



VISION IAS

www.visionias.in



GENERAL STUDIES (TEST CODE : 1066)

Name of Candidate	VAIBHAV GONDANE		
Medium Hindi/Eng.	ENGLISH	Registration Number	103781
Center	PUNE	Date	25/7/18

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:

Remarks:

Signature of Examiner

INSTRUCTIONS

1. Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
2. There are TWENTY questions printed in ENGLISH.
3. All questions are compulsory.
4. The number of marks carried by a question/part is indicated against it.
5. 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.
6. Word limit in questions, if specified, should be adhered to.
7. Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.

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

V BIONIAS
9
U

EVALUATION INDICATORS

1. Alignment Competence
2. Context Competence
3. Content Competence
4. Language Competence
5. Introduction Competence
6. Structure - Presentation Competence
7. 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

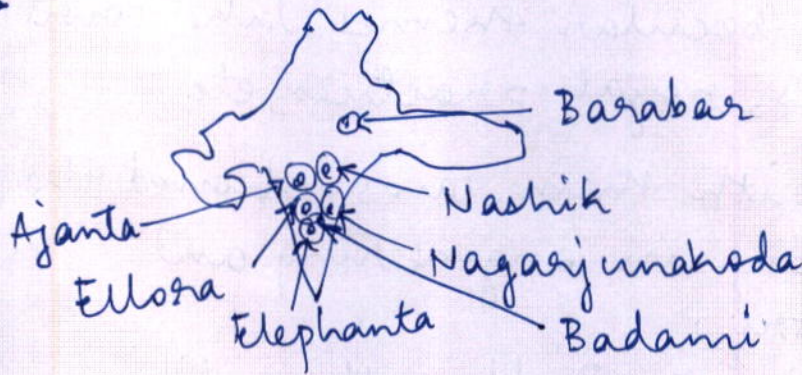


Fig. Major caves of India

Ancient India achieved enormous expertise in cave architecture right from time of Barabar caves made by Ashoka. They provide information about various traditions and customs:

1. The fresco paintings are seen in Ajanta for Buddhist traditions.
2. Similarly, Ellora shows all three traditions; Buddhist, Jain and Hindu ex → Vishnu coming on Garuda from cloud is shown.
3. Nashik caves depict tradition

of Hinayana Buddhism.

4. Badami caves, on other hand show secular themes like court scenes, royal practices, etc.

With them, caves showed the mastery in engineering and artistry:

1. In Ajanta, Bodhisattvas like Padmapani and Vajrapani along with other mural paintings are shown.
2. Ellora has many architecture like Ravana shaking Mt. Kailash. It also has triple storey structure plastered and painted.
3. In Elephanta, the famous trimurti is shown.
4. Caves like Lepakshi show many Hindu architecture like Vishnu in his boar avatara, Hindu deities like Parvati, etc.

Caves have thus been a treasure of traditions and engineering

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

→ Since the time British settled in Bengal, there were frictions between Nawab of Bengal and British. Seeing British misusing the 'dastak' system and fortifying Fort William, the Nawab attacked British leading to Battle of Plassey (1757).

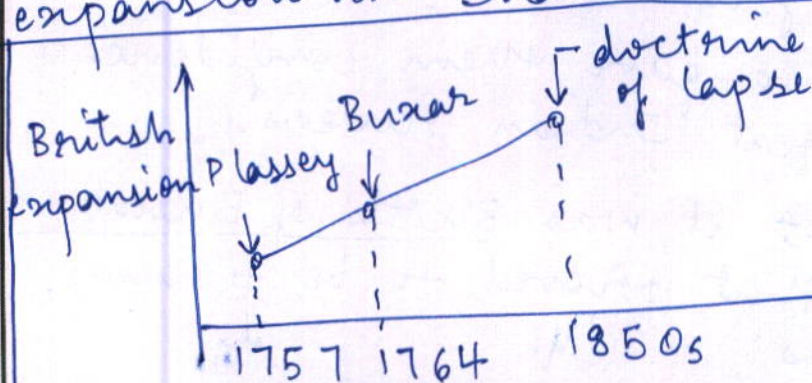
This battle laid foundation of British rule in India as:

1. The British installed a puppet Nawab in form of Mir Jafar.
2. They extracted huge reparation from Bengal that helped them to keep other powers like French away from India.
3. It also gave them confidence to defeat Indian rulers.

But it was Battle of Buxar (1764) that proved to be turning point as:

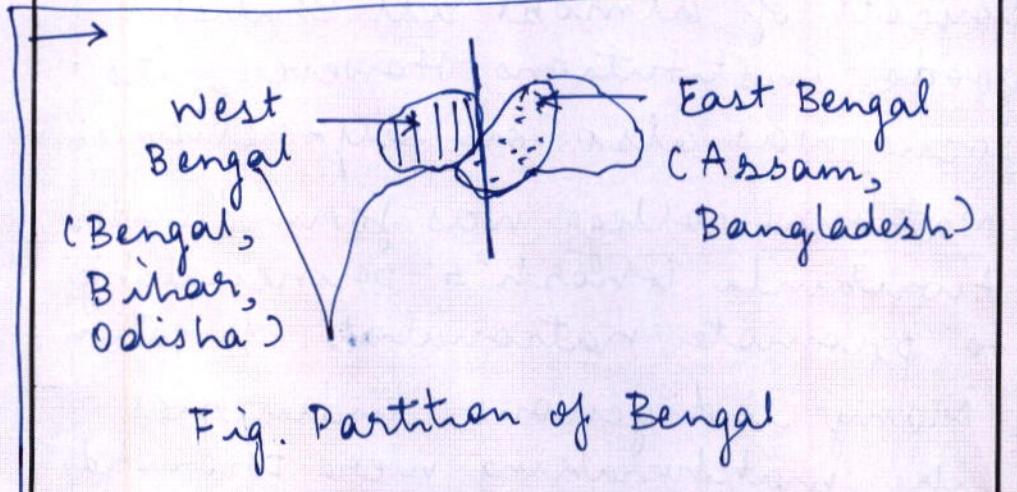
1. The British defeated combined army of Mir Kasim, Shuja-ud-Daulah and Shah Alam II.
2. The Treaty of Allahabad (1765) that was signed after war gave British diwani rights in Bengal, a fixed source of revenue.
3. Robert Clive invented dual governance system that gave Company all powers but no responsibilities.
4. The money received through diwani was used in many wars and conquests in India.

