



NEXT IAS (Head Office) : 27-B, Pusa Road, Metro Pillar no. 118, Near Karol Bagh Metro, New Delhi-110060

Bhopal Centre: Plot No. 46, ZONE-2, M.P. Nagar, Bhopal-462011

Ph: 8081300200, 8827664612 | **E-mail:** mts@nextias.com | **Web:** www.nextias.com

(To be filled by candidate)

Code : TC157

Name of Candidate : **Anand Sharma**

Roll No. : **MT23RTRA001**

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MTS - RAPID TEST-3 : 2023

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SUBJECT/PAPER
GENERAL STUDIES

Invigilator's Sign. :

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Evaluator's response

(For filling by Examiners only)

Evaluator Code :

Q.No	Pg No.	Maximum Marks	Marks	Total
1	1			
2	3			
3	5			
4	7			
5	9			
6	11			
7	13			
8	15			
9	17			
10	19			
11	21			
12	24			
13	27			
14	30			
15	33			
16	36			
17	39			
18	42			
19	45			
20	48			
Grand Total				

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MACRO COMMENTS



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प्रश्न संख्या
Question No.)

Q1. What do you understand by Windfall tax? Do you think that windfall taxes can effectively redistribute wealth and promote greater economic equality?

Ans. Windfall tax refers to the tax levied by the state on certain industries who have accumulated larger profits in their operations.

eg Windfall Tax was recently levied on oil industries in India.

Effectiveness of windfall Tax

① In Redistributing wealth

→ With greater taxation, the government can use it in its core activities.

eg Development of forests, upliftment of vulnerable and antyodaya, women Centric projects etc.

→ Redistribution in terms of physical

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development like construction of highways, buildings, irrigation facilities etc.

(2) Greater Economic Equality

→ Charging industries can act as a deterrent in case of Doing Business

→ Industries may report lower profits and thereby cause "industrial dwarfism"

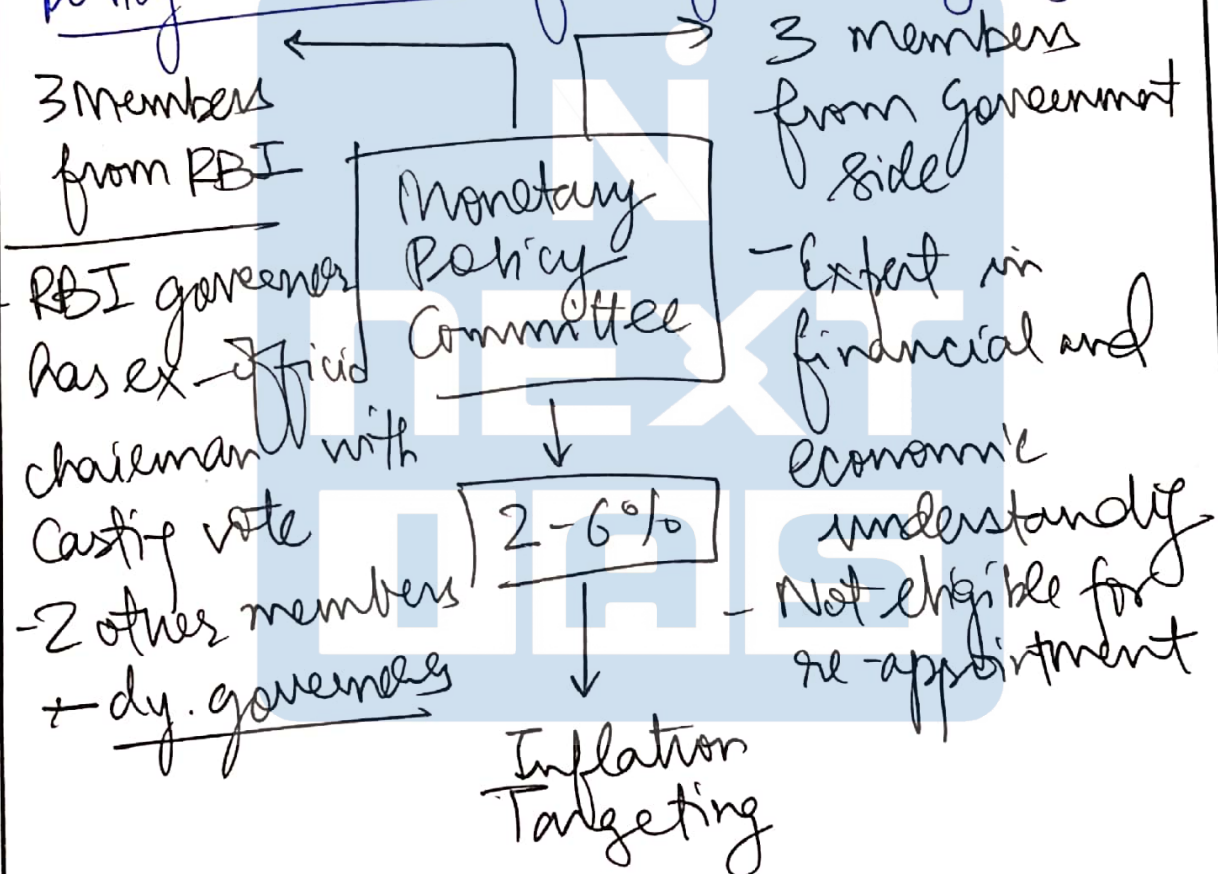
However to induce greater economic equality the tax can be used in generating new employment opportunities, giving skills under PM Kaushal Yojana etc.

Thus, windfall tax can aid to boost economic equality and redistribute wealth provided it shouldn't be too much that affects the industrial and manufacturing working and outcome

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Q2. Discuss the perceived successes and challenges of implementing inflation targeting under the new Monetary Policy Committee (MPC) regime.

Ans - Art 45ZB of the RBI Act 1934 provides for constitution of a 6 membered Monetary Policy Committee for inflation targeting



Success of Inflation Targeting

Under Art 45ZA of RBI Act 1934 the targeting of inflation band = $4 \pm 2\%$

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- ① RBI has successfully maintained the band in past 5 years since its inception
- ② Keeps RBI focus of inflation as singular target
- ③ Gives adequate flexibility to manage capital flows
- ④ Use of Quantitative and Qualitative tool in inflation management $\Rightarrow$ CRR, Moral Suasion etc

Challenges

- ① Lost fiscal saw breach of target band for consecutive 4 quarters
- ② Inflation targeting focused only on demand side with no control over supply side
- ③ Core Inflation ~~must~~ comprises of prices of petrol, diesel that sees fluctuations.

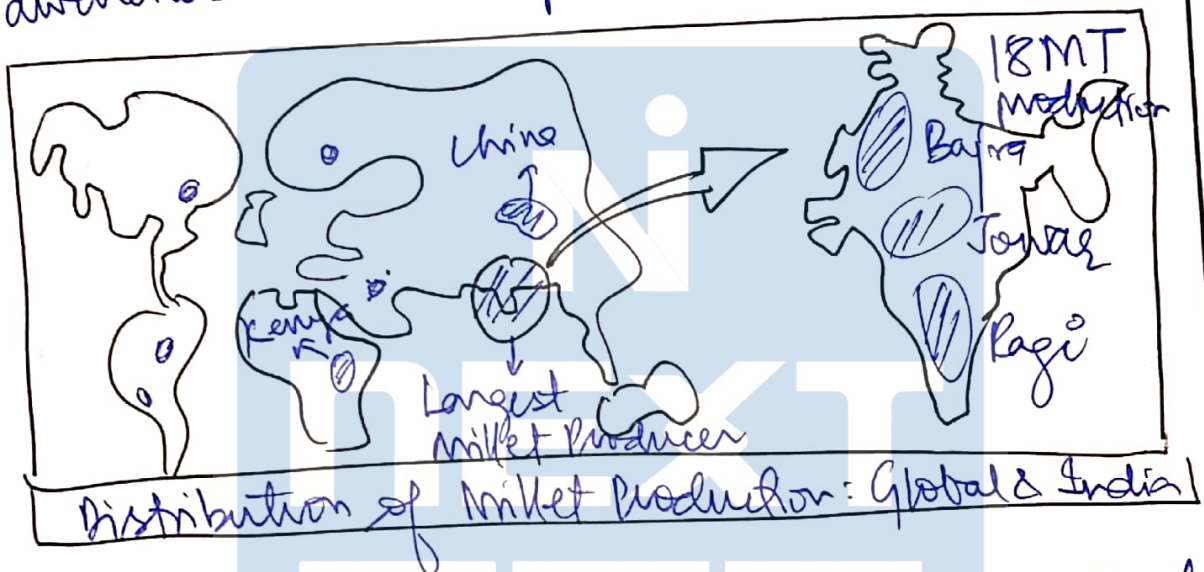
Thus, the new idea is to have a Producer Price Index over current CPI for better inflation targeting.

