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FIAS – MGP 2023 – GS PAPER 3_FLT #7

Time Allowed : Three Hours
समय : तीन घंटे**Forum IAS**Maximum Marks : 250
अधिकतम अंक : 250**GENERAL STUDIES / सामान्य अध्ययन**

Name Of Candidate परीक्षार्थी का नाम	MANISH BHARDWAJ		
Roll No./अनुक्रमांक	1910009316	Medium/माध्यम	English <input checked="" type="checkbox"/> हिंदी <input type="checkbox"/>
Center Code/परीक्षा केंद्र	online	Date/दिनांक	16-08-23

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

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

EXAMINER'S REMARKS



CRITERIA FOR THE FEEDBACK SECTION AT THE END OF EACH QUESTION

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

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प्रश्न संख्या

① Foreign trade is one of the important milestone to contribute to a \$ 5 trillion USD economy with potential for export earning and saving forex (import substitution)

In this context foreign trade policy 2023 is important as:-

- ① Focus on Remission with schemes like RODTEP for Volume expansion
- ② Focus on bigger target with \$ 2 billion export 2030 to acts as a force-multiplier
- ③ Addressing low share (< 2%) in global trade with focus on FTA's and economic partnership
- ④ Addressing the issue of commodity diversification by enriching the One district one product (ODOP) and town of export excellence
- ⑤ Thrust on regional development

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with district as Export HUB scheme

- ⑥ Facilitation ease of Doing Business with
Single window & GST Reforms
- ⑦ streamline export with SCOMET policy
(small use goods) for diplomatic
advantages

India out of Bigge groups like
RCEP => low potential

① Issue with Input tax credit
Challenge with exports

② Star trade crossing guideline
can lead to Monopolization

③ Infrastructural issues with high
turn around (> 2 days & Singapore
24 hrs)

④ Issue of skilled manpower, logistics etc

Way forward

- ① PM MITRA & DESH = force Multiplier
- ② IPEF framework is the key
- ③ Sagarmala & PM-Jali Shakti for
Multi-Modal & Logistics..

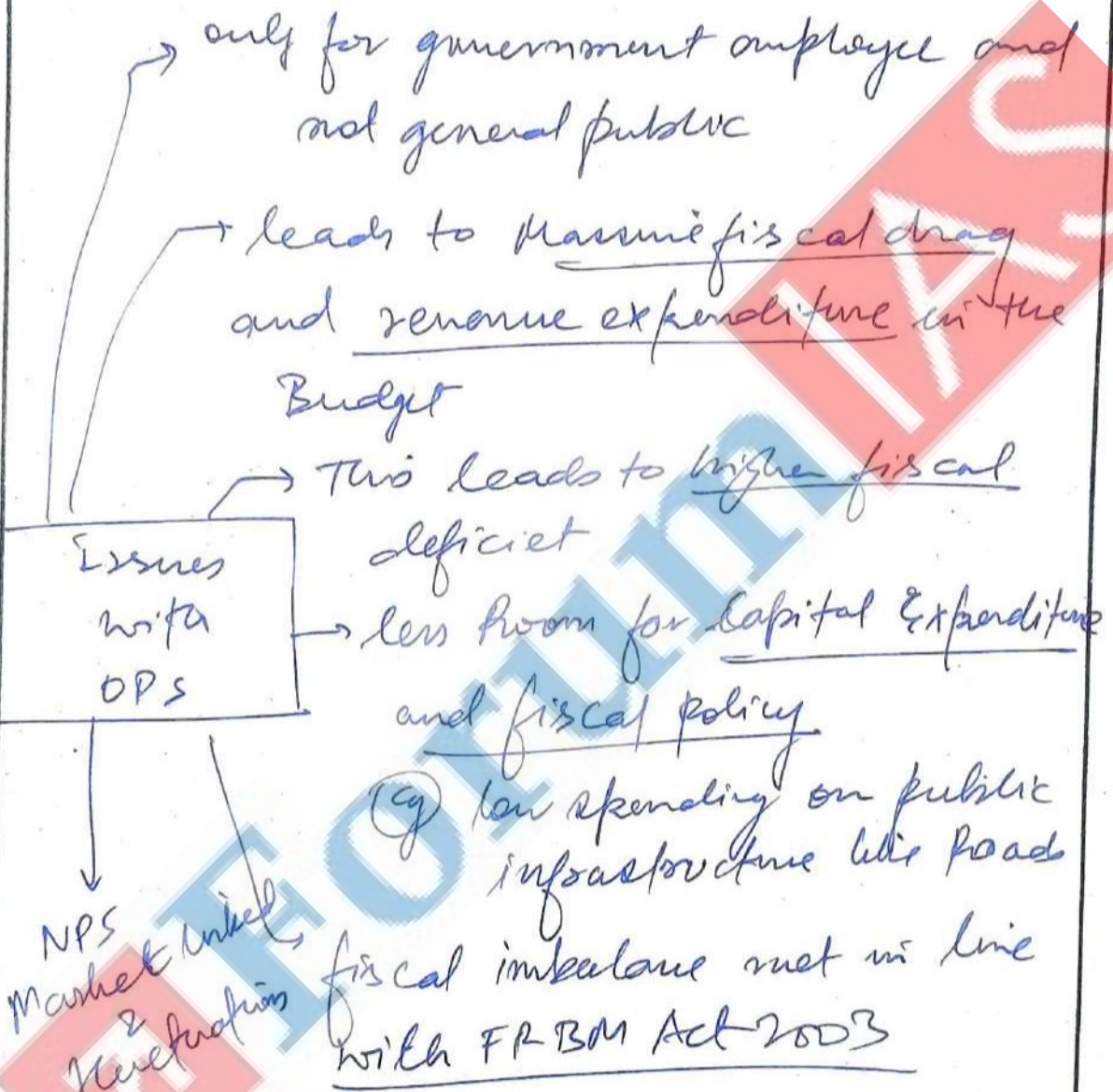
(02) Social protection is an integral aspect of Welfare State (Art-36-51) of directive principle however a balance needs to be maintained with fiscal prudence :-

| Old pension scheme as welfare economy |

- ① OPS led to social protection of government employee with 50% of last drawn salary as pension till lifetime
- ② It led to social security and income support for ease of living
- ③ OPS was not market linked thus an assured pension amount.
- ④ OPS was inflation indexed with dearness relief (DR) to protect from inflation
- ⑤ OPS helped towards poverty alleviation demand creation ⇒ Savings Rate improvement.

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⑥ OPS useful for second demographic dividend

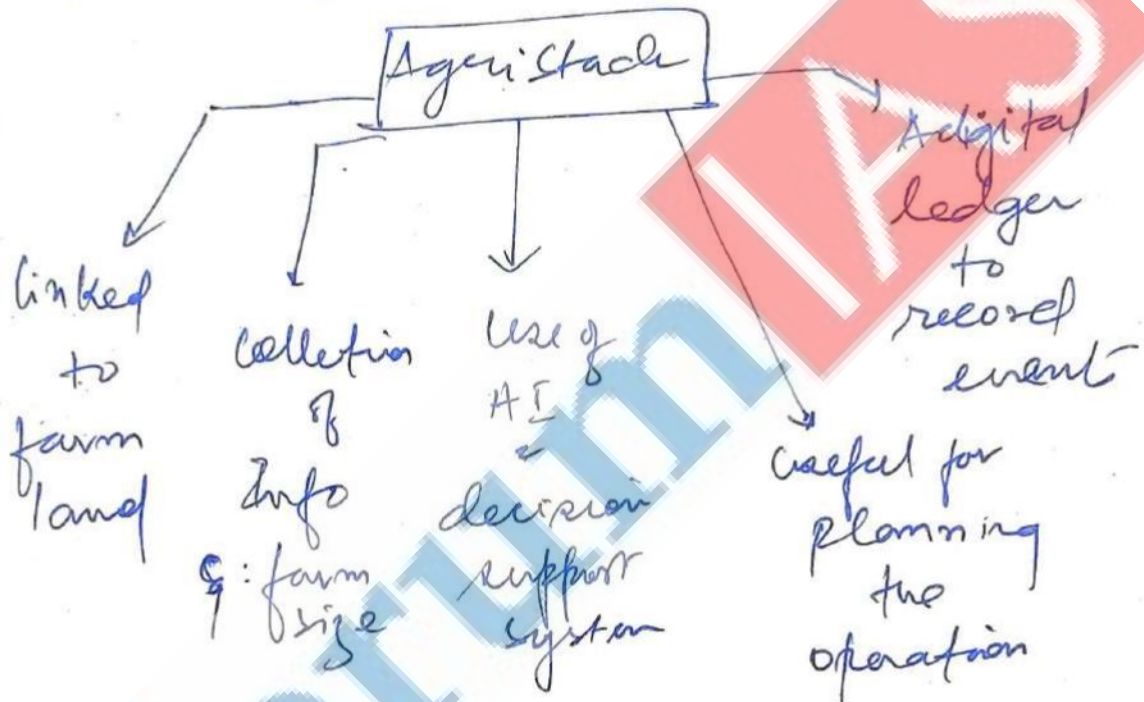


Way forward

- ① Committee Under Union Finance Secretary to look into the balancing Act
- ② Social Safety Nets with Better Universal Health & Pension Reforms

(03)

AgriStack is a technology intervention to collect information about Agricultural operations for Utilization in planning.



