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GENERAL STUDIES (TEST CODE : 1515)

Name of Candidate	SURBHI SINGHA		
Medium Eng./Hindi	ENGLISH	Registration Number	227299
Center	ORN	Date	02/12/2021

INDEX TABLE			INSTRUCTIONS
Q. No.	Maximum Marks	Marks Obtained	
1	10		1. Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
2	10		उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न-पत्र कोड, विद्यार्थी क्रमांक आदि)।
3	10		2. There are TWENTY questions printed in ENGLISH & HINDI
4	10		इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं।
5	10		3. All questions are compulsory.
6	10		सभी प्रश्न अनिवार्य हैं।
7	10		4. The number of marks carried by a question/part is indicated against it.
8	10		प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
9	10		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.
10	10		प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न-सह-उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
11	15		6. Word limit in questions, if specified, should be adhered to.
12	15		प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
13	15		7. Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.
14	15		उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।
15	15		
16	15		
17	15		
18	15		
19	15		
20	15		
Total Marks Obtained:			
Remarks:			

16-B, 2nd Floor, Above National Trust Building, Bada Bazar Marg, Old Rajinder Nagar, Delhi-110060

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

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

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

All the Best

1. Explain the meaning of off-budget borrowings and its role in helping the government raise funds for various expenditures. Also, comment on its desirability. (150 words) 10

बजटेतर उधारी (ऑफ-बजट बॉरोइंग्स) का अर्थ स्पष्ट कीजिए और विभिन्न व्ययों के लिए धन जुटाने में सरकार की सहायता करने में इसकी भूमिका का उल्लेख कीजिए। साथ ही, इसकी वांछनीयता पर टिप्पणी कीजिए।

off-budget borrowings refer to government borrowings not accounted in the budget or fiscal deficit. These are borrowed by government agencies | PSUs from the market | other innovative sources.

eg) FCI's borrowings from market

Role in helping government raise funds

1) enhance fiscal space of the government:-
as off-budget borrowings are not accounted in FD.

2) Diversify sources of funding as:-
FCI's borrowings from market, bonds etc.

3) Allow credit ratings to not get affected by increased borrowings

4) keep separate the debt of government from its agencies | PSUs.

However, desirability of off-budget borrowings have been questioned & criticized as:

- 1) Reduced transparency in government's fiscal policy. While a fiscal deficit for 2017-18 officially was ~3.5%, actual: ~6% (CAG)
- 2) Violating FRBM timelines through manipulative innovation. & FDIs
- 3) Escaping Parliamentary scrutiny, as borrowings under budget are scrutinized by Parliament while off-budget borrowings are not.

Way forward:

15th Finance Commission recommended the government to do away with off-budget borrowings for increased transparency & accountability. Strengthening bond market could be an alternative to fund needs.

2. It is argued that genetically modified food crops are required to ensure food security of India. Examine in view of concerns regarding introduction of GM crops. (150 words) 10

यह तर्क दिया जाता है कि भारत की खाद्य सुरक्षा सुनिश्चित करने के लिए आनुवंशिक रूप से संशोधित खाद्य फसलों की आवश्यकता है। जी.एम. फसलों की शुरुआत से संबंधित चिंताओं के आलोक में परीक्षण कीजिए।

Recently, GM food crops draw attention as shipment Indian-origin food shipments in EU were found to violate GM-content percentage.

Genetically modified food crops are those in which modifications are introduced in genes to enhance certain qualities - shelf-life, pest-resistance, yield etc. [eg]: Bt-cotton
pest resistant

GM crops for food security

- enhanced crop yield.
- enhanced resistance to pests & diseases. [eg] Bt-cotton against bollworm
- enhanced nutritional value [eg]: Golden Rice
- enhanced resistance to climate variations. [eg] GM-mustard
- Resistance to pollutants in environment [eg]: Mukto Shri against arsenic in water

Despite above benefits, they are cause for concern as:-

~~1) lack of sufficient data~~

1) environmental:

a) lack of sufficient knowledge about effects on other crops

b) effects on ecosystem, water bodies

2) Health:

a) effects on human health not known.

3) economic

a) concerns around terminator seeds & their cost-effectiveness for farmers

b) Alleged higher seed-replacement ratio.

4) Sustainability

a) May increase antibiotic resistance in environment.

there is need to set up a dedicated committee for greater research of effects of GM crops in environment before their introduction.

3. India's price intervention policies to support its agricultural sector not only create a broken system but also complicate matters related to international trade rules. Critically discuss. (150 words) 10

अपने कृषि क्षेत्र का समर्थन करने के लिए भारत की मूल्य हस्तक्षेप नीतियां न केवल एक अप्रभावी व्यवस्था का निर्माण करती हैं बल्कि अंतर्राष्ट्रीय व्यापार नियमों से संबंधित मामलों को भी जटिल बनाती हैं। समालोचनात्मक विवेचना कीजिए।

Agriculture sector provides employment to ~45% population & is crucial to India's food security. Thus, numerous price interventions exist to support the sector :-

- (A) ~~Direct~~ Direct benefit transfer to farmers: [eg]: PM-KISAN
- (B) Guaranteed crop procurement at pre-decided prices [eg] MSP, PM-Aashu
- (C) Material support. [eg]: Subsidized electricity, water supply, fertilizers, seeds etc

Impact of Price Interventions:

- (A) create a broken system:

1.) ~~that~~ MSP procurement etc hinders free development of markets

2.) ~~the~~ distortionary effects of MSP:

- increased area under rice-wheat systems
- reduced growth of pulses, millets.