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Q3.

Assess the potential of millet production in promoting sustainable agriculture and improving food security in India.

Any FAO announced the Year 2023 as the international year of millets for promoting awareness and its production worldwide.



Potential of Millets in promoting Sustainable Agriculture

- Can be produced in dryland areas
- Do not require aggressive irrigation facilities (e.g. 1 kg of rice = 3000-5000 lt of water)
- low use of chemical fertilizers and pesticides
- Better yield if supported with miniscale agri improvements

Improving food security

- Help address malnutrition and issues of stunting, underweight
- Better option for people with celiac diseases
- Gluten free, & so help curb the menace of NCDs (NCDs deaths)
- In terms of grain production ~18 MT produced

Government Steps Taken

- ① Initiatives like MIIRA and MAHRISHI under G20 group to spread awareness
- ② Included in PM POSHAN Abhiyan
- ③ Better private linkages to expand their commercial reach

Thus, branding millets as "Shri Anna" is an appreciable step which could help overcome malnutrition and hunger issues
(India ranked 107 in GHI-2022)

Q4. Jal Teeran Mission has the potential to end the regional disparity in the availability and accessibility of drinking water. Highlighting the significance of the mission, discuss the underlying impediment in achieving the desired objectives.

Ans - Jal Teeran Mission was launched in 2019 with the aim of realising Functional Household Tap Connection (FHTC) to every rural household by 2024.

Significance of Jal Teeran Mission

① Ending regional disparity

→ rural-urban water divide

→ water rich regions be connected with water deficient regions

→ ending disparity in terms of social outcomes like walking miles to get water largely done by women.

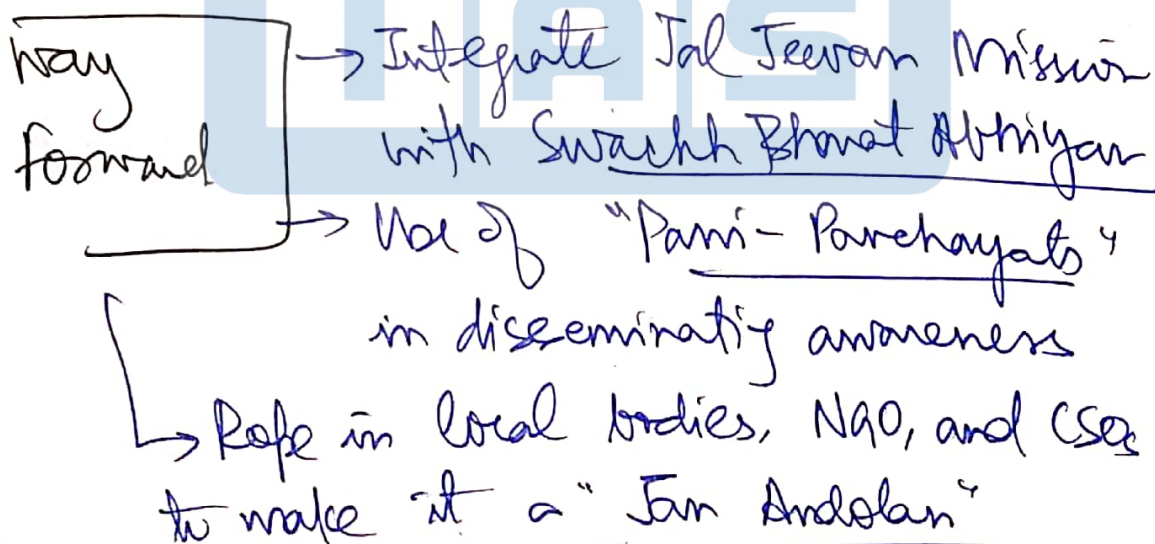
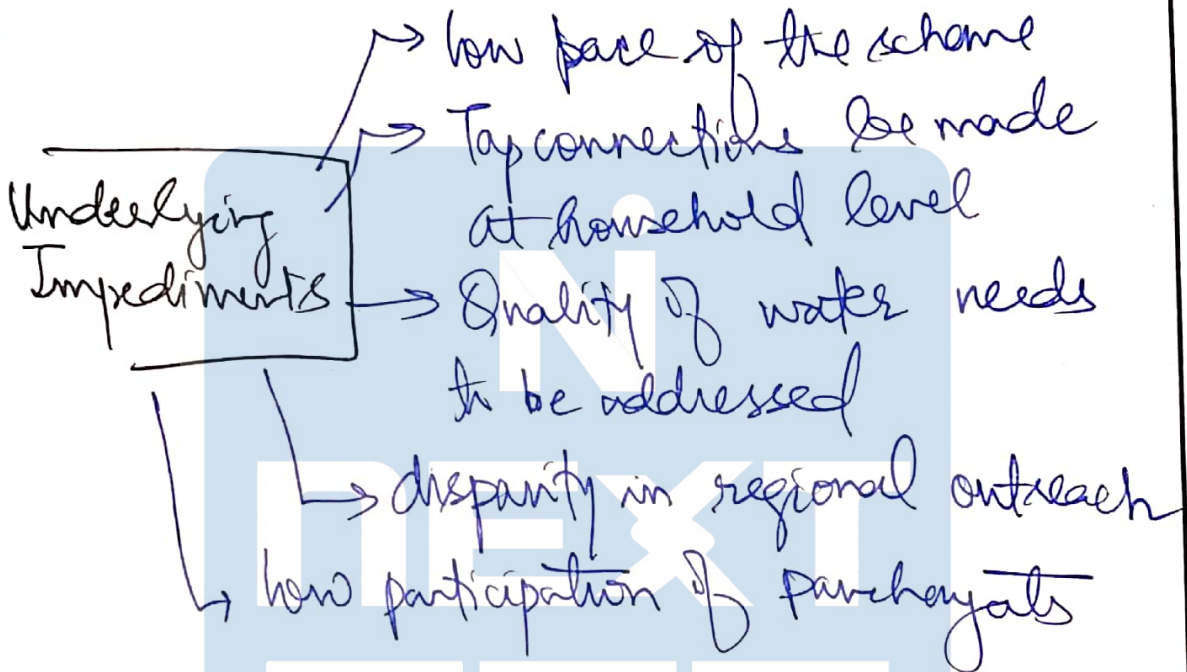
② Availability and accessibility of water

→ 55 litres of water per day per person

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- clean drinking water would help address the issue of water-borne diseases
- ~~essential~~ for addressing nutritional scarcity and health vulnerability



Thus Jal Jeevan Mission is key to harbour the aim of "har ghar jal" via "har ghar nal"

Q5. What do you understand by Battery Energy Storage System (BESS)? Discuss its applications and how it can revolutionize the energy program of India.

Ans. Battery Energy Storage Devices/Systems refers to those equipment that can store energy which can be further utilised ~~is~~ for off-grid transmissions.

Applications of BESS

- ① Rural electrification and 24x7 supply of electricity
- ② Harness mobile healthcare infrastructure by having H2WCs equipped with such batteries
- ③ Enable the digitalisation of education especially in tribal and north eastern regions where grid construction is feeble

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(4) Decarbonise the transportation system
eg EVs, Hybrid EVs, Photovoltaic EVs etc

(5) Efficient source for carboning climate
change reductions eg low GHG emissions

low spread
because of less
charging
stations

Challenges

Higher cost of
manufacturing

Add to
import bill
of India

Skewed distribution
of raw materials like
Li, Ni etc

Revolutionise Energy Programme of India

- (1) Meet its Panchamrit target
- (2) INDCs → 50% of energy from RE sources
- (3) PLI scheme for Advanced Chemistry Cells
- (4) Impetus of EV adoption eg FAME initiative
- (5) Digitalisation of social services.