It can become panacea

- ① Helps in credit availability with currently 66% informal credit culture
- ② Better Agro-climatic planning as for the physical & socio-economic factors
- ③ Millet promotion in dry land areas
- ④ Agriculture Market Information

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This can lead to better price discovery
and prevent suicide (eg) 12000 suicide in 2020-21.

④ Address extension service gap for farm
Mechanisation / Cooperative etc

⑤ Use of tech in Agriculture with
(eg) Kisan - Drone for spraying

⑥ Useful in preventing demand-supply gap
that leads to inflation.

→ Not useful for landless farmer as it is
land & topography linked

→ Issue of Commercialization
and Monopoly

→ Issue of Rural - digital connectivity
infrastructure gap. (Only 13.7
Household internet)

→ Privacy & Cyber Security challenge

→ potential to create divide
Need for proper R & D of Agri-tech

before a Rollout

(04)

World Trade Organization (WTO) is a UN specialized agency to enable rule based global fair trade to ensure global & national good.

Objectives of WTO

- ① Rule Based trading order.
- ② protecting the vulnerable country interest and needs.
- ③ Food security in 3rd world and developing nations
- ④ Fair Market Mechanism and equitable Access.

In this context WTO Agreement on Agriculture (AoA) has provided the following solution

- ① Special Safeguard Mechanism to check the surge of import & price by temporary Blockade.

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② public stockholding norms such as Buffer stock for food security.

③ Peace - clause with temporary suspension of 10% Aggregate Measure of Support (AMS) Rule under the Amber - Box mechanism.

④ differentiated subsidy

- Green : allowed
- Blue : restricted
- Amber : denied

Issues

→ Give advantage to subsidies like Direct Cash transfer to USA and developed Nation farmer

→ WTO decision making & dispute resolution seen as biased in favour of west

→ Issue of recognizing Developed & developing without parameter

→ using IPR regime against developing Nation

Need for Reformed Multilateralism and WTO Overhaul for better resolution.

05

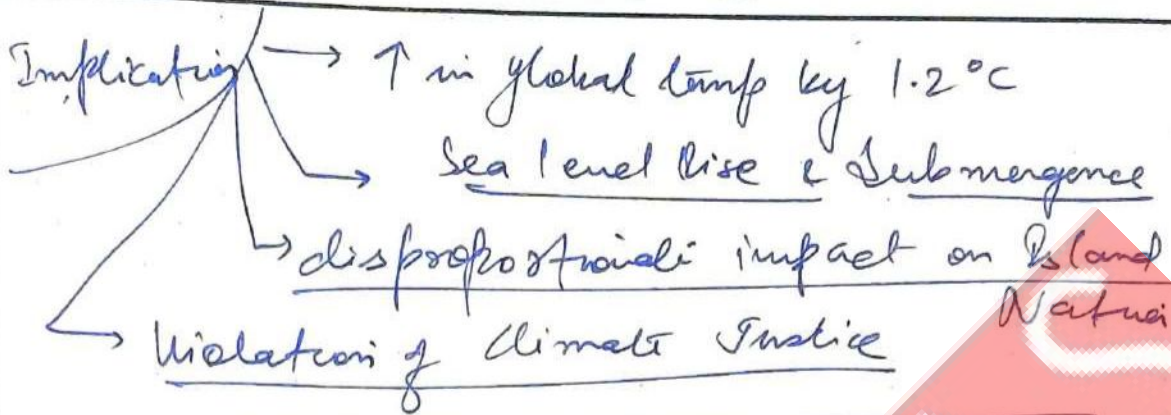
The Stockholm conference on Human & development (1972) envisaged a sustainable model of development.

However, there remains a gap between target & action to achieve the

Challenges of climate change:

- ① developed Nation resistant towards paying climate finance
(a) only \$15 billion out of \$100 billion
- ② Non-adherence to CBDR and preference to National interest
- ③ calling Climate Change 'a hoax' by USA president.
- ④ Loss & damage fund for developing & island Nation still unachieved
- ⑤ Large dependence on energy method.
(a) India 60% energy from coal is dependent
- ⑥ Non-Adherence to Nationally determined contribution

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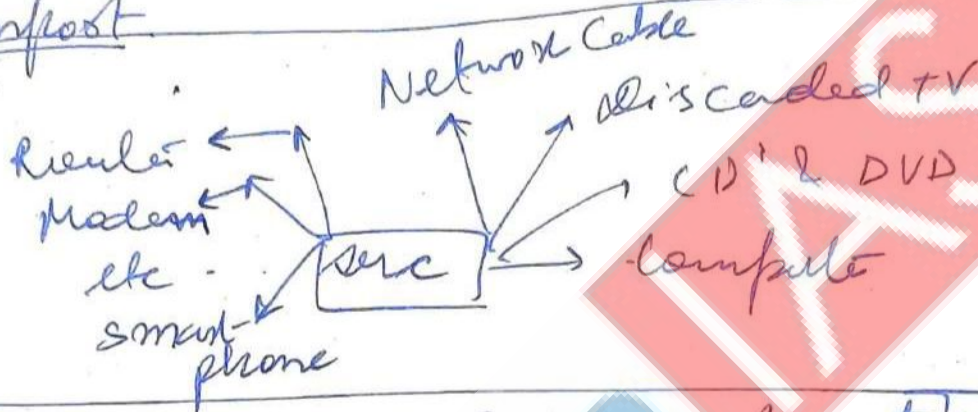
Coherent Actionable Strategy

- ① Climate fund with mandatory clause for timely contribution
- ② Technology transfer to developing Nations
 (a) green hydrogen R&D cost
- ③ Global Collaboration (a) seer. in CERN & Thermo-Nuclear Collaboration
- ④ Mitigation Rule → Coal phase down timeline
 ← sequestration
 (a) Bio rock
 → Climate pledge
 → no Climate engineering
- ⑤ Adaptation → support for green city by developed Nations (SDG-11)
funding IPCC R&D.

Need for India "Panch Amrit" strategy at global level to curb Climate Change

06.

As per E-Waste Monitor Report; India is one of the largest destination for E-Waste import.



Impediments in E-Waste Mgmt

- ① High Volume of waste with digital push on DPI (public)
- ② Informal Nature of the E-Waste disposal supply chain with (95% informal)
- ③ Lack of Awareness, Tech volatility about E-Waste management
- ④ Culture of consumption in 21st Century
- ⑤ DEM Manufacturers are not held accountable for E-Waste.
- ⑥ Weak implementation of E-Waste Rule.

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E-waste Management by Trinity

① Citizen → Nudge & Behaviour for E-waste disposal
 → Utilizing 3R' and Gandhian
principles of green living
 → Awareness about Segregation of waste

② Business

→ Accountable for disposal via
extended producer Responsibility
 → Incentive for disposal with
deposit-refund Scheme
 → PPP Mode with government for
E-waste Clinic (g) Tamshelpur
Shivkalan

③ Government

→ dedicated Model Body for E-waste
Management Rule, 2011
 → strict fine and formalization with
Municipal Body intervention.