Thus Battle of Buxar proved to be starting point of British expansion in 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



The revolt against Partition of Bengal soon got converted into Swadeshi movement in 1905. The

movement saw many novel techniques and approach like:

1. Boycott of British goods, schools, govt. institutions, etc.
2. Dipping in Ganga, tying of Rakhi, celebrating Ganpati and Shivaji festivals to show brotherhood.
3. Taking mass public rallies.
4. Swadesh Bandhab Samiti was formed by Ashwani Kumar Dut to educate masses.

The movement laid emphasis on boycott of almost all British goods, institutions. However, its focus was also on self-reliance:

1. National College was formed under Aurobindo Ghosh's principalship to promote nationalist education.
2. Many indigenous industries like matchmaking were promoted.
3. P.C Ray set up first Swadeshi pharma company.
4. In cultural sphere, Rabindranath Tagore composed many poems, writings making India self-reliant in this sphere.
5. Scientists like J.C Bose made new inventions to break Western hegemony in science.

Thus the movement focused on both boycott and self-reliance and became guiding light for Gandhian mass struggle.

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

→ The British had divided India into different regions as per their convenience. However, it was needed to reorganize them as per the aspirations of people.

Linguistic states was one of assurance by national leadership during independence:

1. The Congress was already reorganized linguistically.
2. Gandhiji always insisted on redrawing of borders of India on basis of language.

However, the idea took time after independence due to:

1. Nationalist leaders were fearful that it may create secessionist tendencies particularly after formation of Pakistan.
2. There were many other important issues like Kashmir dispute,

integrating princely states,
making Constitution, etc.

3. Disputes between certain regions
ex → over Mumbai in Bombay
province.

It was finally the fast and
death of Potti Sreeramulu, a
famous freedom fighter that
Andhra Pradesh was formed.
Consequently, State Reorganization
Commission (1953) recommended
reorganization of states on
linguistic basis.

Thus in 1956, many states
were formed in N. India and later
Maharashtra, Punjab were carved
out. India could successfully
deal with linguistic challenge and
states have thus been symbol
of unity in diversity.

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

→ According to historian Dhananjay Keer, Dr. Ambedkar is tallest Dalit leader. No one before and after Ambedkar achieved what he could for the Dalits.

Dr. Ambedkar himself was a Dalit and understood the socio-economic inequalities of India. This, he argued posed challenge to India and its people:

1. Dr. Ambedkar did not understand how a nation divided into so many castes and communities can emerge as a nation.
2. His idea of nation was based on concept of fraternity.
3. In Constituent Assembly, he argued that political democracy without socio-economic democracy will be a contradiction.

4. He thus pitched to remove these discrimination and work for socio-economic wellbeing of people.

Dr. Ambedkar fought his life for this cause seen from his contributions:

1. He undertook Mahad Satyagraha for Dalits.
2. He formed Scheduled Castes Federation and wrote through his works like Moknayak.
3. He participated in all three Round Table Conference.
4. He was chairman of drafting committee of Constitution.
5. Many Constitutional provisions like Art. 17 (abolition of untouchability) are his brainchild.
6. He tried to introduce Hindu Code Bill.

Dr. Ambedkar's ideals are relevant today seeing inequalities.

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

→ Nuclear households has been a 'new normal' in urban areas due to breakage of joint family system. The reasons for their rise in last 20 years in cities were:

1. Stagnation in agriculture forced many to migrate in urban areas
2. Nuclear families provide more freedom and recreation facilities to people.
3. Education and new employment opportunities led to migration and forming nuclear families.

However; in present times, more nuclear households are coming in rural areas than urban due to:

→ Unplanned Urbanization:

1. Indian cities have grown in haphazard manner with lack

of proper sanitation, health provisions.

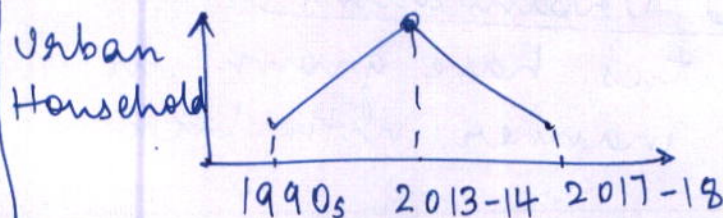
2. High cost of housing is not affordable to many poor migrants.
3. Quality of environment is not good hence families are unwilling to settle in cities ex → Delhi air pollution.

→ Transport facilities:

Due to development of transport infrastructure, it is possible to migrate to city and come back in rural area in single day.

→ Law and order problem in cities particularly against women, senior citizens lead to families settling in rural areas.

Thus variety of factors are leading to trend.



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

→ In India, marriage system is considered sacred and divorce, separation are rarity. In recent times, separation has risen but divorce rates are low due to:

1. Women have become more aware and are thus separating if violence is committed by husband's family.
2. Divorce is less due to slow criminal justice system.
3. Also, family members do not support divorce and believe in reconciliation.
4. Women are also separating as urbanization has liberated them and they themselves

can stand on their feet without anyone's needs.

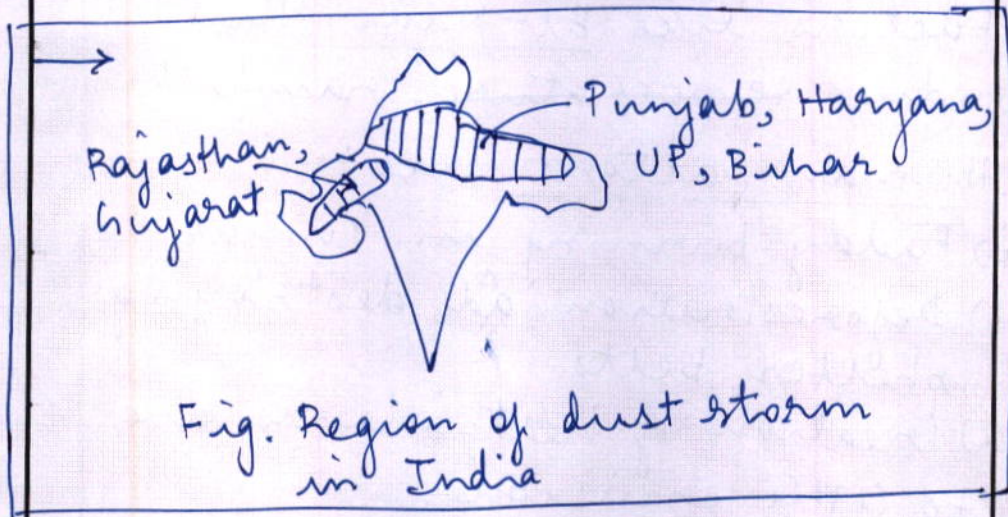
Divorce rates are different in various parts:

1. High divorce: Maharashtra, Tamil Nadu.
2. Low divorce: Rajasthan, Bihar, UP.

Reasons for variation:

1. More opportunities for women in developed states along with more awareness about their rights.
2. Traditional societies in N. India along with poor motivation to women to break marriage.