Thus, BESS can aid India in realising its
domestic needs and international
commitments

Q6- Discuss in brief development and challenges in the Gaganyaan mission of ISRO. What are the possible benefits of the mission for the society?

Ans- India's first manned spacecraft mission Gaganyaan envisages to send its "vyomants" to low earth orbit for about 4-7 days

Developments in Gaganyaan Mission

- ① Ramping up of GSLV-Mk-III vehicle to carry humanoids
- ② Development in 'Re-entry Vehicles' by ISRO
 - optimum living environment
- ③ Testing of vehicles for → Pod Abort Test
 - Safe landing in ocean
- ④ Help engage ISRO in space tourism activities

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- Challenges:-
- ① Re-entry of vehicle at crucial angle is a challenging part
 - ② Affect of solar radiations on organisms
 - ③ Safe landing without vehicle getting burned
 - ④ Enhancing the capacity of "abort testing" in case of failure and space debris

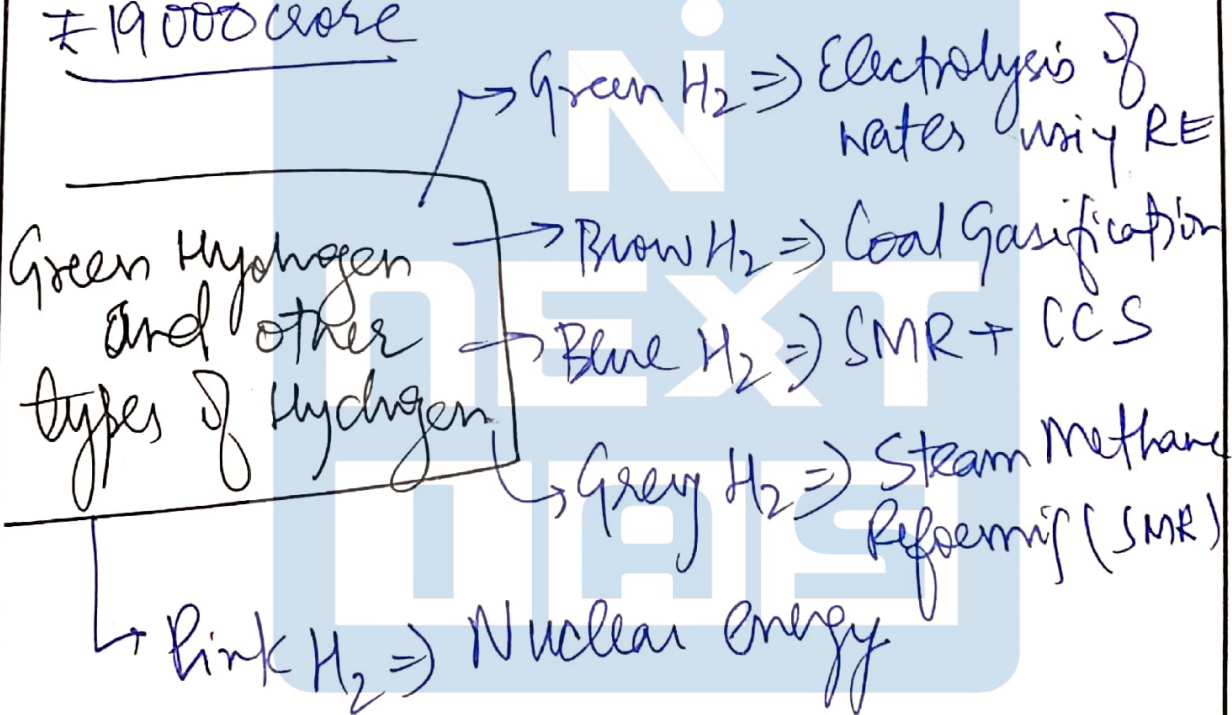
Possible
Benefits

- Space Exploration leads to scientific developments
- Knowledge enhancements
- Boost to space tourism
- Key for having an alternate space station development
- Boost private sector participation as envisaged in National Space Policy-2023

Thus, Gaganyaan mission alongwith successful launch of Chandrayaan-III and Aditya L-1 speaks of technological and scientific advancements that ISRO has made

Q7. "Green Hydrogen can be the silver bullet in our quest to tackle climate change and pollution." Critically analyze the statement in light of India's National Green Hydrogen Mission.

Ans - Recently cabinet announced National Green Hydrogen Mission with a corpus of around ₹ 19,000 crore



Green Hydrogen ⇒ Climate Change + Pollution

- ① Boost India's INDC to have 50% of energy generation from non fossil source
- ② Decarbonise the transport sector
⇒ Boost to Hydrogen powered vehicles

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③ Abatement of over 50 tonnes of CO_2
annually under the NGHM

④ Sub missions under NGHM

↓
SIGHT

↓
Development of
electrolysers.

↓
Development of zones
for producing Green H_2

⑤ Overall help generate over 6 lakh employment
and reduce import bill by over ₹ 8 lakh cr
annually

Challenges

→ H_2 is flammable liquid

→ Only 1% of Green H_2 produced
now

→ Expensive in terms of maintenance
and establishment

→ India will be relying on fossil sources
for electrolysing water

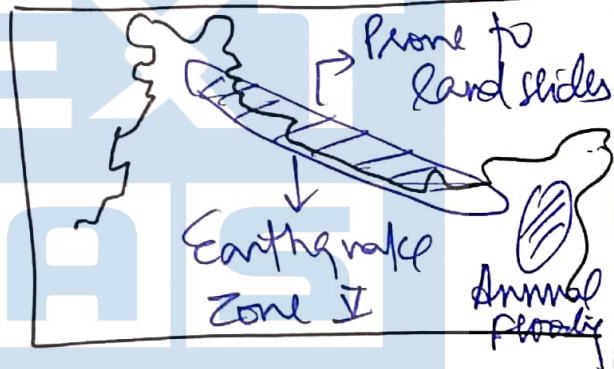
However the adoption of Green H_2 is key
for developing green economy and with
further R & D the mission can take the
needed steps in its successful adoption.

Q8. What are the key lessons for disaster management and environmental conservation in the Himalayan region, in light of the ~~the~~ recent disaster in Joshimath, Uttarakhand?

Ans. Reports of land subsidence were reported from Uttarakhand's Joshimath that caused huge displacement and mass evacuation of people.

Causes for disasters in Himalayan Region

① The region of Indus-Tsangpo Suture Zone is tectonically quite active (Zone I)



② According to Landslide Atlas, about 13% of India's landmass is prone to disaster & $\frac{2}{3}$ rd comprises of NW Himalayas

③ Increased flux of tourist activities

④ Reckless construction of highways

⑤ Deforestation and clearing of jungles.

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key lessons

Disasters Management

① Construction of structures on slopes beyond 40° shall be avoided (NDMA)

② Early Warning System must be functionalised

③ Construction of dams, highways be sound to safeguard from unforeseen disasters

④ Awareness generation

⑤ Community training

Environmental Conservation

① Reckless deforestation in the name of construction has to be checked.

② Chipko Andola 2.0 can be thought in critical zones

③ Empower local livelihood opportunities

Thus as envisaged by Hon'ble PM, Mission LIFE has to be adhered in principle for safeguarding our pristine Himalayan ecosystem

Q.9.

"The recent radical trends in Punjab show that the Khalistan issue is still simmering." Discuss the statement with respect to recent development and suggest measures to handle it.

Any

Attacks on Indian ~~cons~~ consulates in UK, Canada, coupled with slogans of "Khalistan Zindabad" in Punjab indicates radical trend simmering in this region.