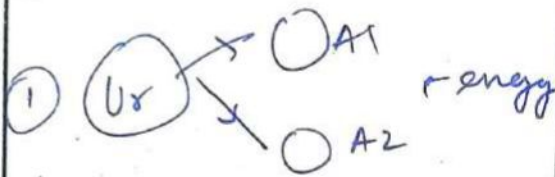
Creation of waste to wealth Notion is
essential to manage - E-Waste.

(7)

Nuclear energy is currently 6.78 MW in India, mostly fission in nature

It differs from Nuclear fusion

Fission



One large atom breaks with release of energy

② Mainly Uranium & plutonium & Thorium as raw material

③ Chain Reaction is established

④ Require Normal temperature.

⑤ Currently in use and misuse too

⑥ Hiroshima

Fusion



two small atom combine with energy

③ Uses Hydrogen (H_2O) & Helium as Materials

NO such chain reaction

Require high initial temperature

Global collaboration at ITER => No daily

life usage.

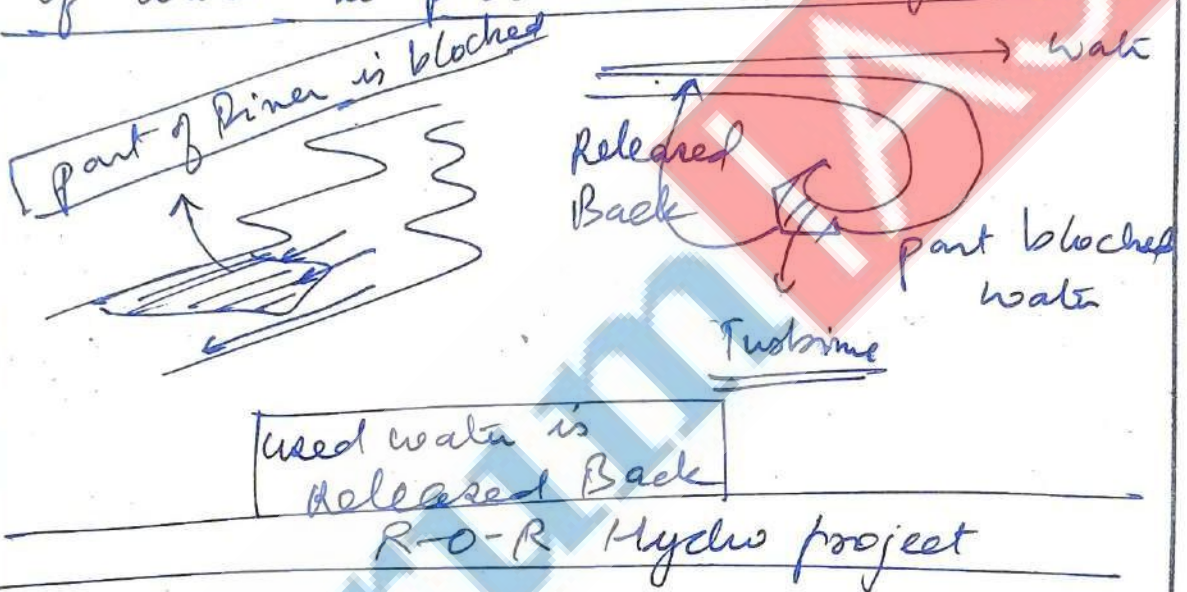
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Relevance in energy security

- ① Fits in the notion of usable as it is current in use in France (60% dependent)
 - Available
 - Accessible
 - Affordable
- ② Useful in addressing energy crisis in Europe
 - ⑨ Germany restarted Nuclear plant
- ③ Helps in addressing the energy distribution dilemmas especially in South Asia
- ④ Potential for scale development and counter to OPEC Monopoly
- ⑤ Useful in energy supply to climate and latitudinally disadvantaged Natua
 - Threat of explosion & Mismanagement
 - ⑨ Fukushima
 - Monopoly in supply ⑨ NPT group
 - Issue of displacement of people
 - Need for Micro-grid Based MINI Nuclear plant and global collaboration

08

Run of the river hydroelectric projects are a better and sustainable type of HEP as it utilizes the natural flow of water to produce electricity (Fig)



It balances the ecological preservation with economic development:-

- ① does not fully block the Natural & ecological flow \Rightarrow health of river is maintained
- ② No large scale DAM & associated displacement
- ③ (eg) Kishanganga ROR on TheWm River

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③ Does not lead to habitat destruction for the wildlife.

(eg) ~~displacement~~ displacement during Narmada dam

④ Its design doesn't lead to siltation of sand at bed & bottom thus, no siltation of River

⑤ Usual Benefits of Navigational, water for drinking and hydroelectricity is seen

(eg) Rattle DAM area in Jammu.

→ Inter-Country disputes due to water sharing agreements (eg) Indus Commission

→ Issue of flood plain embankment & people living there => face the threat of floods.

→ Initial Upfront Cost & technical expertise

→ Climate change & isotatic Rains

Need for better data sharing and ecological management in ROR.

09

Vibrant Village Border program was launched
to create a robust Border infrastructure
to counter the threats along Indo-China
(3488 km) & Indo-pak Border.

Robust border infrastructure → counter threats

① prevents the issue of illegal migration
and associated crime

② ICP along Bangladesh Border
to check cattle trafficking

③ prevents border clashes and act as a
guard against threats

④ useful for surveillance & monitoring

⑤ Rajauli Border in Kashmir

⑥ useful in case of war and act as shelter

⑦ useful for Border reconnaissance

⑧ Border village used as
advance control room.

Vibrant Village program

- ① Re construction of village for better infrastructure & socio-economic development
- ② These could promote Border tourism
(eg) in Ladakh eco-tourism
- ③ Useful for health/education and harmony along village.
- ④ prevents illegal migration & terror infiltration due to intelligence sharing.
- ⑤ Act as dual-purpose in case of war.

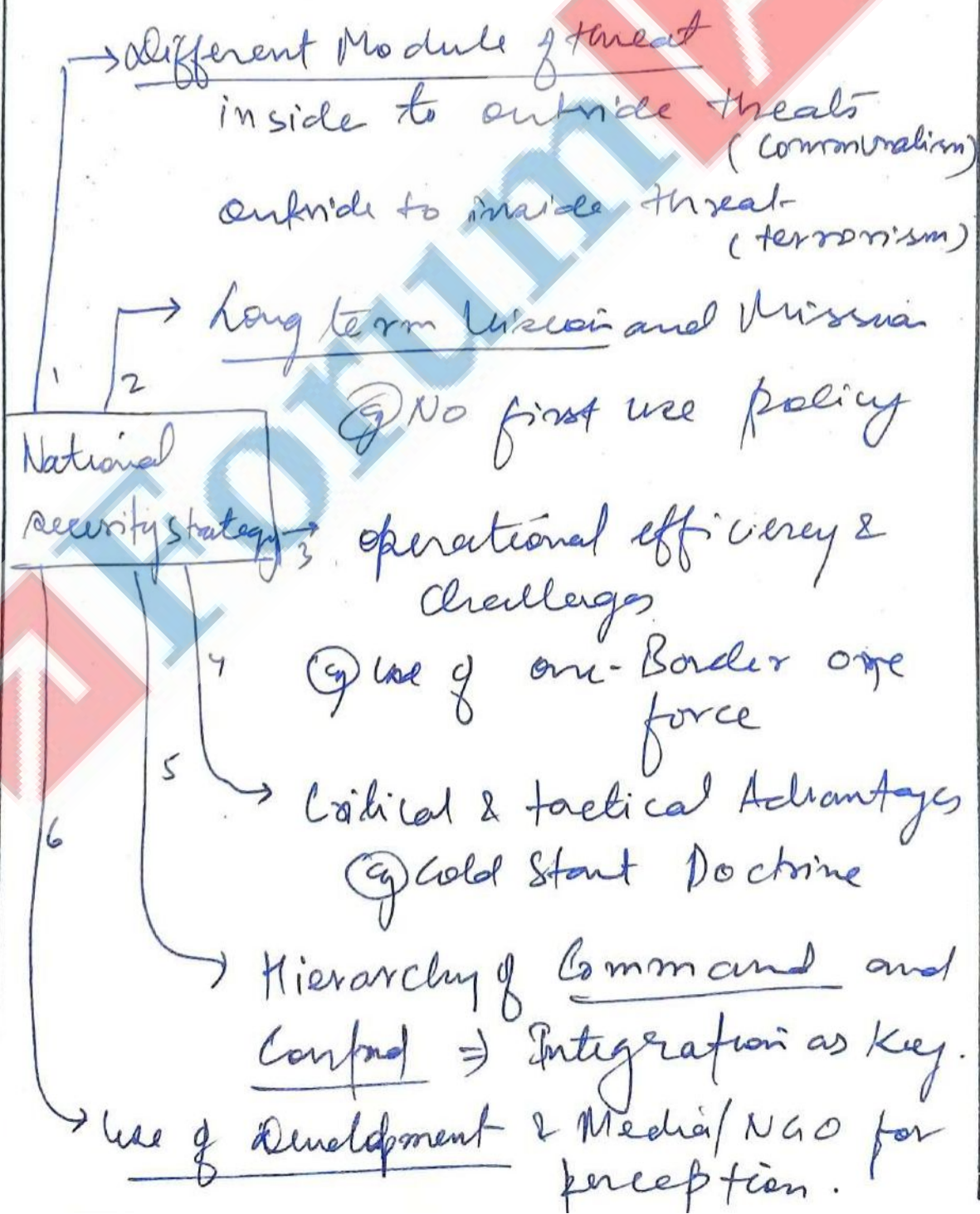
Issue → Need for Border Demarcation.
Diplomacy needs to be given push against defence.