3) environmental

- water-gulping nature of MSP crops
→ reducing groundwaters tables
in Punjab Haryana
- increased pesticide & fertilizers
use ⇒ run-off ⇒ polluted water
bodies

4) Hinder private investment due to
APMC monopoly, ECR restriction etc.

(B) complicate international trade rules
matters

- 1) WTO's Agreement on Agriculture demands
to restrict distortionary Amber Box
subsidies to 10% of production levels
- 2) India's invocation of Bali Peace Clause for its support measures
recently drew concern

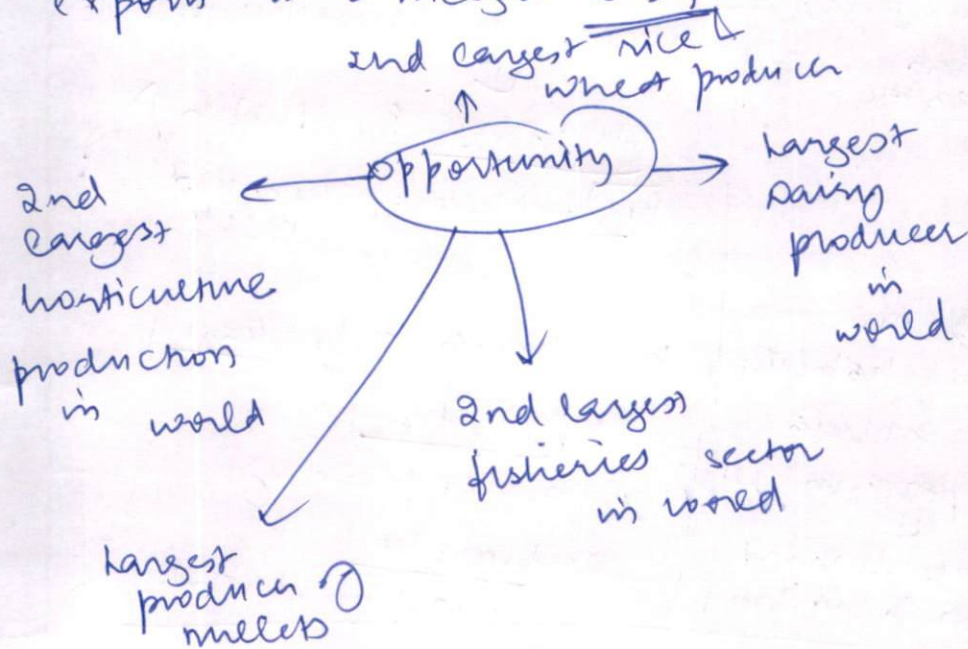
Way forward:

- 1) Inclusive nature of subsidies:
- Across crops (es: PM-Aashu)
- Across regions (Es: Majority rice
procurements at MSP
from Punjab,
Haryana)
- 2) Shift away from price-support to
direct transfers as under PM-KISAN

4. India has an opportunity to become a leading global food supplier provided it has an efficient supply chain and the right marketing strategies. Elucidate. (150 words) 10

भारत के पास एक अग्रणी वैश्विक खाद्य आपूर्तिकर्ता बनने का अवसर है बशर्ते उसके पास एक कुशल आपूर्ति श्रृंखला और सही विपणन रणनीति हो। विशदीकरण कीजिए।

Despite being among countries with largest area under agriculture India's contribution to global agriculture exports is a meagre 2-3%.



Realizing that Despite above opportunity,

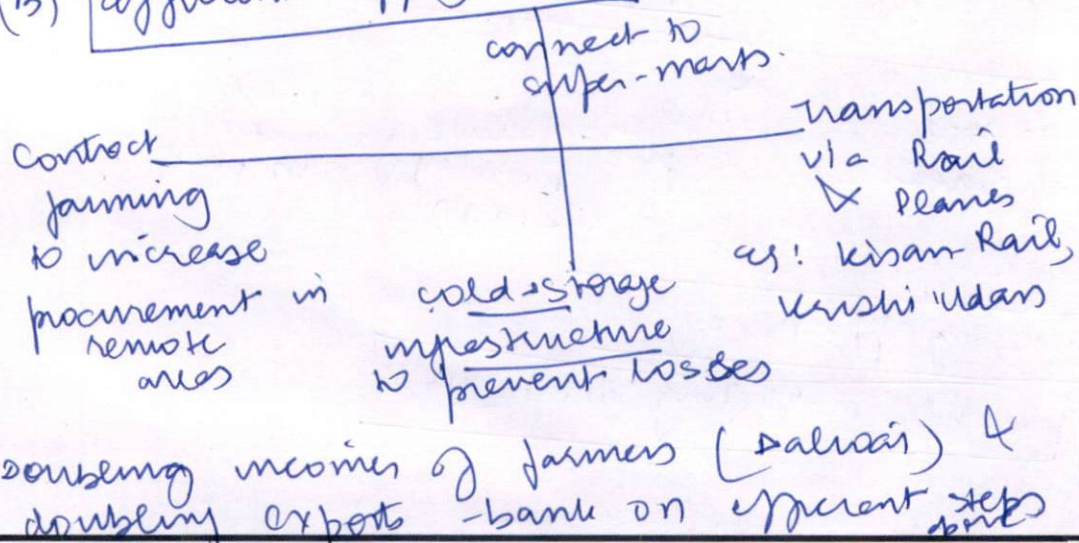
- high food wastage
- low exports
- low income of farmers (<10%)
- low farmers income