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



Dust storms is one of way in which atmosphere tries to adjust heat balance of region. They are formed due to:

(i) convective heating of air that makes it warm and creates clouds.

(ii) Absence of moisture thus winds blow without any rain but by blowing dust.

Though they are common, their frequency has increased. due to:

1. The heating of Arabian Sea due to its landlocked nature creating

high temperature.

2. Factors like El-Nino that reduce temperature, rainfall.

3. Human factors like:

- (i) Paddy burning in Punjab
- (ii) Deforestation ⁿ & destroying shelter belts
- (iii) Creation of heat islands due to GHG emissions.

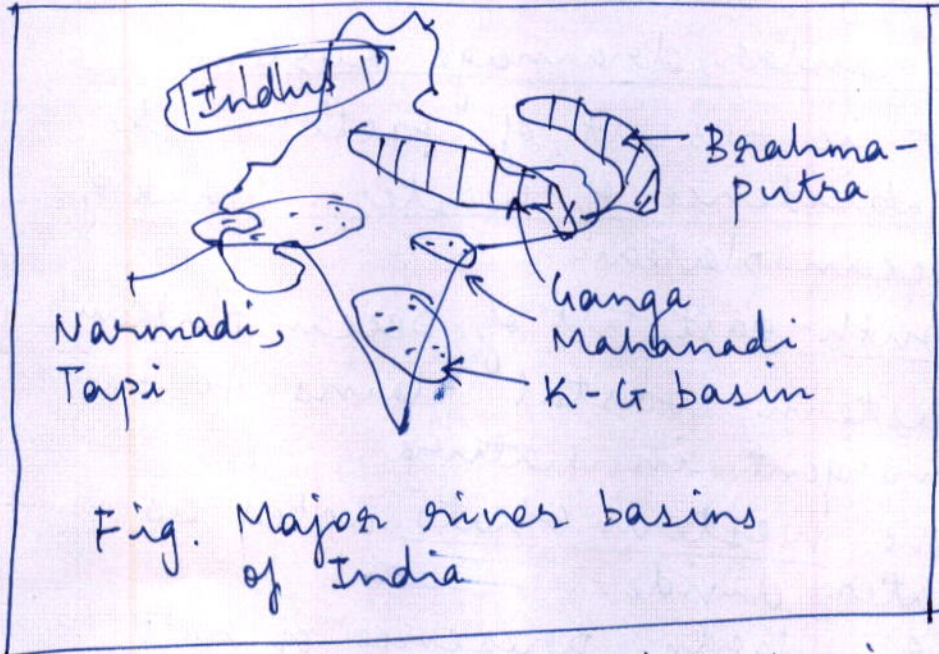
→ Impact:

- 1. Affects health and may lead to eye infection, respiratory problem.
- 2. Destruction of roads, buildings.
- 3. Polluting air and water bodies.
- 4. Can lead to death of humans, animals due to falling of electric transmitters, etc.

Thus dust storms need to be treated as disaster and effectively handled by:

- 1. Education and capacity building.
- 2. Afforestation
- 3. Using traditional knowledge.

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



India has complex drainage system that is result of various factors like:

Himalayan drainage system;

(i) It is considered that a single Shivalik river flowing throughout subcontinent broke into three rivers: Indus, Ganga, Brahmaputra.

(ii) The factors responsible for this are uplift of Patwar plateau and Delhi ridge and

Creation of Malda fault near
~~to~~ Rajmahal - Garo hills.

Peninsular drainage system:

(i) It is result of factors like:

1. Subsidence of western flank of Deccan plateau
2. South-east tilt of Deccan plateau
3. Eastern coastal plains to be emergent in nature.

(ii) The Western Ghats acted as water divide.

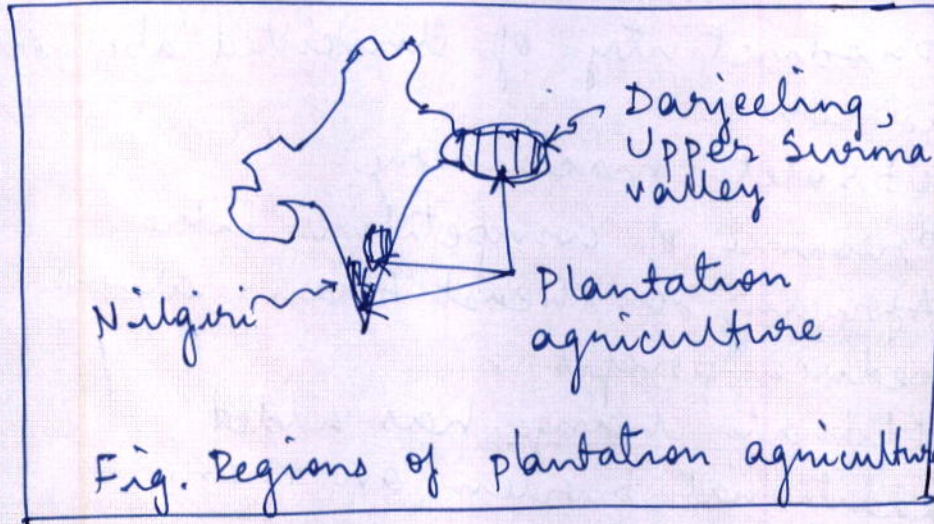
(iii) Similarly, presence of rift valleys led to limited delta formation.

It can be seen by features of two river systems

	Himalayan	Peninsular
Nature	Perennial	Non-perennial
Source	Glaciers	Rain water
Drainage	Dendritic	Rectangular, trellis, etc
Basin area	Large	Comparatively small.