Causes for such trends

- ① King peddled state where youth is engrossed in drugs and highly addicted
- ② Infiltration of arms and drugs from Pakistan (proximity to Golden Crescent)
- ③ Lack of employment opportunities
- ④ Religious radicalisation through social media.
- ⑤ Expressing antagonism in the name of "farm protests"

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- ⑥ International support in terms of finances and ideology
- ⑦ Rise of Bhindranwale 2.0 in Ajnala of Amritsar
- ⑧ Lack of administrative intelligence & timely redressal of issue.

Measures

- ① MEA shall actively engage with foreign consulates on Pakistan issue
- ② At home, strict vigilance over drug infiltration for BSF + State Police joint operation
- ③ Re-radicalise youth by having gainful employment and skill development

Thus, secessionist ideas like Khalistan has to be curbed by strict enforcement of rules and empowering youth

Q10. The anonymity and ease of drone operation contribute to the challenges of India's border security. Elaborate and give suggestions to tackle the drone problem in border areas.

Ans. Frequent reports of drones being used in carrying arms, drugs across Indo Pak border have been reported increasingly in recent times.

Challenges with drones

① Ease of operation with enhanced reach. Senders their cross border movement

② Involvement of locals in drone peddling with cross border peddlers

③ Capacity to carry heavy weights with ease

④ Lack of airspace vigilance.



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⑤ International border fence not completely "SMART" to detect air movements

Suggestions

- ① Stringency in Drone Policy along the border areas to have enlarged "red zone"
- ② Equipping security personnel with adequate gadgets and training to manœuvre such cross infiltration
- ③ Airspace surveillance be monitored by UAVs with real time communication
- ④ Smart fences with electronic engagement to catch "over the land" objects

Thus, through technological reforms and border fence be made electronically strengthened drones anonymity and operation be created.

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Q11. Electricity Amendment Bill, 2022 brings several advantages for consumers, DISCOMs as well as the environment. Elaborate. Also, list out its shortcomings and suggest some measures to overcome them.

Ans Union government recently introduced the Electricity Amendment Bill-2022 which seeks to amend the Electricity Act-2003 and induce efficiency and competition in the electricity sector.

Advantages

(A) Consumers :-

- ① Provide them the choice to select their distribution player in the locality.
- ② With greater competition comes better service outcomes in terms of electricity to all, continuous power supply, low costs in electricity etc.

(3) The pricing of electricity usage may see a drop because of increased competition

(B) DISCOMs

(1) Diversification in distribution network could overall reduce the burden on single DISCOMs

(2) Provision for Renewable Repurchase obligations

(3) Enhancement of Plant load factor (from current ~ 55-60%)

(4) Reduction in ATC losses by bringing efficiency in working and distribution

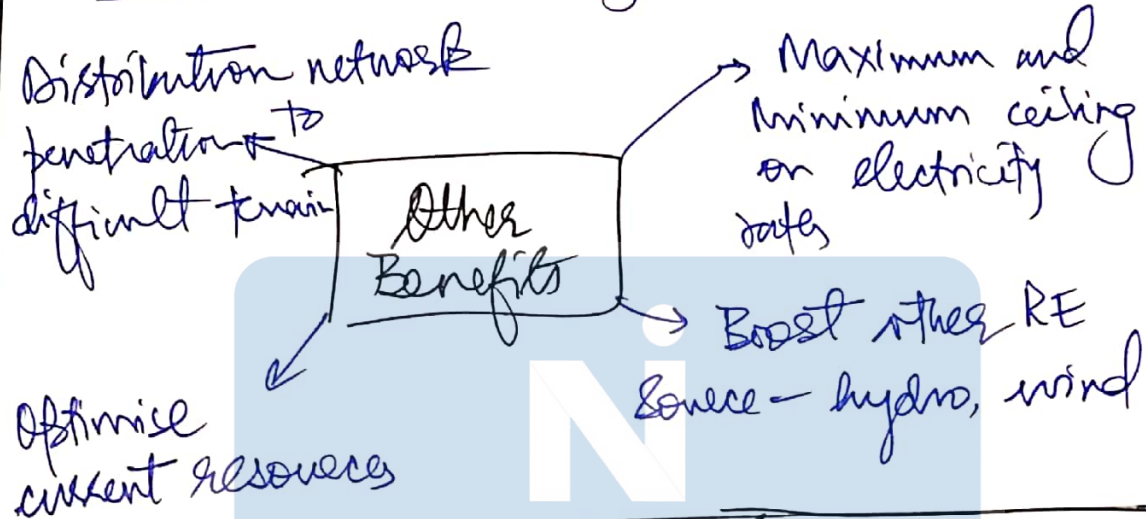
(C) Environment

(1) Includes a mandatory provision for generating and supplying "Renewable Energy" to households

(2) Help India achieve its Intended Nationally Determined Contributions like 50% of power generation from Non fossil fuel

by 2020 (currently ~42%).

③ Reduce overall GHG emission and help decarbonise the electricity sector



Key Shortcomings

- ① Incent of private sector monopolisation
- ② Irrational and high rates
- ③ Delivery restricted to urban and peri-urban areas
- ④ Loss of farmer's subsidy on electricity
- ⑤ Supply to MSMEs be restricted

Suggestions

- ① With greater private participation comes greater efficiency
- ② Alliance of act with schemes like UDAM, SAUBHAGAYA and RDSS
- ③ Check environmental issues and align with 'Panchamrit Targets'

Thus, the bill envisages to induce much needed improvement in DISCOMs sector

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Q12. SEBI plays an important role in the regulation of the share market and safeguarding the interest of investors.
In the light of given statement, highlight the challenges faced by the SEBI and suggest reforms in this regard.

Ans

The Securities Exchange Board of India, ^{Act} 1992
provided for establishing SEBI as a
statutory body

Important role
played by SEBI
in the regulation
of the share
market and investors

→ Checks fraudulent practices
in buying and selling of
shares

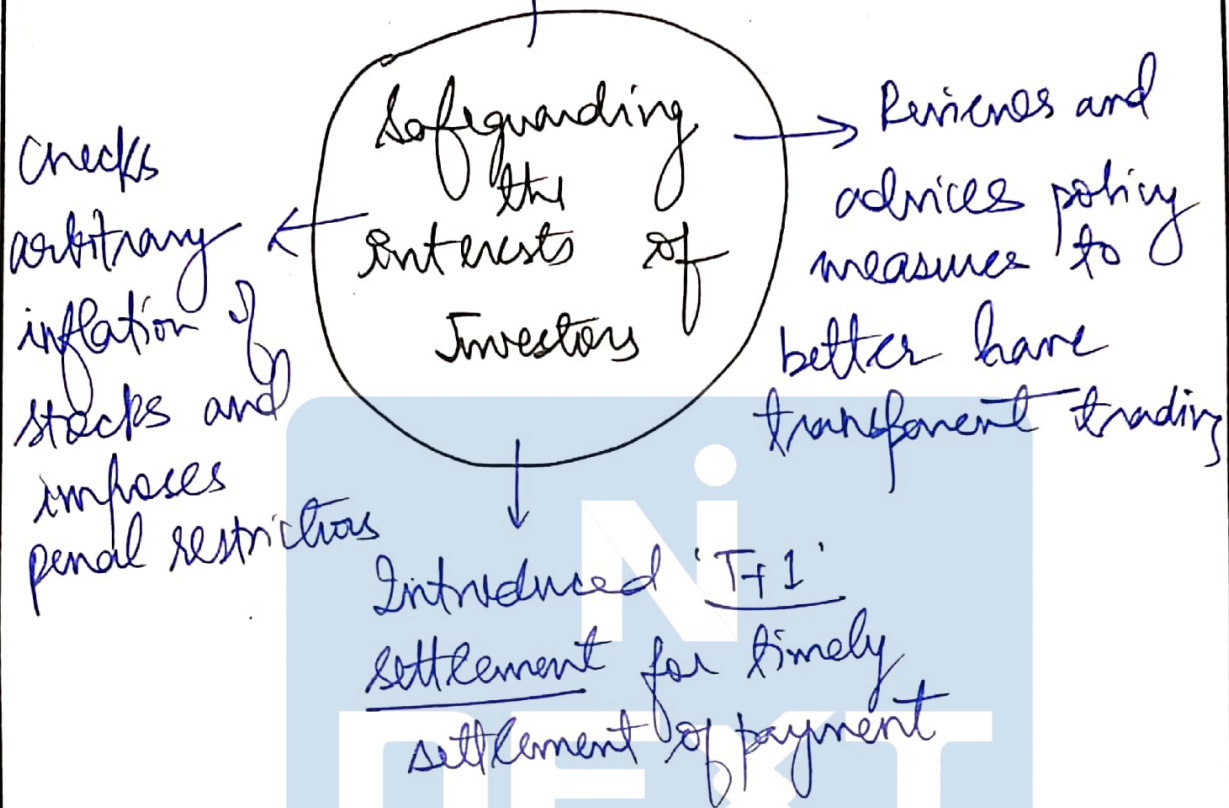
→ Overview and supervises the
functioning of stock markets
- NSE and BSE

→ Through various steps like
"Circuit Breaker", ensures that
fair trade practices are followed

→ Provisions on "Insider Trading"

→ Acts as a quasi-judicial and quasi-
legislative body.