Vibrant village has potential to realize the vision of reaching last mile for development.

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(10)

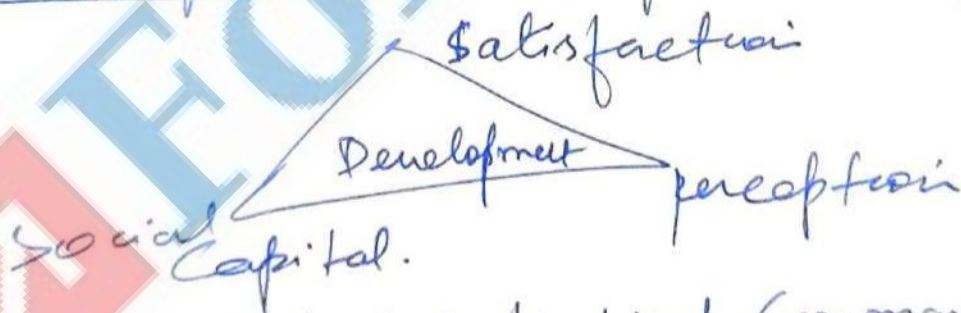
National Security Strategy (NSS) is a document that highlights the priorities of security show cases future challenges and hybrid nature of opportunities.



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All this can help in overcoming challenges to National Security by:-

- ① Operational Readiness at all time for quick & swift action.
- ② Address diplomatic & global order and issues (Vision clear)
- ③ Clear line of command => prevents ethical dilemmas in warfare
- ④ Development as an important component



⑤ Issues → Lack of Unified Command and working in silos

→ R.D. Shekhar committee told about high cost of war

↳ low tooth to tail Ratio.

Adherence to principles of Reform-perform and Transform Security challenges.

- 11) Inflation is the general rise in price of commodity and goods.
In India, RBI uses Consumer Price Index (CPI) to measure inflation

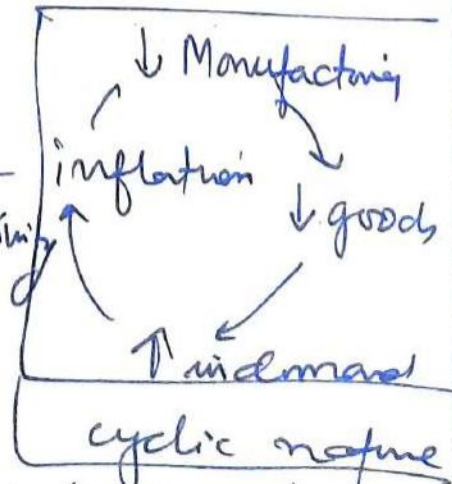
Factor influencing inflation trends

SUPPLY SIDE

- ① Agricultural growth and produce
(a) Recent rise in price of tomato @ 200/kg due to bad produce
- ② Issue of Black Marketing & Hoarding as seen in Covid-19 and oxygen crisis
- ③ Foreign goods or imported inflation due to its utility in consumer goods
- ④ Slowdown in Manufacturing and investment
- ⑤ Monsoon & Climate Change impacting productivity

Demand Side

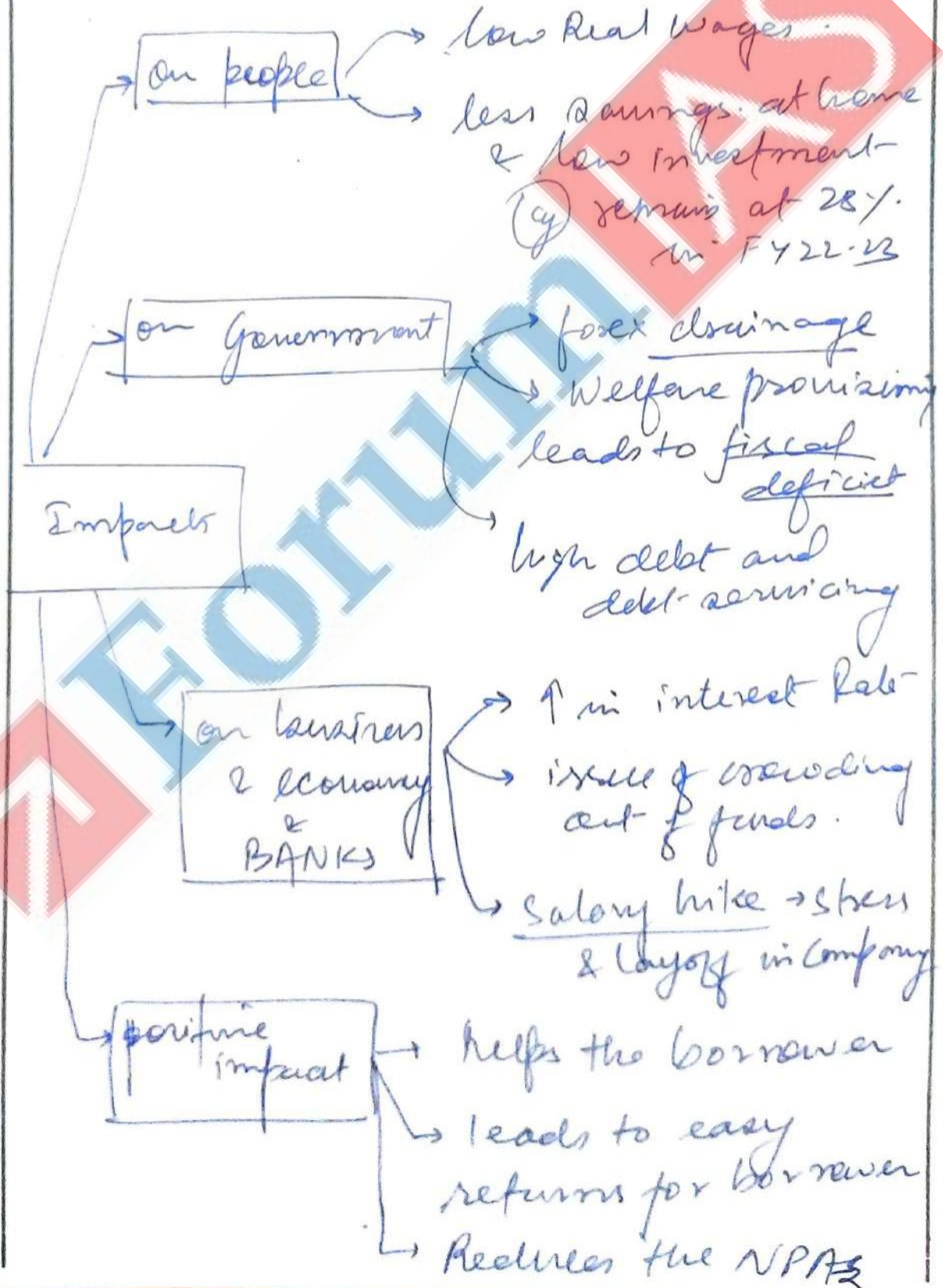
- ① Due to preference for a commodity
(a) Limited edition watch.