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



Plantation agriculture implies growing of single crop over large fields of plantation estates.

→ Features :

1. Monocropping ex → tea, coffee, sugarcane, etc.
2. Per hectare productivity is high.
3. Requirement of both cheap labour and machinery.
4. Managerial skills are required with expertise in crops grown.
5. Use of inputs like fertilizers, pesticides, etc.

6. Generally for export purpose.

→ Problems:

1. Productivity of unskilled labourers is low.
2. Obsolete machinery.
3. Presence of competitors like African, Southeast Asian nations reduce profit.
4. Climate change has added additional burden on them.

Palm oil is seeing more interests and increase in area under production in various parts of world particularly Africa.

Benefits:

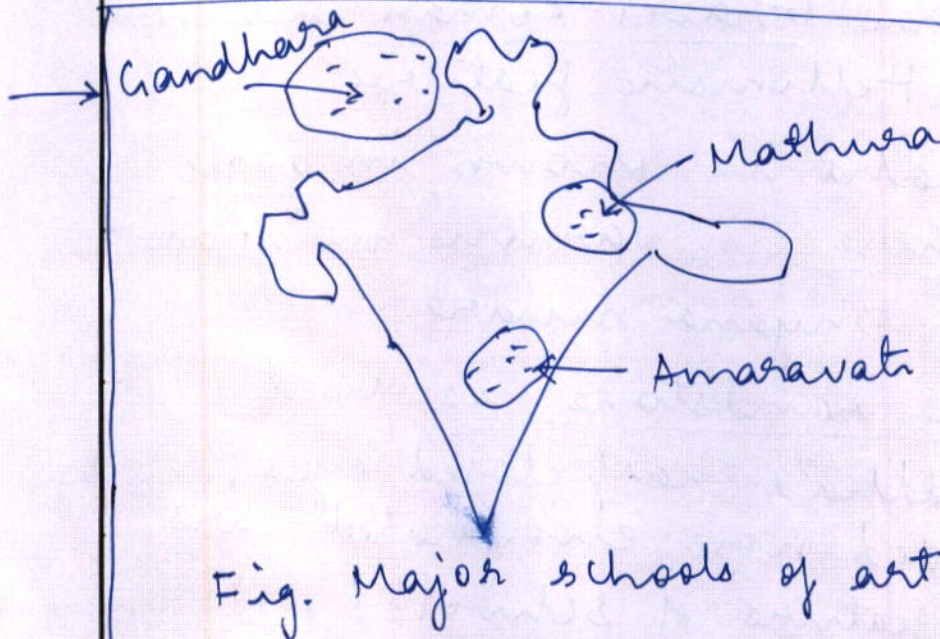
1. More income and addressing of livelihood concerns.
2. Socio-cultural benefits to poor and traditional cultivators.

Challenges:

1. Awareness about benefits.
2. Lack of proper R&D.

Thus palm oil needs to be promoted by integrated programme.

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



Gandhara, Mathura, Amravati were most developed art schools of ancient India. Their features are:

→ Gandhara:

1. It developed near Afghanistan and Pakistan region.
2. Buddha for first time got human form in this school showing rise of Mahayana

Buddhism.

3. It has Graeco-Roman influence and Hellenistic features.
4. Buddha is shown in yogic posture in various mudras like Dhyana mudra.
5. Blue sandstone is used.
6. Buddha's half closed eyes, pointed nose, elongated ears are feature of school.

→ Mathura:

1. Gandhara is devoted to Buddha but Mathura also includes Hindu and Jain sculptures.
2. There is use of red sandstone.
3. Drapery and decoration are more as Mathura was trading down.
4. Buddha is shown in delighted mood along with bodhisattvas.
5. Jain tirthankaras and

Hindu deities also find prominence.

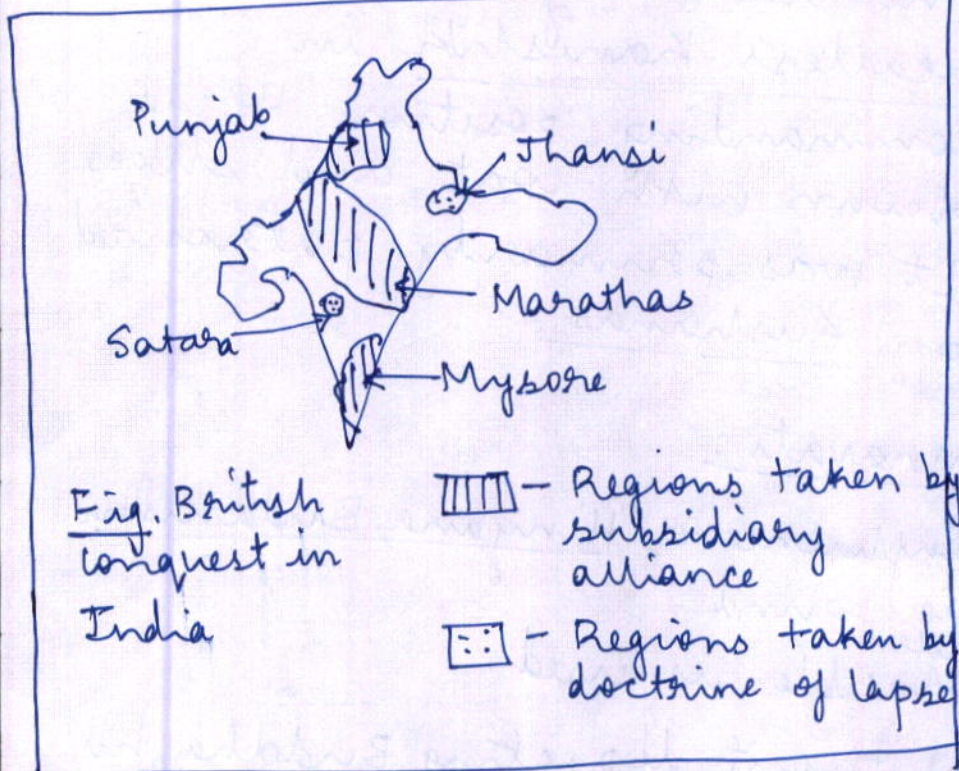
6. The most significant is the headless Kanishk in commanding position. He is shown with coat and shoes.
7. It was primarily patronized by Kushanas.