Realizing opportunity:

(A) Right marketing strategies :-

Current Challenge	Right marketing Strategy
1) Informal nature of production	<u>standardized quality</u> checks & <u>standards</u> (FSSAI under QCI, APEDA) ⇒ increased <u>brand value</u>
2) low shelf-life, high wastage	Investments in food processing infrastructure ↓ <u>shelf life</u> ↑, profits ↑ [eg]: Milk ⇒ <u>summed milk</u>
3) low reachability [eg]: Indian diaspora in USA ↓ huge demand for local food	Investments in <u>packaging</u> ↳ <u>advertising</u> ⇒ better reach of <u>Indian food</u> to <u>Diaspora abroad</u> .

(B) efficient supply chain



5. Land banks are increasingly gaining prominence in India to encourage land-use efficiency and enable economic growth. In this context, discuss the benefits of a land bank and state the concerns associated with it.

(150 words) 10

भूमि उपयोग दक्षता को प्रोत्साहित करने और आर्थिक वृद्धि को सक्षम बनाने के लिए भूमि बैंक भारत में तेजी से प्रमुखता प्राप्त कर रही हैं। इस संदर्भ में, भूमि बैंक के लाभों तथा इससे संबंधित चिंताओं का उल्लेख कीजिए।

Land Banks refer to ready-to-use land parcels with pre-clearances & regulatory approvals. DPM recently finalized proposals for a Land Bank Company to streamline a bank.

Benefits of Land banks :

Land Banks (A). Better land use-efficiency :

- a) unused government land brought to use
- b) ~50% land in SEZs lying vacant $\Rightarrow$ better use.

(B) enable economic growth.

(B.1) ease of doing business :-
through pre-cleared lands.
(B.2) starting business

(B.2) enhances investments in India
by avoiding disputes like Vedanta
mining in Orissa

B37 ~~to~~ Reduce inordinate delays
in allotment

(c) Other Benefits:

(1) transparency in land allotment

⇒ reduced corruption

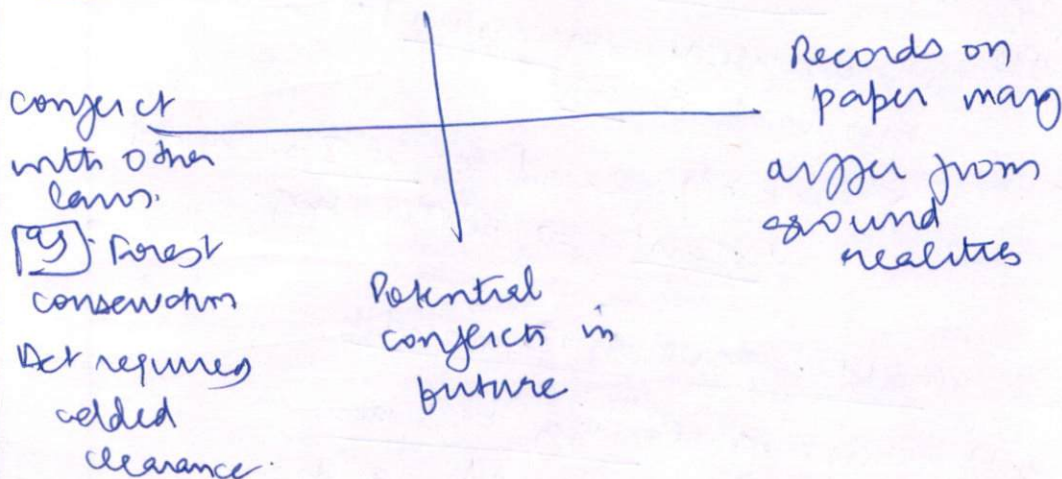
(2) consolidation of land ⇒ better
use [eg]: for Allotment for SCs.

(3) Informed decision-making.

[eg] Records of land-bank ⇒

investors can make informed decisions
on investment site.

Concerns



There ~~is~~ there is need for proper-implementation
with involvement of all stakeholders -
to use ~~also~~ prevent future conflicts &
utilise potential of India's vacant land assets

6. Desertification has been described as one of the greatest environmental challenges of our time and climate change is making it worse. Discuss.

