानसून पर उनके प्रभाव का एक संक्षिप्त विवरण प्रस्तुत कीजिए:

(a) ENSO (एन्सो)

(b) Madden-Julian Oscillation (मेडेन-जूलियन दोलन)

(c) Indian Ocean Dipole (हिंद महासागर द्विध्रुव)

(A) ENSO → El-Nino and Southern Oscillation affects Indian monsoon
ENSO event occurs irregularly but on average 4-5 times in 20 years span

Reason:- Caused due to reversal of pressure conditions between

Eastern pacific and Indian ocean

Indicators

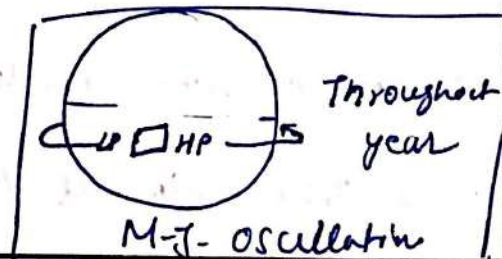
- Upwelling at peru coast stops
- destroying fertilizer industry
- forest fires indonesia
- ~~High rainfall~~ Rainfall deficit

in Indian Monsoon because it
weakens High Pressure over western
Indian ocean and thus reducing
strength of Easterlies.

(B) Madden Julian Oscillation :

It is an ~~an~~ imaginary pair
of H.P-LP couple which rotates
over earth and completes round
in 24 hours.

When H.P. lies on ^{western} ~~eastern~~ Indian
ocean during Monsoon, it strengthens
slightly and when LP lies on
western part of Indian ocean it
weakens monsoon
and reduces
rainfall.



Indian Ocean Dipole - Dipole generated
due to pressure diff b/w
western and eastern Indian
ocean

Affect on rainfall →

→ when Positive IOD i.e.

HP on Eastern Indian ocean

LP on Western Indian ocean

we Stronger Monsoon

→ when Negative Dipole

HP on western

LP on eastern

Weaker monsoon

Conclusion - There are various other
phenomena also apart from these 3
which makes Indian monsoon dynamic.

20. Despite tropical areas being the major emitters of CFCs, the phenomenon of ozone hole formation is largely confined to polar areas and that too over the Antarctic and in early spring. Elaborate. (250 WORDS) 15

उष्णकटिबंधीय क्षेत्रों के CFCs के प्रमुख उत्सर्जक होने के बावजूद, ओजोन छिद्र निर्माण की परिघटना मुख्य रूप से ध्रुवीय क्षेत्रों तक ही सीमित है और वह भी वसंत ऋतु के प्रारंभ में अंटार्कटिक के ऊपर। सविस्तार वर्णन कीजिए।

Tropical Areas major emitters

- More inhabitants i.e. high population density,
- High temperature so more usage of appliances causing emission of CFC like chloro fluoro carbons and CCl₄ etc.
- Photochemical smogs - Presence of sunlight of NO₂ and other pollutants causes CFC emission.

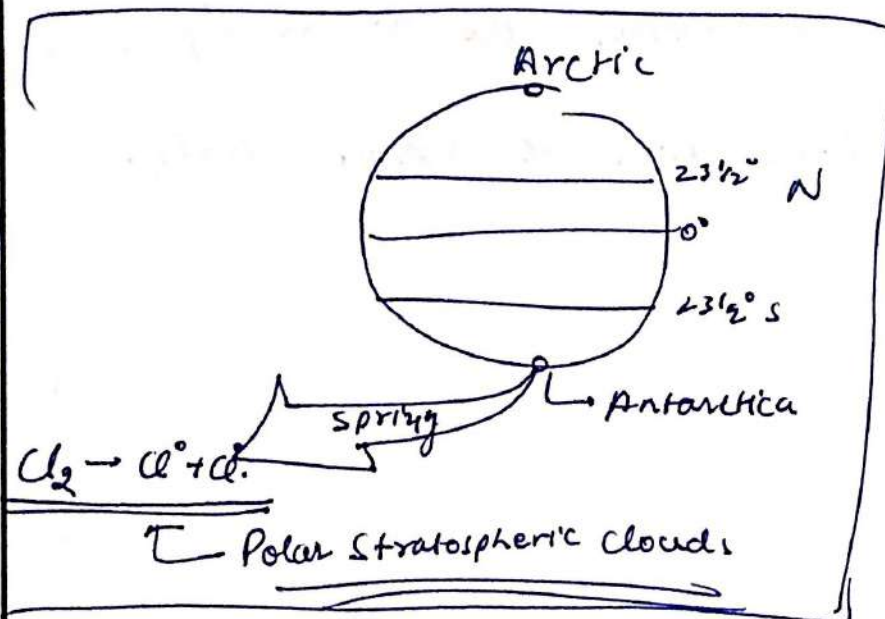
More on polar areas -

→ Because temperature is less and ozone layer is nearer to poles.

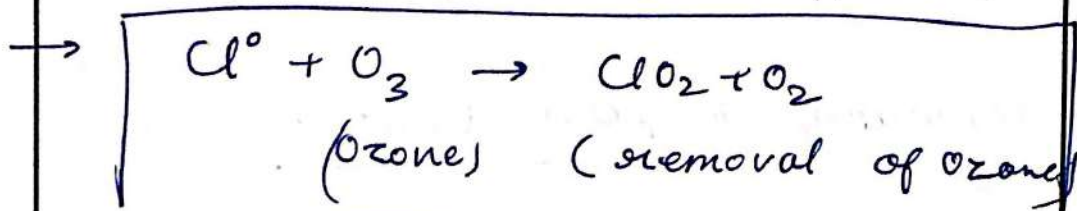
→ Antarctic in early springs formation of Polar Vortex

→ Polar Vortex → Polar Stratospheric

clouds provide the base platform for reactions to take place.



→ free Cl° chlorine radicals
reacts with ozone after
they rise up.



→ This removal of O_3 causes
hole in the belt.

Montreal Protocol has
been successful in reducing
the formation of ozone hole.