→ Amravati:

1. Influence of Hinyana Buddhism is found.
2. ^{white} Marble is used.
3. Without depicting Buddha, his entire life is shown by various objects like throne, umbrella.
4. Patronized by Satarahanas.

12. The British in India wanted not only territorial conquest and control over revenues; they also felt that they had a cultural mission: to 'civilise the natives', change their customs and values. Critically discuss.

(250 WORDS) 15



The British came in India primarily as traders but soon captured the political power. Their territorial conquest can be seen by:

1. The Battle of Plassey (1757)
2. Battle of Buxar (1764)
3. Subsidiary Alliance under Wellesley
4. Doctrine of lapse by Dalhousie
5. Wars with Punjab, Maratha, Mysore

rulers, etc.

Similarly, the British wanted to maximise their revenues. This they did initially by getting incentives from native rulers and later by themselves controlling the revenue affairs:

1. The Treaty of Allahabad (1765) gave British the diwani rights in Bengal.
2. They appointed their own deputy nawabs for diwani administration in Bengal and Bihar.
3. In later phase, they developed the collectornates to collect revenue.
4. The various land settlement systems also gave them a say in revenue affairs.

However, the cultural dimension of British raj cannot be neglected. With British traders, missionaries also travelled throughout the country. British

aimed to civilize the masses
seen by:

1. Lord Bentinck removed many evil practices like sati, organized crimes, cruelty towards infants.
2. Under Lord Macaulay's insistence, English education was promoted on large scale.
3. Christian missionaries translated bible in local languages.

However, their real intention was not to civilize but to show their superiority. They projected themselves as civilized and Indians as barbarians. Civilizing mission was also used to justify their economic exploitation of India.

Thus British aims of civilization were rooted in their ambition of Indian conquest.

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

→ Jawaharlal Nehru and Mahatma Gandhi were tallest leaders of national movement. Both had relationship of trust between each other. Both were mass leaders who faced British wrath yet fought for national movement. Nehru actively participated in Gandhian led movements like Civil Disobedience, Quit India, etc.

However, there were differences between two. For example, Nehru believed in Struggle - Victory (S-V) while Gandhian approach was Struggle - Truce - Struggle (S-T-S). With respect to state, the differences were more prominent:

→ Role of State:
View of Gandhi-

1. Gandhi was in favour of direct democracy and village republics.
2. He considered state as 'soulless machine'.
3. According to him, even minimal state has to use violence.
4. Thus he believed in limited state if not its complete elimination.

View of Nehru -

1. Nehru was progressive inspired by Soviet experiment.
2. Unlike minimal state, Nehru argued for state as instrument of development.
3. He favoured socialist state that participates in economy.

→ Control of State:

Views of Gandhi -

1. Gandhi favoured civil society over state thus state to have

minimum control on decisions of people.

Nehru :

1. For Nehru, state should have wide controls in regulating economy and ensuring competition.
2. It was this control that led to license, quota raj.
3. Nehru argued that control of state is necessary in social affairs ex → communalism.

However, both views are not completely antithetical. Nehru's state was what was practical at that time. India has also moved towards Gandhian state after 73rd Amendment.



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

→ Communism was common ideology that linked China and USSR. In both countries, communist revolution based on Marxist principles had happened.

However, Sino-Soviet split started from 1960s due to:

1. USSR's Khrushchev wanted peaceful ties with West and talked of cooperation with USA that China opposed.
2. China too drifted from communism when it went for market liberalisation creating its own brand of communism.
3. There were unresolved borders and small wars

between the two countries.

4. The split became more prominent as China progressed economically while Soviet was tangled in Cold War.

→ Impact on cold war:

1. The Western nations took advantage of this rivalry and made advances towards ~~con~~ capitalism in East European nations.

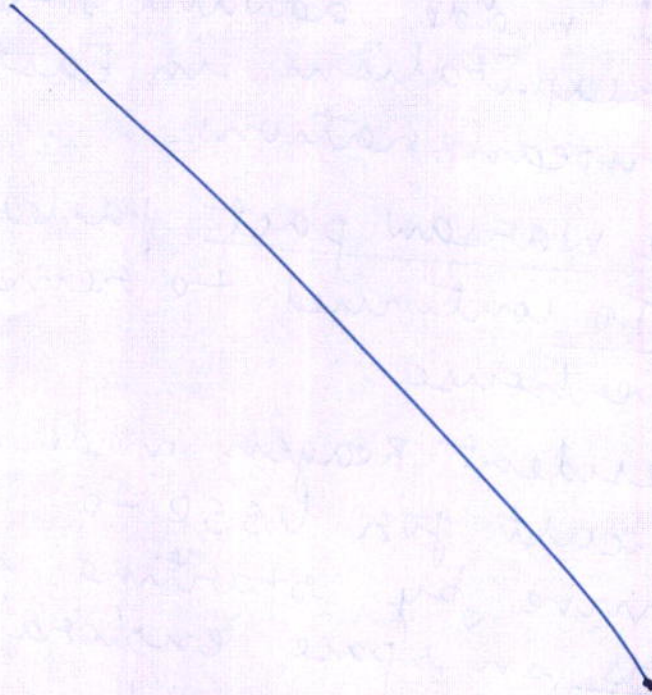
2. The Warsaw pact failed while NATO continued to remain powerhouse.

3. President Reagan made it difficult for USSR to survive by starting star wars in space exploration, increasing defence expenditure.

4. China became more aggressive in later phase and

3rd world countries tried to
balance between two blocks.

Thus Sino-Soviet split had
profound impact including
fall of Cold War.



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

→ Western scholars were always skeptical of democracy in India due to:

- (i) Its Western origin due to British rule.
- (ii) Lack of proper socio-economic conditions for success of democracy due to poverty, inequality.

However, India not only sustained democracy but also emerged as role model for many former colonies. The achievements of democracy are:

Constitutional:

- (i) India made a revolutionary constitution that aimed to achieve political and socio-economic democracy.

Institutional:

- (i) Many institutions like Parliament, judiciary got developed.

(ii) The Civil Services and military became symbol of India's unity.

Political:

(i) Indian democracy could successfully achieve transition of power from one to other govt.

(ii) Politics has become tool of empowerment ex → 73rd Amendment.

Social:

(i) Democracy in India could uplift marginalized and disadvantaged ex → untouchables.