① Nudge & Behavioral aspect

② Organic food & high price of it

③ Issue of imported inflation.



Institutional measures

① Supply side :-

- a) Law to check hoarding & Black marketing (g) Essential Commodity Act 1955
- b) provision of goods (g) Tomato by Government
- c) crop diversification & Resilience by Agro climatic planning
- d) Undo the supply chain disruption by Market reforms (g) e-NAM
- e) Better logistics & Make in India

② Demand side :-

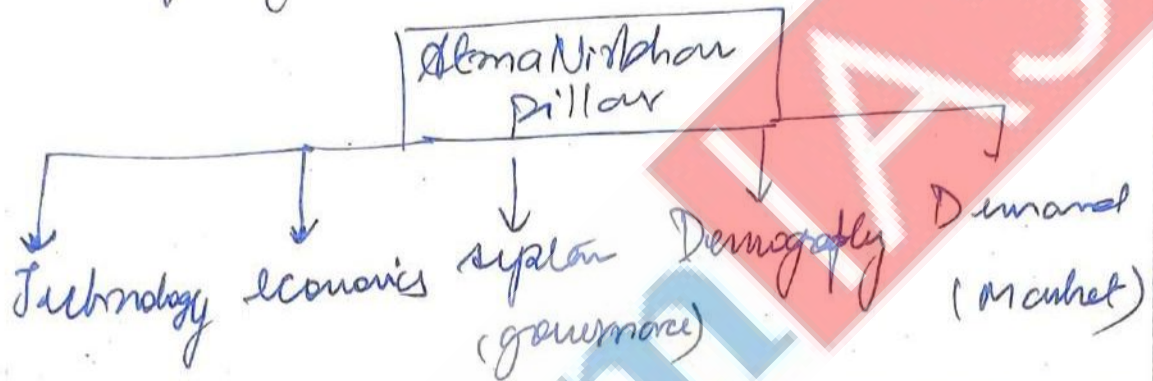
- a) Nudge for Swadeshi / Atmanirbhar
- b) preference for organic for climate Resilience.
- c) Alternative Manufacturing to provide substitute.

way forward (g) Inflation Indexing Bonds to hedge people

② fiscal & Monetary policy Review for welfare of vulnerable.

(12)

Atmanirbhar Bharat is self reliant Indian in multidimensional aspect is essential for global power and economic strength for investment.



PLI Cornerstones for Atmanirbhar Bharat

- ① Export Based economy with better employment prospects
 - (a) Textile exports
- ② Market Utilization its size & volume
 - (a) Vocal for local campaign.
- ③ Foreign Investment Climate with rise in FDI to \$87 Billion for better incentives.
- ④ Economic growth with incremental production & sales thus a.

Waters cycle is in making

- ⑤ Employment generation in various sectors to adjust 08 million labour force entering each year
- ⑥ Diversify sector for diversification
 - 1) Semiconductor with SPIC Missions
 - 2) Medical device @ parks in Bangalore
 - 3) Defence modernisation
- ⑦ Technology upgradation with the use of IR 4.0 in AI, Machine learning & Blockchain
- ⑧ System improvement in land, labour, dignity (3L) reforms in PLI.
there are still issues prevail due to which industrial growth rate as per IIP is stagnant in 3-4% range.

Issues

- ① Infrastructural deficiency that hampers the growth & logistics.
- ② 14% logistic cost make it less attractive

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- ② Issue in labour law rigidity, land acquisition challenges
- ③ Liquidity crunch with ↑ in NPAs and taxi Balanced sheet problems.
- ④ Folders growth due to Capital-intensive investment against labour-intensive
 - ① FDI in white goods & not in Agriculture
- ⑤ Export Bottlenecks with GST implementation challenges.
- ⑥ FDI Bethevels concentrated in few cities.
 - ① 86% in FDI in only 6 cities.

Way forward

- ① labour reforms with 4 labour codes and E-sarvan portal
- ② PM gati shakti yojna for logistics.
- ③ Tarapore Committee → FDI Reforms
- ④ PPP thrust with National facilitation Centre (single window) - Vijay Kelkar Committee

Need for coherence in strategy to achieve \$5 trillion economy

13

Internationalization of Rupee is the domestic and global usage of Rupee in settling transaction frequently.

It is different from de-dollarisation

de-dollar	Internationalization of Rupee
<p>① Reduces the dominance of dollar currency (88% share)</p> <p>② Against the prevailing order</p> <p>③ Use of local & regional currency like Yuan, Rubble etc</p>	<p>① promote the use of Rupee in our exports & settlement</p> <p>② Birth to new economic order</p> <p>Use of Indian Rupee as far as possible</p>

Benefits of Internationalisation

- ① Reduces our dependency on dollar and Atmanirbhar in presence
- ② India: 23 Credit Swaps with Nations

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- ① Limited issues with respect to forex spending.
- ② External Commercial Borrowing is easy in long Run.
- ③ Increase in FDI and production of goods
- ④ Rise in share of global trade with currently (< 2%) share
- ⑤ Liquidity would reduce; credit issue for different sector solved.
- ⑥ India become an economic giant with better say in World Bank and IMF governance
- ⑦ Economic diplomacy improves.

Challenges

- ① Triffin dilemma
 - Short term local needs
 - vs
 - Long term Global Stability
- ② Vulnerable to external shocks.
- ③ Immune for economic sanctions of USA used as global tool.

- ④ Exchange rate volatility in short and long run.
- ⑤ Infrastructure and settlement system not in place to handle such transition
- ⑥ Issues in Informal nature of economy & limited digitalization.

Way forward

RBI said 3 pronged strategy

- ① Short term → NRI to Open Account in India
- ② Medium → expanding RTGS networks
- ③ long term → ↑ in LDR Basket share in IMF Reserve tranche position
- ④ Regional de-dollarization thrust with EU and UAE FTA's.
- ⑤ Explore R&D in Currency Convertibility as per Tarasore Committee.
Need to study the impact before a full scale rollout.

(19) PACS are Cooperative Bodies at the Panchayat level that provides extension services to farmers with regard to credit, operational knowledge, tool and procurement too.

(20) Bihar PACS has dominated rural economy and politics.

Cooperative push by Government

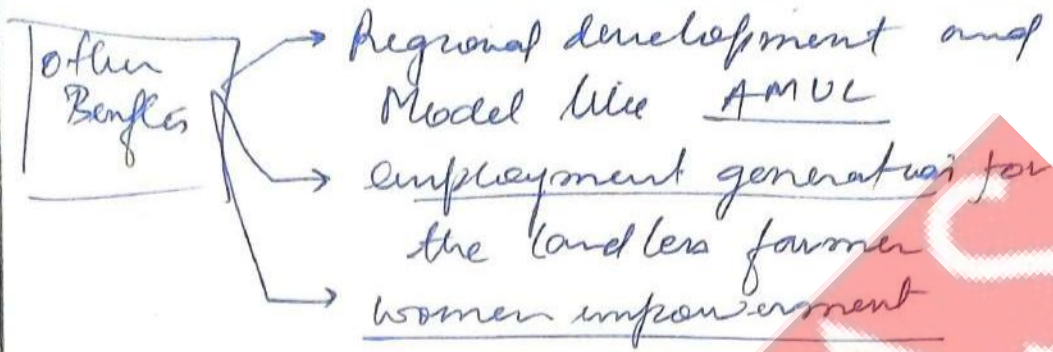
- ① Ministry of Cooperative at National level to streamlining uniform governance and accountability.
- ② Promotion of FPO in Agriculture with target of 10,000 FPOs.
- ③ Lesson learnt & Best practice available from Amul & Sudha Cooperative
- ④ Budget 2023-24 largest Village grain storage scheme led by Cooperative
- ⑤ Cooperative federalism as Cooperative is state Subject (Entry 32).