Securities Appellate Tribunal (SAT)
established under SEBI Act 1992



Challenges faced by SEBI

- ① It is a quasi-judicial body and although acts as civil court, but cannot undergo criminal proceedings
- ② Often overburdened with myriad of roles and responsibilities coupled with staff crunch

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- (3) Harsh regulations in terms of trading leads to ^{less} effective participation by private sector.
- (4) Complicated rules and subsequent penal provisions renders individualised trading ineffective.
- (5) Can investor issue notices but not full autonomy given.

Reforms suggested

- Integrate trading with new tech adoption like AI, Web 3.0 etc.
- Use of Block Chain Technology for storing and continuous updation.

→ Harsh penal provisions can be replaced by fines to attract private players.

Thus, with 3 decades of LPG reforms, the role played by SEBI in regulating share market has been widely appreciated by global financial institutions.

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Q.13.

Despite being, a major contributor to the Indian economy, the agriculture sector is plagued by several constraints that impede its growth and development. Discuss the role of technology in overcoming these constraints

Ans- Indian agriculture contributes to about 18-19% of total GDP and the fiscal year 2022-23 saw agricultural exports witnessing an all time high of about \$ 53 Billion.

Agriculture Sector : Major Contributor to Indian Economy

① Employment generation

① Contributes to about 45% of total workforce

② Fisheries sector employs about 30 million people

③ 75% of rural population engaged in farm activities

② Key for India's exports as agri export has now moved beyond

\$50 billion, contributing to 2.5-3% to global exports

(3) Ensures food security $\Rightarrow$ Buffer production of more than 330 MT in FY 22-23.

This is key for social security and thereby economic development

Agriculture sector plagued by foll. constraints

(1) low farmer's income despite India being one of the largest producers (~ ₹ 10,000)

(2) Fragmentation of land has rendered low equipment usage in farm lands. India's average landholding ~ 1.08 ha

(3) Usage of low yielding seeds, ineffective irrigation facilities (55% = rainfed) and low fertiliser efficiency has impeded its growth

(4) low access to market linkages and credit facilities $\Rightarrow$ According to RBI

close to 60% farmers still dependent on private moneylenders.

⑤ Over subsidisation (water, electricity) and skewed MSP regime following biased open procurement policy (wheat and rice) has affected environmental health.

Role of Technology

→ Better R&D in terms of crop development eg Bt cotton, GM Mustard for higher yield, SHC

→ Farm mechanisation by using drones for pesticide spraying, threshers, tractors etc

→ Use of nano technology eg Nano urea, golden urea has high efficient usage (over 90%)

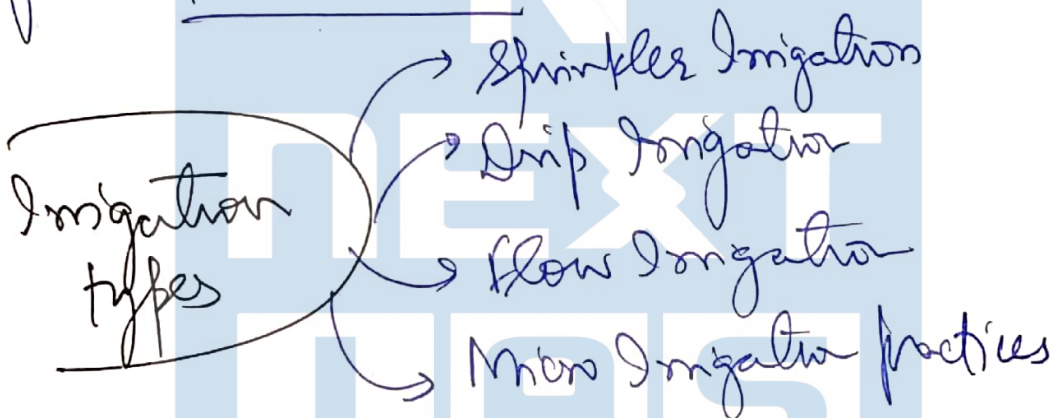
→ Technology for linking credit to insurance eg PM Fasal Bima Yojana

→ Impetus on DBTs over MSP (Shanta Kumar Committee)

Thus, agriculture is the backbone for any economy and with tech impetus like AI, drones, farmers can be turned into "agripreneurs"

Q 14. Evaluate the impact of irrigation on the environment and natural resources, and suggest measures to ensure the sustainability and equity of irrigation practices in agriculture.

Ans - According to NITI Aayog, about 73 million hectares of net sown area (52%) has now access to irrigation which has increased from 41% in 2016-17.



Impact of Irrigation

(A) Environment

- Positive Impact]
- ① Helps reduce soil dryness
 - ② Overcomes soil compactness that hinders root penetration
 - ③ Optimum irrigation helps overcome challenge of soil erosion

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- (4) Better crop yield if irrigated well
- (5) Can help avoid soil alkalinity

Negative Impacts

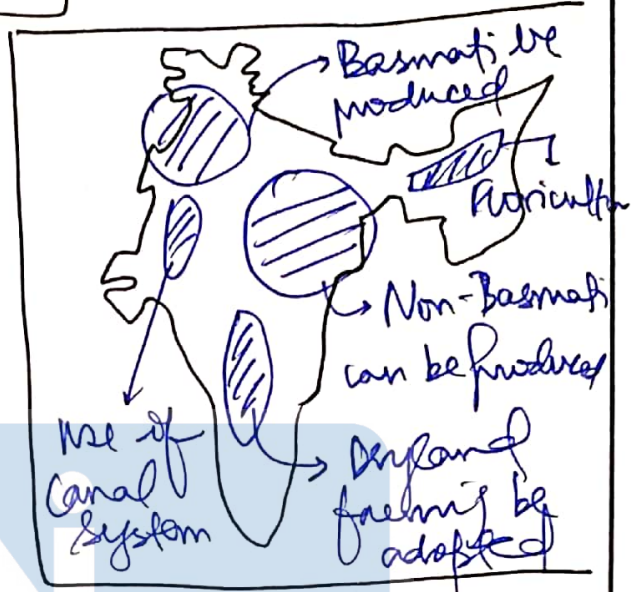
- (1) overirrigation is the cause of degrading soil efficiency in plains of Punjab and Haryana
- (2) loss of crop productivity
- (3) Continuous irrigation of fields causes for soil to lose its retentivity and leads to erosion

(B) Natural Resources

- (1) Overdependence of groundwater resources
(~25% extraction of groundwater by India)
- (2) Subsidisation of electricity has added to further challenge
- (3) Depletion of natural resources due to ineffective and over-utilisation
- (4) Farm yield becoming low compared to global average

Measures to be taken① Climate Smart Agri

- Use of localised natural resources
- Reduce virtual water trade
- precision farming

② Enhance the area of micro-irrigation facilities (current = 8mha only)③ International collaboration in R&D for effective irrigation facility development

Ex Israel is pioneer in drop irrigation

④ focus of natural farming - ZBNF,

Paramparagat Krishi Vitas Yojana etc

⑤ ~~lower~~ subsidisation of electricity to curb reckless usage.

Thus, for sustainable irrigation facilities policy steps must be linked with better technology adoption.