(ii) However, progress ~~on~~ on social front has been slow with limited willpower.

Economic:

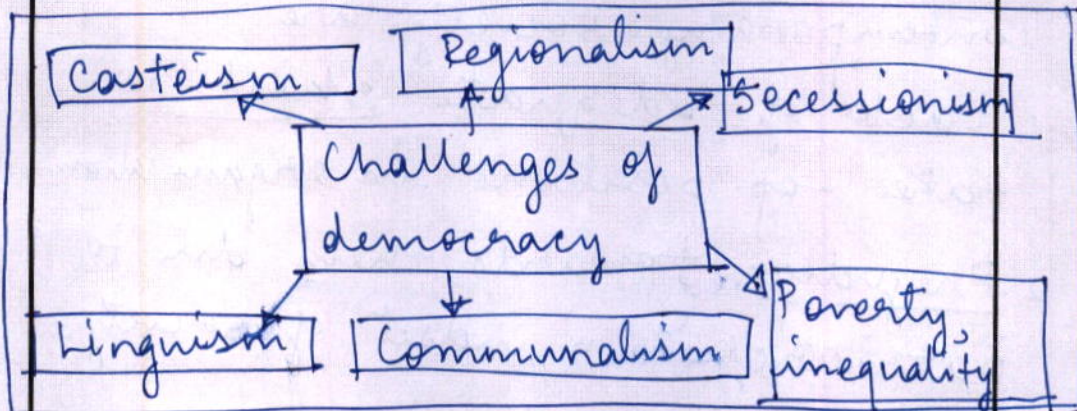
(i) India has emerged as fastest growing economy of world seeing strong democratic credentials.

(ii) Decentralised development helped even backward areas to come

to mainstream.

However, the success has been mixed with failures:

1. Parliament has seen a decline.
2. There has been money and muscle power, criminalization in politics.
3. Representation of minorities, women has been low.



Way Ahead:

1. Electoral reforms to check adversarial politics.
2. Focusing on peoples' participation.

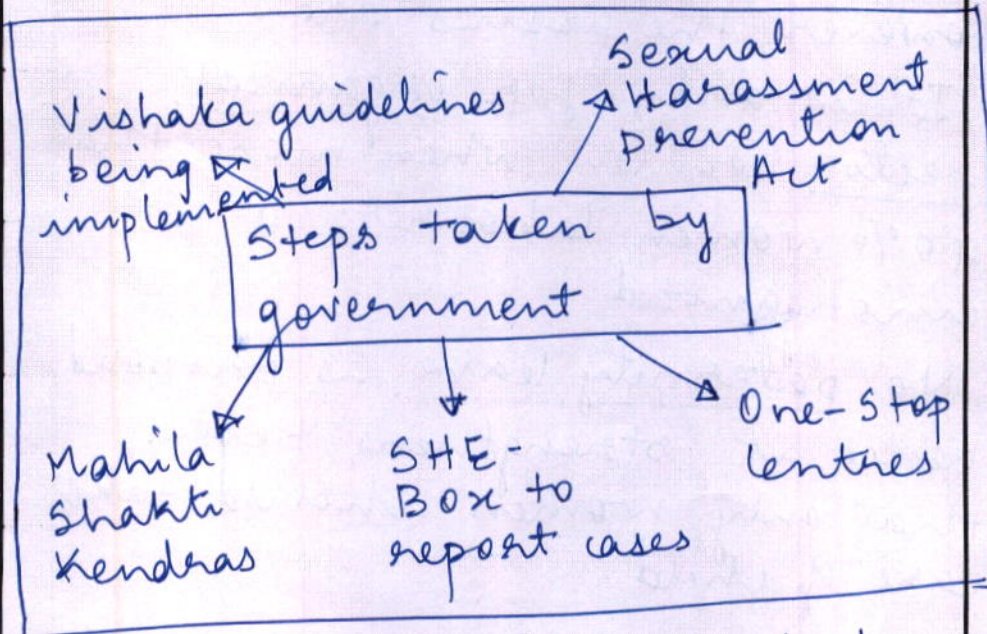
16. Enumerate the key issues faced by working women in contemporary Indian society and the steps taken by the government to address them. Also, critically examine the key features of Maternity Benefit (Amendment) Act 2017. (250 WORDS) 15

→ India's poor rank of 108/144 in Global Gender Gap report depicts the challenges faced by women in India. Issues of working women in contemporary society are:

1. Lack of adequate skills to take top positions in organization.
2. Prejudice towards them due to patriarchal mindset of society.
3. Women are not given equal pay for same amount of work that they do.
4. Sexual harassment at workplace by male employees.
5. Concerns related to their safety particularly in urban areas where cases like rape

has increased.

6. Women face difficulty in managing their personal life and professional responsibilities.
7. Family members do not support women after income of family stabilizes.
8. High cost of living in cities.



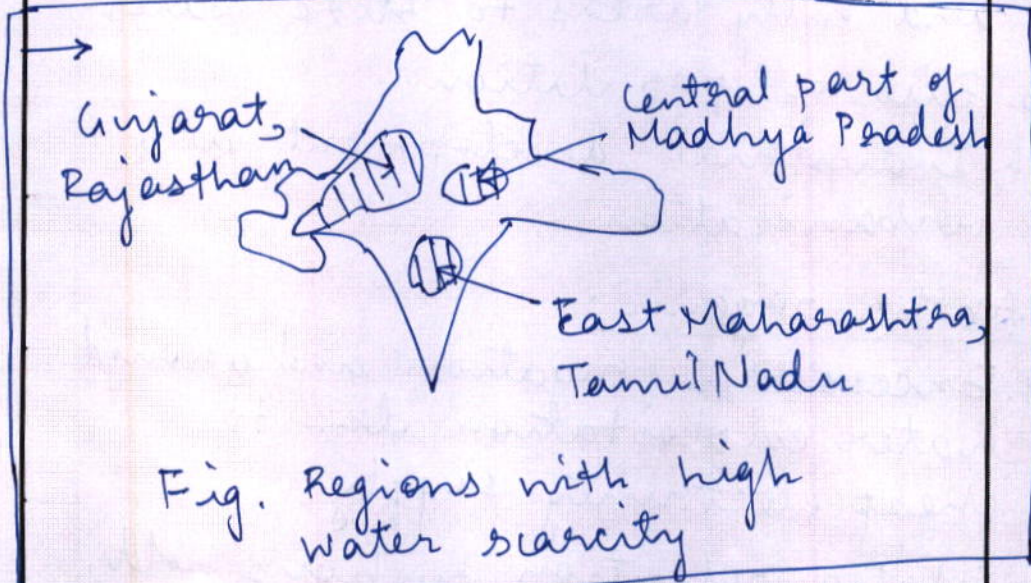
Additionally, the govt. has now created women division in Home Affairs Ministry. Initiatives like Nai Roshni are also leading to political empowerment of women.