Cooperative can help in achieving the farm targets

(A) Boosting Rural economy :-

- ① Agricultural extension services via better knowledge & inputs \Rightarrow good yield
 - ② Market information & Bargaining led to good income.
 - ③ Credit and Resource Mobilization for multiplier effect (eg) Jeevika in Bihar (greeneth)
 - ④ Rural development with Infrastructure creation (eg) village storage scheme
- (B)
- Mainstreaming Small & Marginal farmer
- ① Democratization of credit (formal) in rural space
 - ② Transparent & clear governance with accountability
 - ③ Effective contribution; price discovery and equipment sharing useful for small farmer
 - ④ Helps in Saving Rate in Rural poor.

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Issues, Challenges Remains

- ① governance & functioning as cooperatives is state subject - (No Uniformity)
- ② Lack of Transparency & Accountability in functioning (a) Book & Record keeping poor
- ③ Regional Imbalance with growth in west and south & no
- ④ Credit Availability due to Non-adherence to priority sector lending
- ⑤ less participation of vulnerable like women, SC/ST etc

Way forward

- ① Art 19(1)(f): Cooperative being a funda-
-mental Right => Need for digitalization
- ② Best Models like Koderma (Jharkhand)
Cooperative Bank Model can be helpful

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प्रश्न संख्या

15

Farm policies are enacted for better agricultural growth and future planning however, ertain policies may have collateral damages too.

- MSP → led to soil infertility & ground water depletion
- APMC: low price and distress selling.

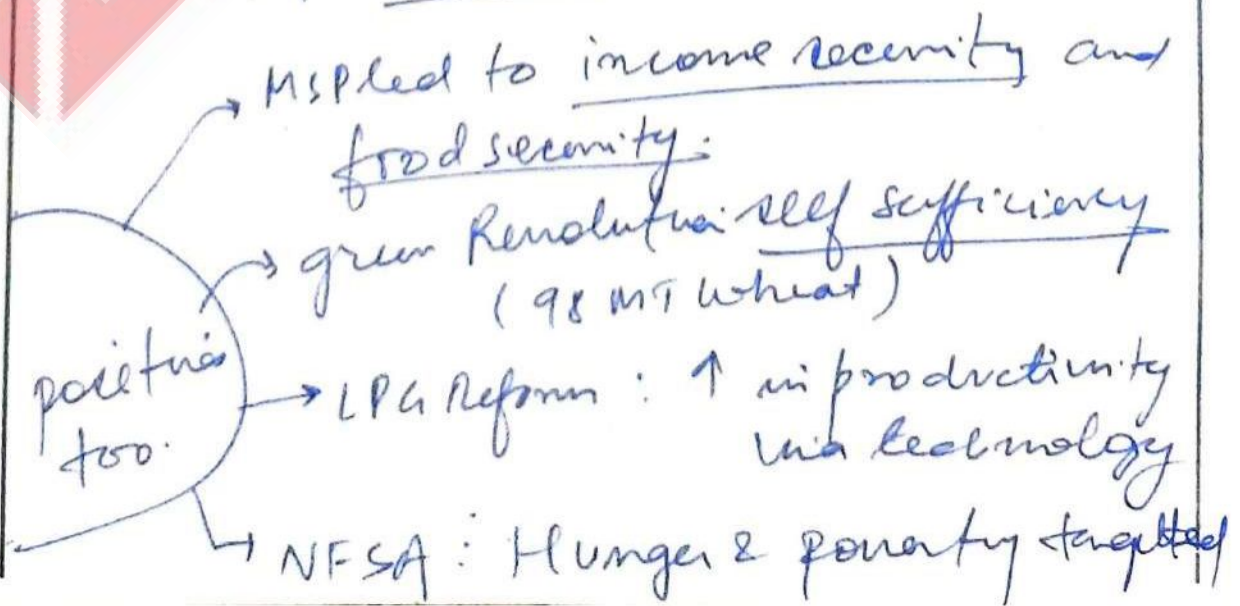
Undesirable consequences

→ green Revolution: Inter-Regional Inequality



→ LPG Reforms: Rise in input cost for Agriculture.

→ NFSA: Rice-wheat monocropping



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In this context, PM PRANAM is launched for organic fertilizer and conservation Agriculture

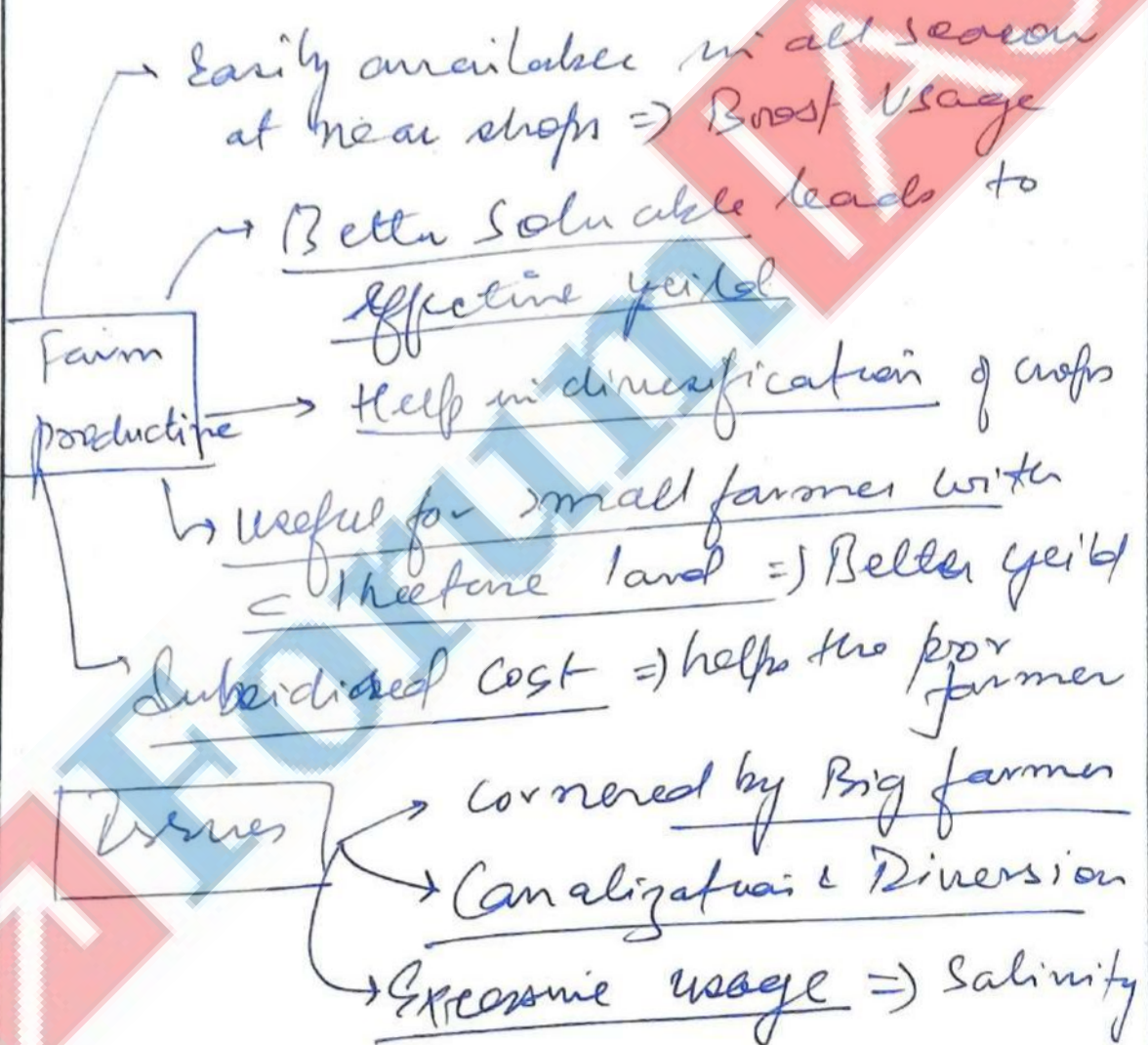
PM-PRANAM

- ① Evolution of organic and green fertilizers
- ② Available at PM KSK (Kisan Samrudhi Kanya)
- ③ Brand "one Nature one fertilizer" to prevent Black Marketing & Hoarding
- ④ Self fulfillment & No import dependency on USA.
- ⑤ Improved the skewed NPK Ratio of 8:3:2:1 against 4:2:1

Enhances soil health

- ① Reducing in Eutrophication and Soil Acidity due to its green and organic Nature.
- ② Easily soluble fertilizer to prevent Bi-Accumulation.