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Q15. How India benefitted strategically from the contributions of Dr. Homi Jehangir Bhabha and Dr. Vikram Ambalal Sarabhai in the field of atomic energy and space technology respectively?

Ans - With India's successful launch of Chandrayaan-III and Aditya L-1 mission and our scientists steering in the nuclear domain as well, the contributions of Dr. H.J. Bhabha and Dr. Vikram Sarabhai are of profound importance.

Dr. Homi Jehangir Bhabha's Contribution

Known as the "Father of Indian Nuclear Programme" the contribution of Dr. Bhabha benefitted strategically to

① He was pioneer in establishing the Atomic Energy Establishment at

Ironmway, which is now called BARC

(2) India currently has 22 nuclear powered reactors ~~across~~ and currently signed MoUs with USA, Japan and France

(3) Dr. Bhabha played a key role in India's 3 stage nuclear programme - the outcomes for which were - Operation Smiling Buddha in 1970s and Operation Devi Shakti in late 90s

(4) At present the energy generation from nuclear source stands at 6780 MW and efforts are being put to ramp up

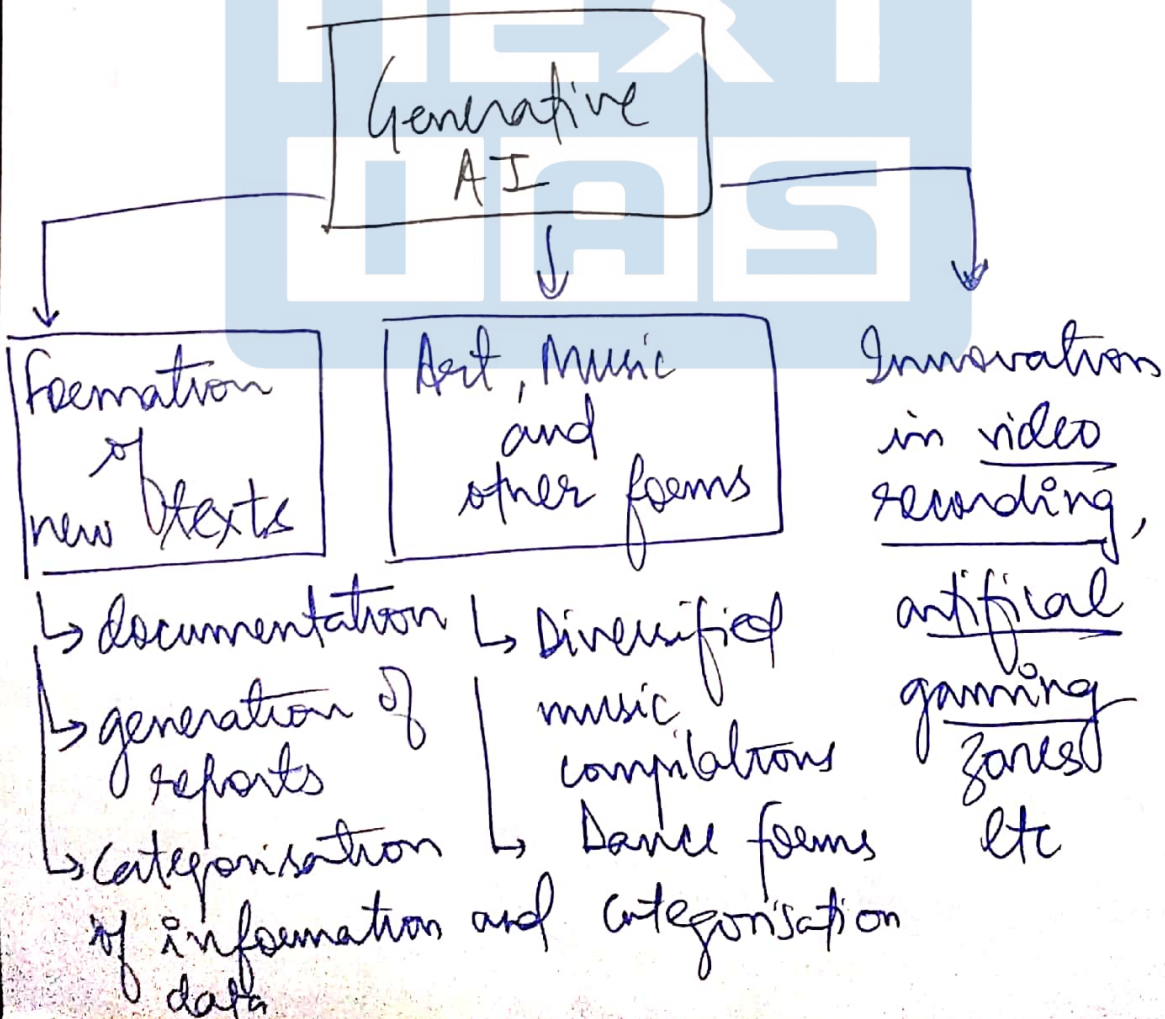
(5) India is also a partner in International Thermonuclear Experiment Reactor (ITER) which is looking to generate nuclear fusion energy

Dr. Vikram Ambalal Sarabhai's Contribution

- ① Rightly referred as "Father of Indian Space Programme", Dr. Sarabhai was instrumental in setting up ISRO (earliest INCOSPAR)
 - ② He was ~~also~~ instrumental in launching India's first satellite - ARYABHATTA and also set up the Thumba launch station at Kerala
 - ③ Apart from science his contributions stand apart in field of education (SITE satellite) establishment of IIM - Ahmedabad and even his Sarpan Academy for Art.
 - ④ He was also instrumental in training Scientists like Dr. APJ Abdul Kalam, Dr. Nambi Narayan who later contributed in developing missiles and rocket Vikram-S
- Thus, naming lander "Vikram" is a tribute to this scientific mastermind of India

Q.16. Generative AI holds the potential to push the boundaries of innovation in the near future, yet its societal impacts raises substantial challenges. Elaborate.

Ans. Generative Artificial Intelligence (GAI) refers to development of new content, document, texts, data, art etc which resembles human made content. Ex Chat GPT, DallE-2, an open AI, Bard of Google etc



Innovation
in
near future

- May replace google search engines
- Minimise human efforts to near zero
- Build robust searching framework
- Enable industry infrastructure modelled on "newlines"
- Development in healthcare, education and virtual tourism.

Societal Impacts

- ① Challenging issue of reliability of information and data generated
- ② Too much information often leads to ineffective statistical analysis
- ③ Privacy concerns is a major issue with generative AI

④ Inadequate legislative frameworks to counter any exigencies eg ~~draft~~ Data Protection Bill still ~~is~~ pending

⑤ Issue of cyber threat, deep fakes, critical information infrastructure

eg Recent cyber attack on AIIMS CII, Covid data breach etc.