(150 words) 10

मरुस्थलीकरण को वर्तमान समय की सबसे बड़ी पर्यावरणीय चुनौतियों में से एक के रूप में वर्णित किया गया है तथा जलवायु परिवर्तन इसे और बदतर बना रहा है। चर्चा कीजिए।

India hosted 14th conf to UN Convention on Desertification which brought to light concerns & challenges around desertification.

Nearly 30% of India's land is undergoing desertification.

Desertification: An environmental challenge

1) Loss of biodiversity: supported by land. [eg]: Himalayan biodiversity eroding due to desertification.

2) Reduced ground-water recharge due to tree-loss ⇒ water challenge aggravating.
[eg]: Chennai → Terracy

3) Greater vulnerability to natural disasters [eg] Mangrove loss ⇒ reduced buffer against cyclones

4) Other challenges

Food security livelihood losses
for farmers, nomads

Climate change: exacerbating
Desertification

1) increased frequency of droughts & floods

[eg]: Central & Western India becoming
dryer.

2) enhanced frequency of natural disasters

[eg]: last decade witnessed most
number of severe cyclones in SO
region

3) wildfires risk increasing
[eg]: Australian bushfire, 2020
due to dry a drier year.

4) Oceans warming + changed wind
patterns → dry winds in some
regions
→ wetter in other

↓
Restriction to natural
moderation

Way forward:

1) climate resilient planning approaches
[eg]: India's NAPCC.

2) enhanced impetus to reforestation
which via locally-sourced trees

3) fulfil commitments to UNCCD
India's commitment to restore 2.5 mn ha of trees
→ great step forward

7. In the context of intellectual property rights, discuss the advantages and disadvantages of releasing projects under an 'Open Source' license.

(150 words) 10

बौद्धिक संपदा अधिकारों के संदर्भ में, 'ओपन सोर्स' लाइसेंस के तहत परियोजनाओं को जारी करने के लाभ और हानियों पर चर्चा कीजिए।

Intellectual property rights provide protection to innovation in products, processes etc - to incentivize investments & output in innovation. India's IPR Policy provides overarching framework for same.

'Open source' license refers to making innovations public at no cost to all.

Advantages:

1). Enhanced public welfare - as more companies & processes can use the innovation to benefit public

eg: Smoking open source smokeless chulhas → Reduced indoor air pollution

2). Reduced cost of new & cutting-edge technologies. eg: Vaccines

3). Impetus to further innovation based on open source. eg: Crispr-cas

innovation acts a base for many
bio-tech innovations in future

- 4) Increased brand value of company
→ sustainable profits & markets for
future products.

5) Disadvantages

- 1) Possibility of misuse by miscreants
for harm to humanity.
eg. cyber-trojan using
open source software
- 2) May harm profitability as initial
R&D may not get compensated
- 3) May hamper incentives to innovate
in future.

Way forward

- 1) Patent pools - can be a viable
mid-way b/w open source &
closed-source & IPRs.

- 2) compensation & financial help from
government may improve viability,
as under compulsory license

There is need to balance rights of patent
producers with public welfare for sustainable
innovations.

8. "Indian space sector has been dominated by a single umbrella of government and government institutions." In light of the statement, discuss the significance of Indian Space Association in providing an impetus to space technology in India. (150 words) 10

"भारतीय अंतरिक्ष क्षेत्र पर सरकार की एकमात्र संस्था का प्रभुत्व रहा है।" इस कथन के आलोक में, भारत में अंतरिक्ष प्रौद्योगिकी को प्रोत्साहन प्रदान करने में भारतीय अंतरिक्ष संघ के महत्व की विवेचना कीजिए।

Recently, announcement of ISIL & in space for private as a step towards privatisation of India's space initiative drew attention to the current public-dominated setup.

Current setup: Dominated by Government

- 1) ISRO : only major organisation launching India's space initiatives for past many years [eg]: GSTV-Mark 3
- 2) DRDO - Defence & space research & launch of mission. [eg]: Ari-Dome
- 3) Private sector satellite launches are mostly micro-satellites contributed by university students
- 4) In countries like USA, SpaceX is playing a major role.

Significance of Indian Space Association

- 1) ISA - is an association of industry bodies & companies to spearhead space initiative. Significance:
- 1) Policy Advocacy to enable ~~set~~ favourable ~~setup~~ for private participation
- 2) leverage synergies & complementarities between private partners.
- 3) enhance capacity of private sector through inputs in advanced technology
- 4) coordinated effort to leverage economies of scale

Other initiatives

- 1) In-Space : As government agency to increase role of private sector
 - 2) NSIC - to enhance capacity of private sector in space participation
- Indicates Space initiatives have cross-utility advantage on overall socio economic progress, & promote innovation

9. Man and machine both have an important role in national security and making urban areas secure. In this context, discuss how technology is a major stakeholder in addressing the internal security challenges of India.