- ③ Improve soil infertility by proper soil Ammendment & Nutrients influx
- ④ Helps in preventing Stubble Burning and Air pollution.



Way forward

- ① Regular inspection as per fertilizer Control order to prevent Hoarding
- ② Awareness via KISAN Kendra

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Heat waves as per IMD definition is the rise in ($4.5^{\circ}\text{C} - 5^{\circ}\text{C}$) above the average temperature

(Hill : $> 30^{\circ}\text{C}$ temperature
 plains $> 37^{\circ}\text{C}$ temperature) \Rightarrow Heat waves.

Types Heat waves \rightarrow Air heat waves \rightarrow as in Summer Season
 Water (Marine Heat waves) seen in Bay of Bengal

Reasons for Heat waves

- ① Climate change with rise in the GHG emissions & global warming
- ② due to seasonal changes with Summer season as potential trigger.
- ③ Marine Heatwave due to Ocean warming and Acidification due to pollution in Water Bodies (y) Harmful Algal Blooms.
- ④ Deforestation in the plains & Hilly

areas reduces the regulation of local climate by forest.

(c) Loos in Uttarakhand & Himachal in Summer 2023.

(5) due to light and heat pollution on the account of excessive industrialization

(g) \uparrow delhi as a gas chamber

(6) Concretization leads to \uparrow in Albedo and rise in terrestrial Radiation that contributes to warming

Measures for Mitigation

(1) NDMA guideline for Heatwaves is divided (Structural & Non-Structural)

Non-Structural

- (1) Zone Mapping of the heatwave for early action
- (2) Mock Drills and Awareness Campaigns for Do & Don'ts
- (3) Doctor Advises Hydration at intervals.

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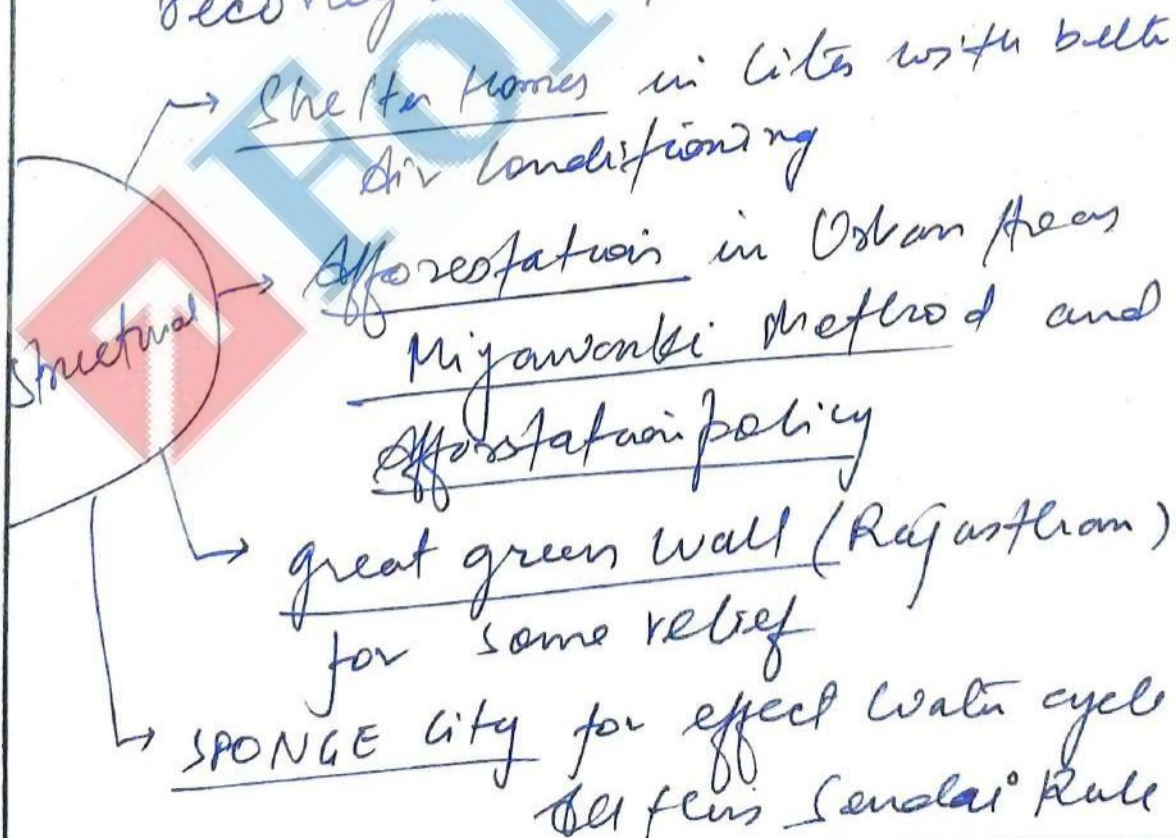
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प्रश्न संख्या



Heat wave Area & effect

- ④ Media control and coordination
- ⑤ National disaster Management plan 2016 for Inter-department coordination
- ⑥ NDMIS (Mgmt info system) and IDRN (Reverse network) for quick movement recovery and response



for disaster Resilience is essential for Build Back Better

(17) Chandrayaan series of satellite has
outline of moon exploration & scientific
analysis for future usages.

Chandrayaan-3

Landing Area is
larger with 410m x 210m

(2) Strong legs to land
at rough terrain

(3) "Failure Based
design" to prevent
failure at different
stages & parabolic

(4) Solar panel extra
for good energy

(5) More fuel for
before for greater
Manoeuvre & Movement

(6) Only lander and
Rover module.

Chandrayaan-2

Smaller with
500m x 300m

weaker previously.

Success Model for
better landing in
South pole of
Moon

Reduces panel for
less weight

less fuel.

lander Rover and
Orbiter too.

Apart from this Chandrayaan-3 we have learnt our lesson from failure.

India's presence in Artemis Accord

- ① Would help in further exploration of the lunar surface and knowledge sharing
- ② Chandrayaan-3 ^(C-3) objective of soft landing would be useful in collaboration in Artemis.
- ③ C-3 exploration with Moon South pole which is a cold place with limited interference can unravel earth history and Chinese history
- ④ Useful for Mineral exploration and water Availability testing in the lunar surface
- ⑤ Strategic importance with space asset and preventing the

Weaponisation of space and other issues

⑥ Artemis accord would promote

↳ Better global collaboration,
support for lunar study

↳ Could be used in our
space missions.

↳ expanding lunar &
space sector to private
players in future.

Helpful for our Space policy, 2023
and PPP (INSPACE & NSIL).

way forward

① Space- Association for Raising
Capital investment (currently only 2%
of the global total)

② Space policy with clarity on
Roadmap & Risk-Sharing

③ Promoting Startups like COSMOS.

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Knowledge economy is one in which the Research and Innovation are integral to the growth and development of the nation.

Research and development is the key

- ① IPR protection to prevent Brain drain and thus skilled manpower
- ② Improve the employability as per India skill Report only 46% engineer employable
- ③ Leads to social and inclusive growth with trust on Scientific Social Responsibility and Social development
- ④ Using India as a the Knowledge Capital with increasing share in innovation
- ⑤ Large IT professionals in the Silicon Valley.
- ⑥ Remittances of skilled people in various

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social & economic development

⑥ In R&D is in line with vision of National education policy 2020 for Atmanirbhar Bharat

⑦ R&D essential for Semi-conductor and service sector like Medical service park.

⑧ Useful in Endeavour for ICET and Indo-USA Technology diplomacy for future economic needs.