Suggestive Reforms → Proper legislative framework has to be put in place

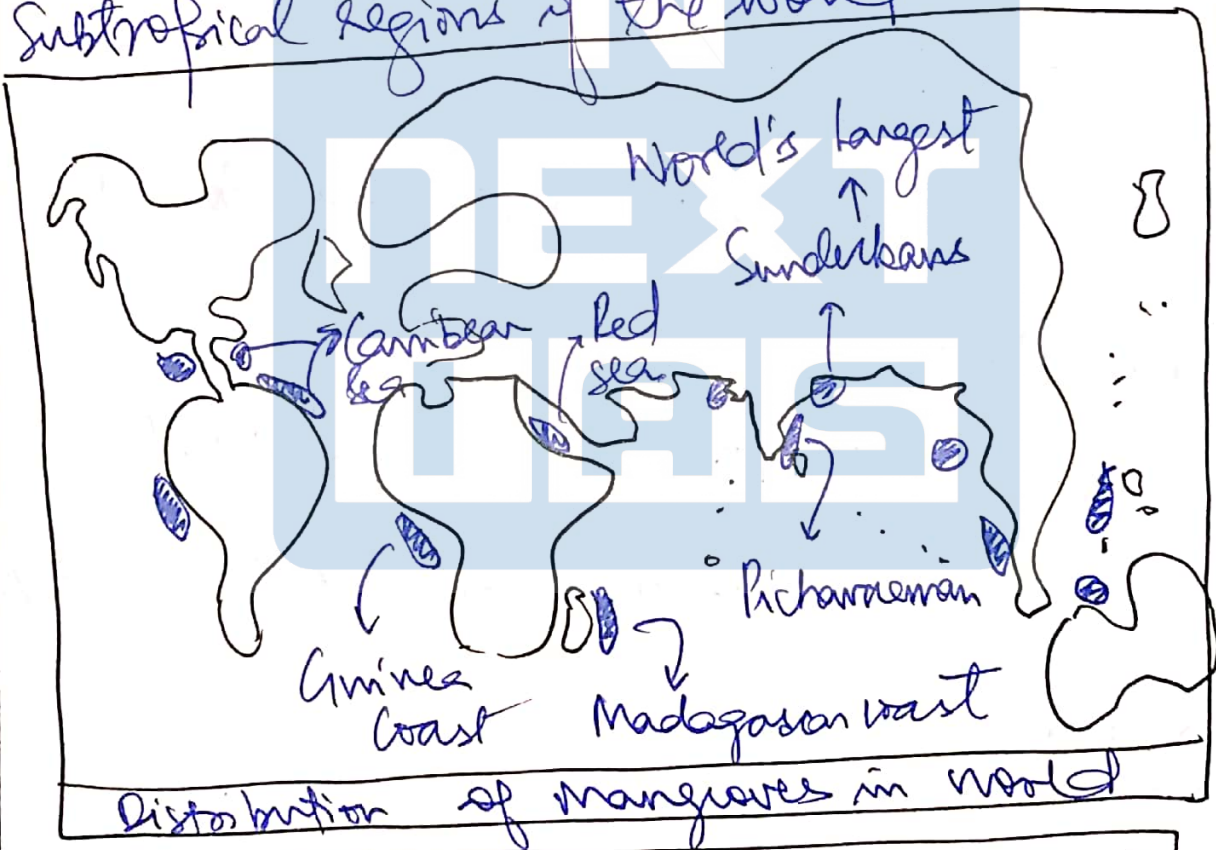
→ Awareness generation about its ethical guidelines

→ Companies working on generative AI need to be careful about authenticity of data

Thus, 'AI' is the new mark of 21st Century and with ongoing Industrial Revolution 4.0, 5G and 6G developments the innovation is boundless in future

Q17. Explain the purpose of the "Mangrove Alliance for Climate" launched at the COP27 UN Climate Change Conference in Egypt in November 2022. Elaborate on the importance of mangroves in maintaining the coastal ecology of tropical ~~nations~~ nations.

Ans. Mangroves are halophytic shrubs that covers around 15 million hectares of global area and are largely found in tropical and subtropical regions of the world



Mangrove Alliance for Climate : COP-27

The alliance comprises of India, Sri Lanka, Australia etc seeks to spread

awareness about the importance of mangroves and their role in managing climate change events and rising anthropogenic disasters.

The alliance stresses on the importance of mangroves in maintaining coastal ecology.

- ① Prevents erosion of coastal areas due to high tides
- ② Acts as "ecotone zone" and therefore harbours key species and rich biodiversity fauna and flora
- ③ Effective in flood management
↳ Pichavaram mangroves in Chennai during the 2004 Tsunami

④ Key livelihood for local inhabitants
→ Sundan' tree used in making boats
houses etc in Sunderbans

⑤ With rising sea level, particularly small
island nations, mangroves enables to
manage incursion of water because of its
deep roots network

But, there are certain

challenges

- ↳ Shrimp farming
- ↳ Use of mangroves in lumbering industries
- ↳ development of ports etc in coastal
areas leading to clearing off mangroves

Thus, in light of above concerns, government
of India has launched MISHTI scheme
that seeks to safeguard the ecosystem
and livelihood of coastal inhabitants.

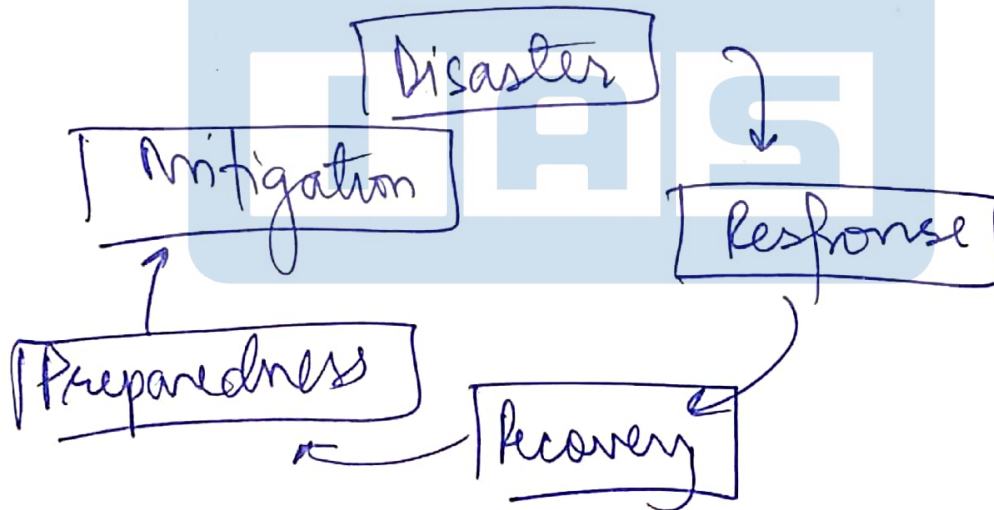
Q18-

The formation of the Coalition for Disaster Resilient Infrastructure brings more robustness to the Disaster Management approach in India. Comment and justify the need for a new strategy to tackle Disasters in India.

Ans-

India along with UK launched Coalition for Disaster Resilient Infrastructure (CDRI) in 2019 to spread awareness about better infrastructure practices.

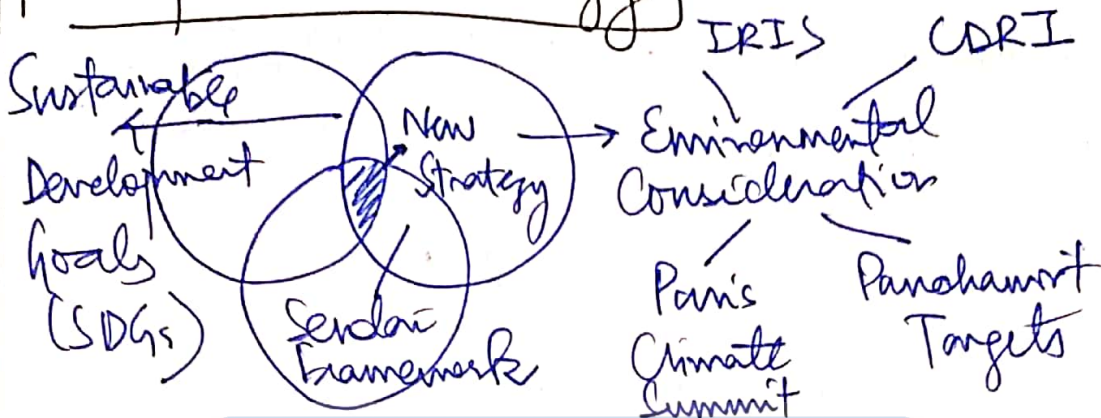
Disaster Management Approach in India



Disaster Management Cycle

Through CDRI, India seeks to achieve the following in disaster management:

- ① Early response mechanism to tackle the disaster through — early warning systems, community training, spread of awareness etc
- ② CDRI also focuses ~~of~~ on the 'recovery' aspect that includes —
 - Rehabilitation of displaced communities
 - Recovery in terms of
 - physical
 - social
 - psychological
- ③ CDRI envisages to promote best international practices for having a robust physical infrastructure. It also stresses on the use of traditional building materials.
 - ↳ Ekra construction from bamboos in Assam or "Dhajji-Diwari" of J&K
- ④ Mitigation strategy largely involves building a strong community sensitivity, training the locals as "first responders"

Need for a new strategy

- ① Disaster management must be a part of India's soft diplomacy by engaging with vulnerable states
- ② Climate changes have made calls to look for a new strategy $\rightarrow$ Destruction of Himalayas, urban floods, landslides
- ③ Rising urban population ($\sim 30\%$ to 50% by 2050)

Thus, the new strategy must be both inward looking as well as cater to global needs to address the challenge of natural and anthropogenic disasters

Q19. The recent rise in ransomware attacks targeting critical infrastructure and major corporations has highlighted the urgent need for stronger cybersecurity measures and policies. Discussing the key factors contributing to this trend, analyze the impact of these attacks on various sectors.