(150 words) 10

राष्ट्रीय सुरक्षा और शहरी क्षेत्रों को सुरक्षित बनाने में मानव और मशीन दोनों की महत्वपूर्ण भूमिका है। इस संदर्भ में, चर्चा कीजिए कि प्रौद्योगिकी किस प्रकार भारत की आंतरिक सुरक्षा चुनौतियों से निपटने में एक प्रमुख हितधारक है।

Globalization & 4th IR have given rise to new & complex forms of internal security challenges - calling for harmonious mix of both man & machine to combat them.

Technology: A major stakeholder in internal security :-

- 1.) Reaching terrains where man can't :-

Ex Ladakh's cold desert,
Siachen Glacier's unfriendly weather

⇓
Drones, smart walls as envisaged under CIBMS

- 2.) Intelligent inputs to stay ahead.

Ex:- AI-based data analytics to identifying deep fakes

3) New & advanced forms of weapons
to deal with complex threats
eg: Air Dome protection to
NCR region against drones

4) Digital monitoring of surveillance
to pre-emptively identify threats.
eg: CCTV-based surveillance

5) Updated cyber infrastructure - such as
attack-proof internet connections -
against cyber security

Way forward to promote technology

→ Role of private sector, through
Strong IR
regime PPP-
models

→ Data security & privacy to leverage
digitalization

→ training of intelligence agencies in
new technology. $\leftarrow$ AI
Big data

Pro-active steps are the best remedy
to security-related threats. Technology
can act as extended eyes

10. National Security Guard (NSG) has emerged as a formidable force equipped to handle various manifestations of terrorism. Discuss the mandate and achievements of this force. (150 words) 10

राष्ट्रीय सुरक्षा गार्ड (NSG) एक पराक्रमी बल के रूप में उभरा है जो आतंकवाद के विभिन्न रूपों से निपटने के लिए सुसज्जित है। इस बल के अधिदेश और उपलब्धियों की विवेचना कीजिए।

National Security Guard is a specialized agency to tackle advanced forms of terrorism in India.

Mandate of NSG

- 1) Coordinated effort against terrorism in India.
- 2) Investigation & intelligence inputs for terrorism & threats
- 3) Specialized trained manpower for specific threats

Achievements

- 1) Pro-active steps in preventing many terror attacks in India.
- 2) Immediate response to big threats like 26/11 - to reduce damage to life & property.

3) Upgraded technology to enhance
India's ability to tackle terrorism.

4). A specialized & trained counter-
terrorism task force to coordinate
efforts.

Reasons:-

→ Funding
for
advanced
weaponry

→ coordination
with other
agencies
like C.B.
etc.

→ Lack of
awareness
about
advanced
methods.

(eg): cyber
terrorism

Way forward:

Counter-terrorism is crucial to India's
~~be~~ internal as well as external
security.

Addressing terrorism through
partnerships (Israel & Russia) as well
as private sector's involvement are
needed.

11. What do you understand by asset monetisation? Why is it needed in India? In this context, discuss the issues that need to be addressed for the National Monetisation Pipeline to succeed. (250 words) 15

परिसंपत्ति मुद्रीकरण से आप क्या समझते हैं? भारत में इसकी आवश्यकता क्यों है? इस संदर्भ में, उन मुद्दों पर चर्चा कीजिए जिन्हें राष्ट्रीय मुद्रीकरण पाइपलाइन के सफल होने के लिए समाधान करने की आवश्यकता है।

Recently, Government of India announced National Monetization Pipeline for asset monetization. Asset Monetization refers to deriving value from public assets through means such as

- leasing (TOT model)
- selling dysfunctional assets
- PPP
- Inv/1st ck

Need for asset monetization in India

- 1) Harnessing the potential of public infrastructure lying idle. [eg]: less used airports, roads
- 2) Financing our massive infrastructure needs for socio-economic development
(Need for ~600 lakh infra by 2025-26, ES)
- 3) Promote the private sector as well as ease of doing business - through access to

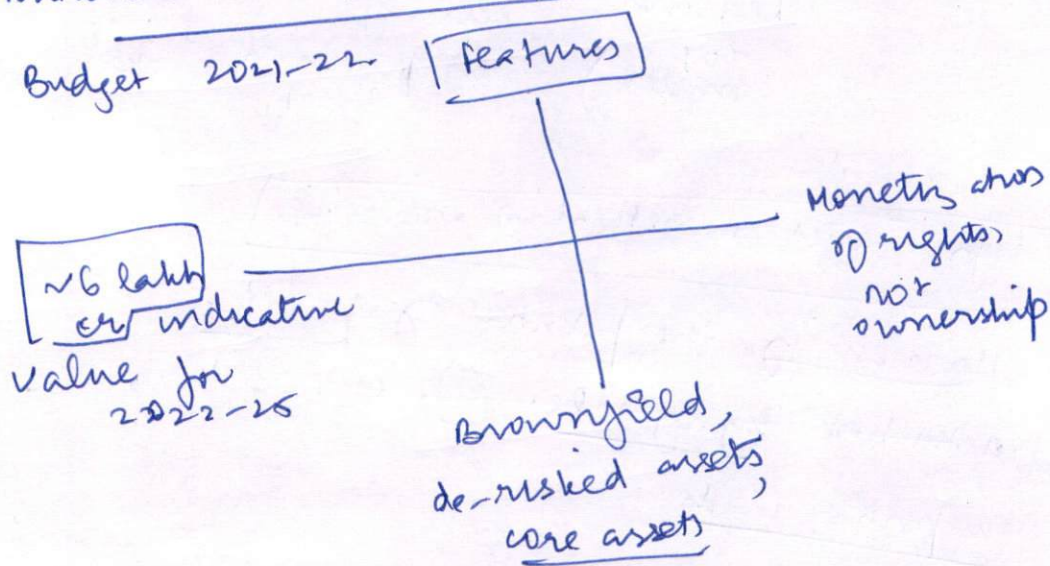
infrastructure at affordable prices.