The Maternity Benefit (Amendment) Act, 2017 aims to fulfil directive principle on maternity benefit. It increases the time of maternity benefit from 12 weeks to 26 weeks. Creche facilities are also to be provided at workplaces. However, the issues are:

1. It is only for organized sector women when more than 90% women labourers are unorganized.
2. No paternity leave is proposed hence it strengthens belief that only women should take care of child.

These problems have to be sorted along with proper implementation of Act.

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



India has an average rainfall of more than 115 cm making it one of the wettest countries of world. Yet, a Niti Aayog report points out that 70% of rural population do not have access to safe drinking water.

The reasons for India being a water-stressed nation are:

Natural Reasons:

1. Factors like El-Nino reduce

- rainfall.
2. Geographical challenges in N. East and hilly areas to store water.
 3. Rise of population.
 4. Industrial development and urbanization.

Anthropogenic :

1. Excessive irrigation and ground water exploitation due to cheap electricity supply.
2. Water pollution by households, industries.
3. Lack of recycle and reuse of water.
4. Wrong crop practices ex → growing sugarcane in Tamil Nadu.
5. Climate change induced by human factors like deforestation, Greenhouse gas emissions, etc.
6. Poor water use efficiency in irrigation.

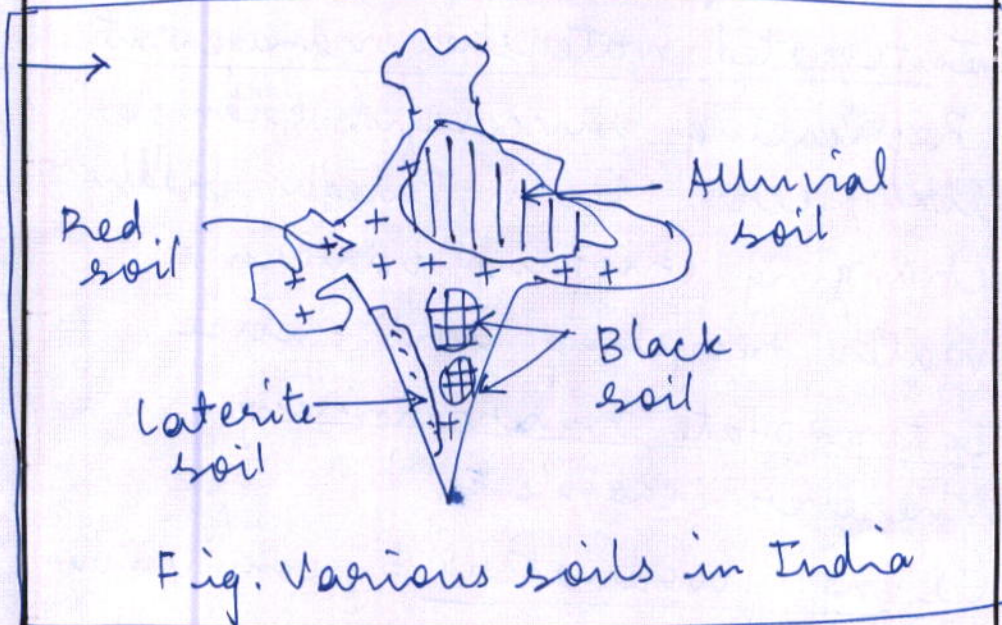
India thus stands at grain crisis that need to be tackled

by solutions like:

1. Promotion of rainwater harvesting in urban areas.
2. Integrated watershed management.
3. Replicating successful examples like Neeru Meeru, Palegan Siddhi.
4. Changing cropping pattern.
5. Water recycling and reuse.
6. Inter-State river linking wherever feasible.
7. Using floodwaters by community owned waterbanks.

The Atal Bhojal Mission, Pradhan Mantri Krishi Sinchai Yojana is step in right direction.

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



Soil is mixture of various organic components and is crucial for food security. There is deterioration in soil health due to:

1. Erosion caused by wind, water.
2. Deforestation
3. Excess grazing
4. Shifting cultivation
5. Excess use of fertilizers, pesticides.

This needs to be checked for food self-sufficiency as:

1. Soil is basis for growth of crops.
2. Soil erosion reduces the productivity and hence crop production.
3. It would lead to increase in imports and loss of precious FOREX.

Soil quality is not uniform everywhere and has following variants:

1. Alluvial soil in N. India has high fertility.
2. Black soil has capacity to support cotton.
3. Laterite soil do not have good quality due to heavy leaching.
4. Saline soil can be brought into cultivation by proper irrigation, fertilizers ex → Indira Gandhi Canal, Rajasthan.

Seeing these variations, govt has taken measures like:

1. The Soil Health Card to find quality of soil through regular sample collection and testing.
2. Developing soil testing facilities in APMC mandis.
3. Creating workforce to educate farmers and test soil.
4. Continuing fertilizer subsidy like Urea Subsidy Scheme, Nutrient Based Subsidy.

Way Ahead:

1. More R & D is needed in soil sectors.
2. Promoting organic farming
ex → Paramparagat Krishi
Sinchai Yojana.

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

- (a) ENSO
(b) Madden-Julian Oscillation
(c) Indian Ocean Dipole

→ Indian monsoon is lifeline of India but is ~~characterised~~^{affected} by many factors like:

a) ENSO:

The El-Niño Southern Oscillation (ENSO) is warming of coast of Peru in S. America. As result warm El-Niño currents reach Darwin coast of Australia creating a low pressure there.

The South West monsoon winds coming to India thus get diverted there leading to reduction in monsoon in India. This phenomenon occurs about 4-5 years.