Ans - Section 70 of the Information Technology Act 2000, defines critical information infrastructure as those equipments, failure of whose may have debilitating effect on economy, political, social and environmental spheres of a state.

Recent Cyber Attacks

- Breach of Aadhaar Data acc to WEF → 1.1 billion users data got compromised
- Cyber attack on 'Co-Win'
- Attack on AIIMS CII recently

Key factors in cyber attack

① Lack of digital development in terms of security protocols

- ② Digitally illiterate population becomes a soft target for such attacks
- ③ Penetration of internet raises the issue of cyber attack. $\Rightarrow$ India has over 700 million population using internet
- ④ Low employment opportunities and skill development forces people to go for such activities. $\Rightarrow$ Tamara has become the "phishing capital"
- ⑤ International considerations and terror outfits engagement $\Rightarrow$ over 70% of cyber attacks are from unknown foreign sources

Impact of cyber attack on various sectors

- ① Health sector personal
 - loss of patient's data
 - Break of critical information, intellectual property rights

- Disruption of online OPD services

② Economic and Finance Sector

- loss of information pertaining to bank accounts, trading, financial purchases etc
- Disruption of banks, financial industries

③ Energy Sector

- Mumbai's Black out due to cyber attack
- Nuclear installations may get threatened

④ Political Institutions

- Reports of ECI, QRAG may get leaked
- Compromise critical information in electoral practices etc

⑤ Social Lamination

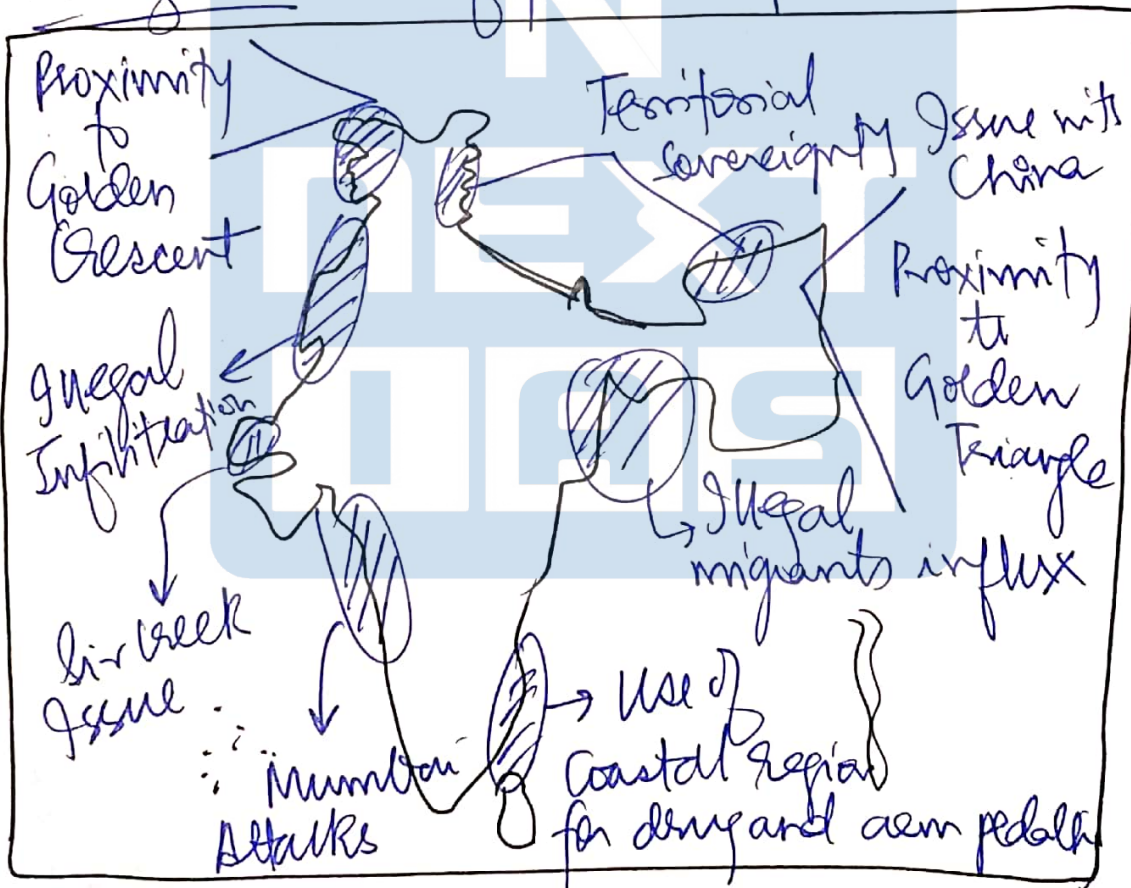
- communal riots and protests

Thus to overcome such impacts, a robust legislative framework has to be put in place. Adopt the use of AI, Web 3.0 and Equip government agencies with new technology and skilled manpower to deal with such exigencies

Q.20.

In the context of border security, how can cooperation and coordination between different security agencies be improved to ensure effective and efficient management of coastal and terrestrial borders?

Ans - With ongoing violence in Manipur where only 6 km of international border with Myanmar is fenced, the need for robust border management is of prime importance



Insurgent challenges pertaining to border security

① Increasing influx of drugs and arms
In J&K, a large no. of youth

getting addicted to drugs

② Illegal migration in northeast has led to rise of "organised crime" and ethnic conflicts

③ Coastal routes becomes easy way to enter India illegally → The Easter Attacks of Sri Lanka ~~was~~ masterminded was in South India for many months

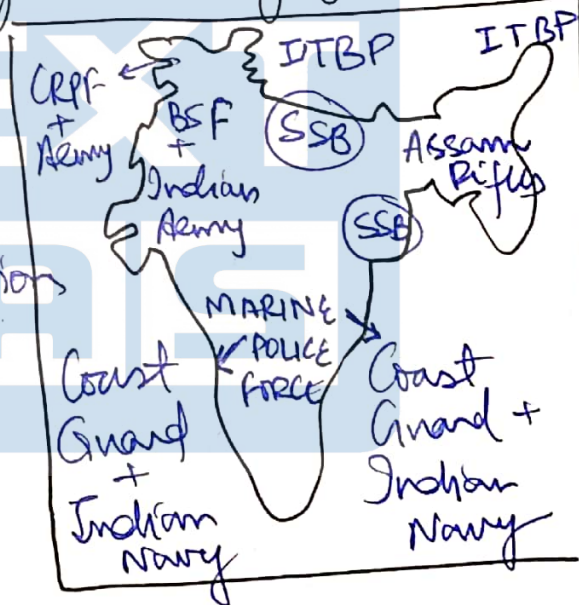
Different Security Agencies Engagement

① Terrestrial Borders

(a) Government recently amended border regulations of BSF in Punjab, West Bengal and Gujarat (50 km limit)

(b) BSF and State Police can work in tandem

(c) ITBP personnels guarding Indo-China border be equipped with small battalions of army to provide adequate man and material resources



U.P.S.C.

- (d) In North East India, Assam Rifle already comes under dual command structure of MHA and Army
- (e) CRPF units be trained with Army battalions in J&K to check youth radicalisation and drug peddling.
- (2) Coastal Border
- (a) Ties with marine police necessary
- (b) Coast Guards (12-200 nautical miles) can engage with Indian Navy in surveillance
- (c) Intelligence agencies be tied with direct communication to Indian Navy in High Seas.

Thus to safeguard coastal and terrestrial borders Security agencies has to function in unity & in terms of intelligence sharing, surveillance and operations execution