4) Balanced regional development - through assets in backward, remote areas.

5) creation of new, efficient assets. ex: ~~Private~~ Minor airports in India - private owned - perform better

on above context, India launched the National Monetization Pipeline announced in

Budget 2021-22



Challenges in implementation

1) valuation of assets - has to be transparent & based on detailed analysis. [ex: ES pointed sell of public assets at lower value]

2) Attracting potential investors for

assets is a challenge - due to negative sentiment. [eg]: PPP Disinvestment bids recently of Air India etc saw low key response

3) low financial viability of many public assets [eg]: Power-sector infrastructure

4) Poor record in contract enforcement & dispute resolution [eg]: Cairn India & Vodafone cases

5) Asset-specific challenges:

- (i) Power sector: regulated tariffs
- (ii) National highway: < 1 lane

Way forward:



Asset monetization can help realize our target of \$5 trillion economy by 2025 & finance our massive infrastructure needs.

12. What is social stock exchange (SSE)? Discuss the need for setting up of SSEs and key challenges in their effective implementation. (250 words) 15

सोशल स्टॉक एक्सचेंज (SSE) क्या है? SSEs की स्थापना की आवश्यकता और उनके प्रभावी कार्यान्वयन में विद्यमान प्रमुख चुनौतियों पर चर्चा कीजिए।

Social stock exchange was recently announced as part of Budget 2020-21; or refers to ^{a stock} an exchange platform to enable funding for enterprises with social benefits.

Need for setting up of SSEs:

1) Financial:

- a) As per govt estimates, there are ~31 lakh NBOS in India. Very few of them have access to funding.
- b) Increased diversifying for investors looking to invest in social enterprises.

2) [Social]:

- a) NBOS & civil society organisations act as arms of the government, extending social services. [Ex]: role played in ration delivery during COVID.

b) Access to funds via SSE can enhance reach & impact

3) Administrative

a) increased transparency through information of NGOs in public domain.

b) Reduces burden on government for funding social enterprises.

4) Outcome-based funding

Challenges in effective implementation:-

1) Measuring social impact is a different task with complex variables.

2) Poor financial viability of social enterprises may lead to poor response rate on SSEs.

3) Monitoring fraudulent NGOs/enterprises & timely removal.

[Es]: use of proxy NGOs for political funding

4) Lack of standardization w.r.t NGOs & social organizations in index.

5) Monitoring foreign funding into India. By: Report on foreign funding of 200 NGOs to create dissuade in India.

6) Training & capacity building of social enterprises to utilize funding to deliver outcomes.

Way forward:

- 1) Accreditation & common standards of service delivery
- 2) Allow only registered NGOs with FCRA ^{audit report} compliances on SSE
- 3) Proper tax & other incentives to investors

Utilizing SSE effectively can help realize SDGs with civil society as equal partners in growth story

13. In the context of India, highlight the importance of agriculture extension. What are the challenges faced in provisioning of agriculture extension services? How does the National Mission on Agricultural Extension & Technology (NMAET) address these issues? (250 words) 15

भारत के संदर्भ में, कृषि विस्तार के महत्व पर प्रकाश डालिए। कृषि विस्तार सेवाओं के प्रावधान में सामना की जाने वाली चुनौतियां कौन-सी हैं? कृषि विस्तार और प्रौद्योगिकी पर राष्ट्रीय मिशन (NMAET) इन मुद्दों का कैसे समाधान करता है?

Agriculture extension services refer to information & education as well as other supporting services to farmers to help enhance agricultural productivity & efficiency.

[eg]:- mKisan - mobile-based information

Importance of extension services:

1.) correct information asymmetry to help make informed decisions on crops [eg]: mKisan - to inform about climate varieties

2.) Inform about new technologies in agriculture to increase productivity [eg]: Hybrid-seed varieties, mechanization

3.) Support correct decision making with

use of agricultural inputs.

[eg]. Soil health cards - optimum use
of fertilizers, water, pesticides

4). Better price realization through
improved access to markets, prevailing
rates etc [eg] ITC's e-choupal ⇒
better farm incomes.

challenges in provisioning extension services

1) Infrastructural :

a) lack of internet services in remote
rural areas.

b) lack of access to devices with
farmers

2) low expenditure financial

a) low expenditure on R&D in
agriculture ⇒ poor intelligence
available. [eg]: ~~low~~ region-wise
impact of climate on crops.