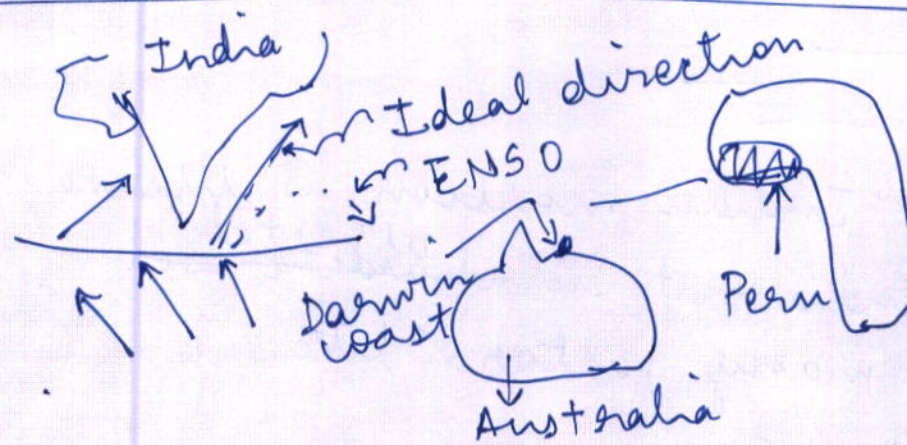
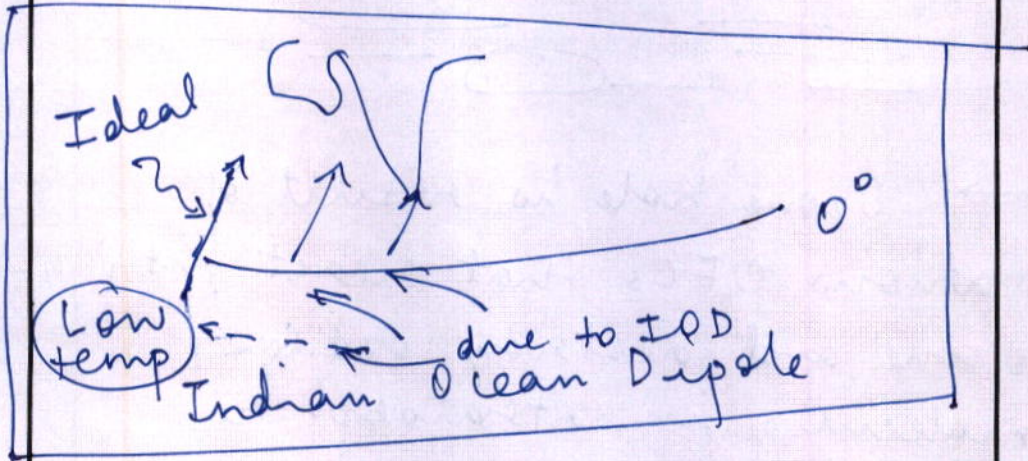


Fig. ENSO effect on monsoon

c) Indian Ocean Dipole :

It is temperature changes that happen in Indian Ocean region. A rise in temperature leads to low pressure affecting monsoon. While if temperature falls, already existing low pressure is enhanced leading to more rain in India.

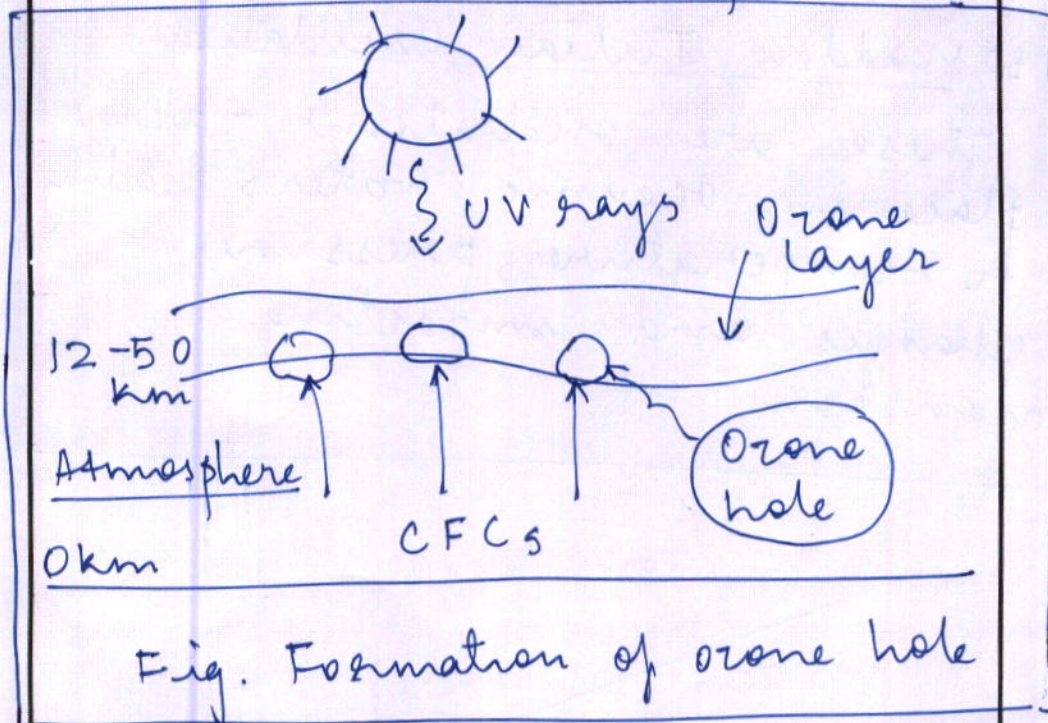


b) Madden Julian Oscillations

These are oscillations taking place in oceanic waters leading to temperature, pressure changes and impacting monsoon.

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

→ Ozone hole is result of various CFCs that react with ozone and destroy ozone molecules in stratosphere.



Tropical areas emit large quantity of CFCs due to activities like heavy use of refrigeration products, lax regulations and obsolete

machinery. However, ozone hole is not found here as polar vortex is not formed in tropics. This is due to more insolation, presence of more clouds due to vertical movement of warm air, etc.

However, it is found in Antarctic as polar vortex are formed. The atmosphere of Antarctica is clean without dust particles. Cold temperature prevent any evaporation of gases that blanket CFCs.

Ozone hole is major problem due to:

1. It increases risk of cancer, cataract.
2. Rises global temperature changing climate permanently.

Efforts are needed to stop this
through implementation of
Montreal and Kigali Agreement.