⑨ Regional leadership in South Asia
 (a) South Asian Satellite.

low R&D : 0.6% of GDP as compared to 3% globally

only 5% skilled force with Korea 95% USA = 70%

Challenges Remaining

→ lack of Regional literature in Science.

→ only 1500 crore spent on Scientific Journal.

→ Issue of rote-learning in education

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The Goal of National Research Foundation Bill (NRF) 2023 is of utmost importance.

- ① Expanding the credit and Capital access
Very low private investment
- ② Women participation in STEM areas
for democratisation.
- ③ Critical infrastructure across the geography
in various IIT / IIM / NIT for greater
Coverage.
- ④ NRF a dedicated Body for handling
and Regulatory purposes.
- ⑤ One Nation one Subscription to increase
the patients & trademark filling in India
- ⑥ Collaborative Research Cell (CRC) for
sharing and knowledge transfer.

Way forward

- ① Need for a dedicated body for
governance like HEFA / UGC
- ② Promotion of early age via
INSPIRE Scheme.

(18)

Hybrid warfare is a term to signify the different module / methods used to target our enemies.

(g) use of cyber-attack
physical-attack
economic blockade

hybrid warfare

different methods ranging from economic; social, tech mology or diplomatic

Hybrid warfare at glance

Pakistan ideology of "Bleed India with thousand wounds"

China Wolf-warrior diplomacy

Chinese attack on Nuclear cyber Network

Pakistan ISI Module Radicalization Insurgency in North East and Terrorist attack (state sponsored)

use of space; cyber; water and Social Media for one's interest

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Implications for India

Negative implications

- ① Disruption of communication & critical infrastructure (eg) Nuclear power plant
- ② Disruption in socio-religious harmony (eg) Riots in J&K
- ③ Insurgency and infiltration from the porous border lead to drug trafficking, arms & communication
(eg) Uda funjals Mome on cross border drug attack by Pakistan to weaken youth
- ④ Diplomatic & global sidelining with attacks on India core-principle
(eg) Seen in Khalistan issue
- ⑤ Regional & secessionist tendency with Anti-National Sentiments
(eg) UFA and Boko Militant kyisi
- ⑥ Refugee attack (eg) Rohingyas.

② Economic slowdown with
China dumping rare minerals in future

⑧ space weaponisation with ASAT missiles

Comprehensive ecosystem

① Economic self sufficiency and supply chain

(a) Supply chain Resilience initiative
against China order (SCRI)

② Social Capital in population to prevent
riots & disharmony

(a) Vigilance on social
media

Bonding
Bridging
Linking

③ Defence improve

↳ ↑ in cost of war for Pakistan

↳ ↑ in Tooth-Tail Ratio for

India as per Shelkar Committee

↳ CDs & Cold Start doctrine take

↳ laws: Inter-services Act & Integrated Command

④ diplomatic strengthen with strategic
alignment.

Need for 'India first' belief

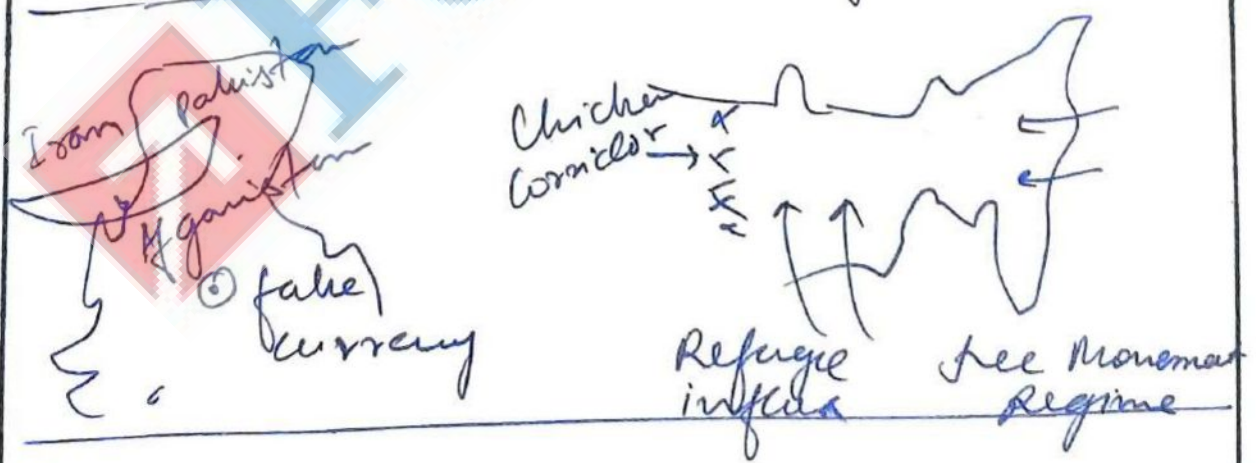
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India's internal security is dependant upon the 14500 km land Border and 7500 km Coastline.

They are related to Neighbouring Countries

- ① Insurgency in the North East is due to the issue of Indo Myanmar Maoist challenge.
- ② Free Movement-Regime leads to drug, Arms, HUMAN trafficking
- ③ proximity to Golden triangle & rescent make us vulnerable to organised crime

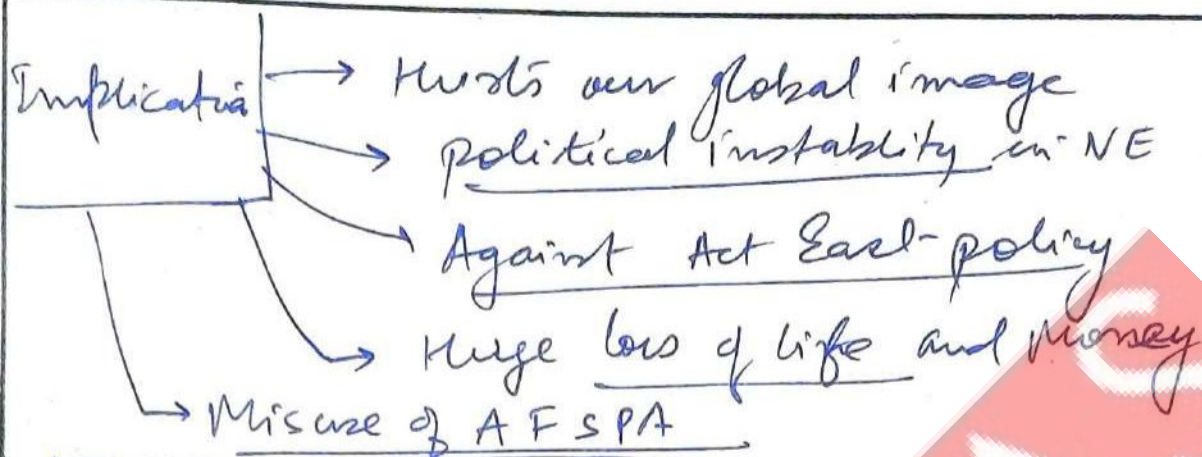


④ Chirchik Corridor : with Chinese adversary has potential to cutoff Mainland.

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प्रश्न संख्या

- ⑤ Refugee infiltration and Radicalization
in Bangladesh youth leads to
ULFA Bombing & Insurgency in Assam
- ⑥ Dictatorship & Military rule in Myanmar
lead to rise in Armed Rebel in
Border Areas (c) Rohingya influx
and security
- ⑦ Nepal animosity and Anti-India
feeling lead to illegal Border crime
and fake currency racket
- ⑧ Nepal economic blockade and Anti-
India feeling led to terrorist infiltration
and training camps.
- ⑨ Urges in Pakistan and its youth led
to attack in J&K.
- ⑩ China expansionist ideology has
led to Brahmaputra floods; Support
to Anti-India groups.



Step taken -

- ① Security → Integrated check post and Comprehensive Border Mgmt (CIBMS)
- use of drone to monitor
 - Social Media surveillance by IB

② Perception & peace

① political participation @ BODO Pact

② Bezbarrouh Committee for NE

Media & grievance Redressal

⑤ AFSPA Resolve it.

③ Development

① Infrastructure: Vibrant village scheme

② employment: Skill → Nai Proshini

④ Joint effort with operation All-out

North east is essential for our Act East policy and development is the way forward