3) Administrative.

a) lack of a dedicated authority with
mandate to enhance quality of

extension services

4) other

- poor literacy rate among farmers
- low human research : lack of interest of youth in agri education.

National Mission on Agricultural extension services:

1.) Bridge infrastructure gap through appropriate technology at farm level.

2.) New methods of information dissemination based on outreach & interaction

3.) Capacity building in agriculture sector

4.) Strengthen institutions to deliver services, promote mechanization

5.) Dedicated R&D on seed varieties, climate resilient - for improved inputs

NMESA, complemented with increased R&D in agriculture can help achieve goal of doubling farmers' income by 2022

14. Clearly delineate the 'employment problem' that India currently faces. Also, explain the fundamental reasons behind existence of this problem. (250 words) 15

भारत वर्तमान समय में जिस 'रोजगार समस्या' का सामना कर रहा है, उसे स्पष्ट रूप से निरूपित कीजिए। साथ ही, इस समस्या के अस्तित्व के मूल कारणों की व्याख्या कीजिए।

Recently released PLFS-report of 2020 reports an unemployment a high unemployment rate of $\sim 14.8\%$ of for India.

India's employment problem:

- 1) large unemployed youth in the country. PLFS 2017-18 : $\sim 7.1\%$; highest in 3 decades
- 2) skewed against gender justice ideals as LFPR of males is higher than females. (female LFPR $\sim 30\%$, saw decline in recent years - (ES 2020-21))
- 3) Informal nature of employment. $\sim 90-1\%$ of India's workforce is employed in informal sector
- 4) Temporary, contractual nature of

employment-

Ex: Rise of new sectors like cris
economy, Platform workers.

5) Lack of social security net for major
portion of India's workers.

6) skewed in favour of non-manufacturing
sectors - Ex: Agriculture: ~45%
of India's workforce

Reasons behind India's employment
problem.

1) Structural:

a) services sector led growth since
Lib reforms

b) employment-intensive manufacturing
sector lags in growth

c) Agriculture still dominates India's
employment share, while contributing
little to output. (~45%)
workforce, (~10%) output

2) Supply-side ~~core~~ issues:

2) Lack of skilled workforce.

a) K2J of India's workforce is formally skilled.

2.2) skill India Report 2020 : Only ~40% of India's youth is employable

2) b) RIS
a.3) Lack of vocational skills certification.

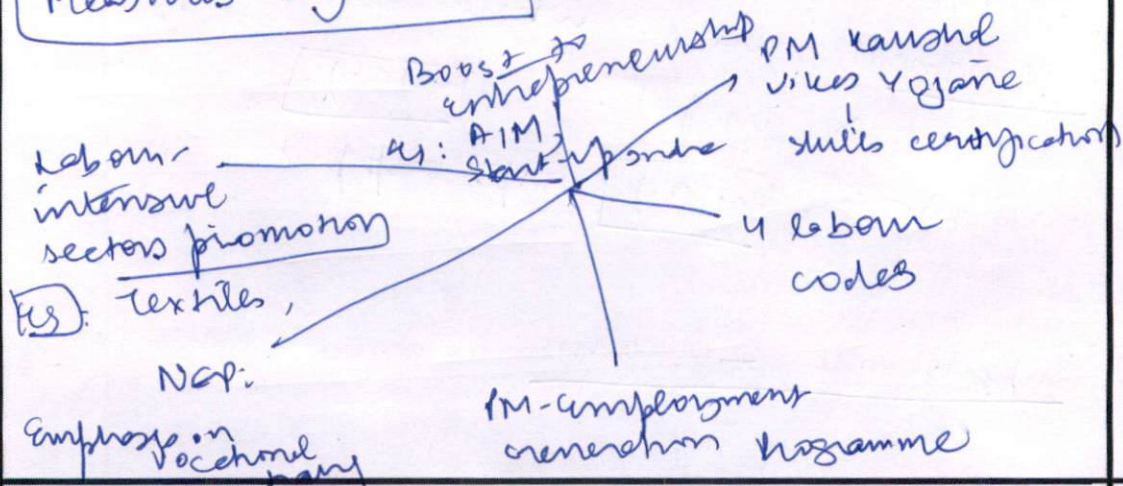
3) Demand side challenges

a) labor market rigidities - disincentive employment generation - 45-2019-20

b) Rise of disruptive technologies - like AI, Big Data $\Rightarrow$ job losses

c) Impact of global slowdown in wake of COVID pandemic

Measures by India

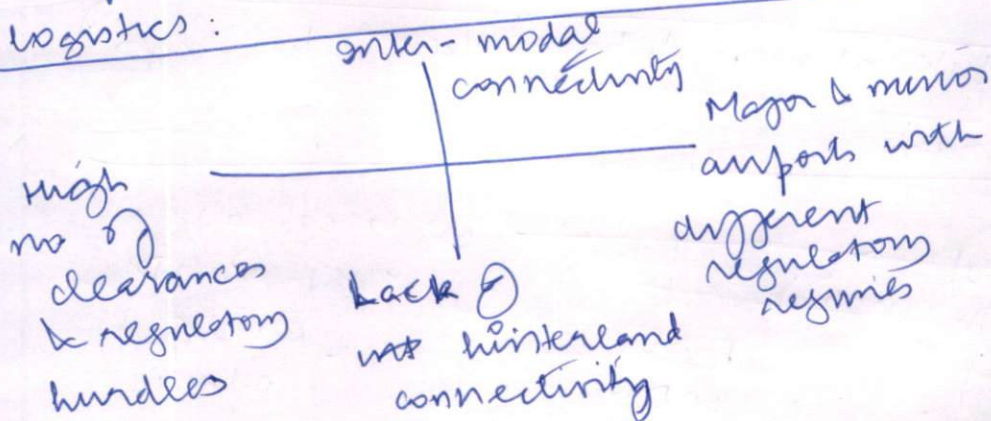


15. Although steps have been taken for integrating the dispersed logistics activities of maritime trade much more needs to be done to make India a maritime powerhouse. Discuss. (250 words) 15

हालांकि समुद्री व्यापार की विखंडित लॉजिस्टिक गतिविधियों को एकीकृत करने के लिए विभिन्न कदम उठाए गए हैं, फिर भी भारत को एक समुद्री पावरहाउस बनाने के लिए और भी बहुत कुछ किए जाने की आवश्यकता है। चर्चा कीजिए।

Maritime trade accounts for ~90% of India's trade by volume, & ~60% of India's trade by value. Dispersed nature of maritime logistics is a hindrance to efficient logistics.

Dispersed nature of maritime trade logistics:



Measures taken by India:

- 1) Sagarmala Project: to boost port infrastructure & increase connectivity to ports with hinterland

- 2) Major Port Authorities Act - to

enable structural reforms aimed at reforming regulation & operation of major ports

3) increased private participation through asset monetization (NMP), TAMF etc

4) shareholder language: enhance inter-modal connectivity with ports

5) inland waterways strengthening

Despite above steps taken, challenges remain:-

2) Port infrastructure lacking

Poor
ROD
performance
on port
clearances

Logistics cost:
~14.1% of GDP
(Developed
nation:
~10.1%)

Measures needed:

1) Infrastructure:

enhance capacity of ports to handle large cargo

- b) frequent dredging & cleaning operations
- c) innovative models to promote PPP.
eg:- Hybrid - Annuity, series challenge

2.) Administrative

- a) ~~take~~ further liberalize major ports administration on line of Act of 2021.

- b) Synchronize all operations at ports to enhance transparency

- c) Pre-clearance of ^{shipments} as followed in developed countries

- 3) also encourage multi-model connectivity through development of inland waterways, last mile railroads etc

- 4) Parity for Indian ships with foreign ships by doing away with current discriminatory regime.

Maritime trade efficiency can help tap potential of India's exports & boost economy to \$5tn target

16. Accounting for natural capital and ecosystem services is crucial to understand the link between the economy and environment. Discuss with specific references to India's initiatives in this regard. (250 words) 15

अर्थव्यवस्था और पर्यावरण के मध्य संबंध को समझने के लिए प्राकृतिक पूंजी और पारिस्थितिकी तंत्र सेवाओं के लिए लेखांकन महत्वपूर्ण है। इस संबंध में भारत द्वारा की गयी पहलों के विशिष्ट संदर्भ के साथ चर्चा कीजिए।

Natural capital ^{& ecosystem services} refers to value stored in land, water, forests & other natural resources. [eg]: forest - provision food, shelter, disaster resilience.

Accounting for natural capital is crucial & ecosystem services is crucial to realizing their importance, as well as internalizing the economic link of environment.

1) Accounting in GDP. By providing value monetary value to NCVES, accounting in GDP becomes possible.

[eg]: India loses billions of \$ dollars to depreciation-induced disaster losses every year.

2) Promoting conservation efforts :- Lack of investments in environment

friendly technologies can be corrected
via NAFES accounting.

[eg]: High initial RAD in solar,
but accounting for GHGS emission,
→ cheaper than thermal.

3) Identify & priority areas & regions.

[eg]: Renewable energy, Inland waterways
- as environment friendly &
hence economically viable

4) Balanced regional development through
active stakeholder involvement

[eg]: Uttarakhand's Green Budget

5) Innovative financing measures can be
derived to realize the harmonious
linkage, based on accounty.

[eg]: Argument for ecosystem services
to help realize incentivize upstream
states' conservation efforts

India's initiatives towards Accounty NAFES

1) NAVES project :- provides for tools

2 methods to correctly account for ecosystem services.

2) Forest & green cover is a criterion under horizontal devolution to states by Finance Commission. [eg]: 15th FC - 15% devolution.

3) states are adopting Green budgets to account for NCAAs [eg] Uttarakhand.

4) Institutions & think-tanks - like NITI-Aayog, CSE, conduct regular studies on ecosystem services & their economic benefits.

5) Financial measures like GST compensation less on sin goods, Coal tax, Carbon credits exist.

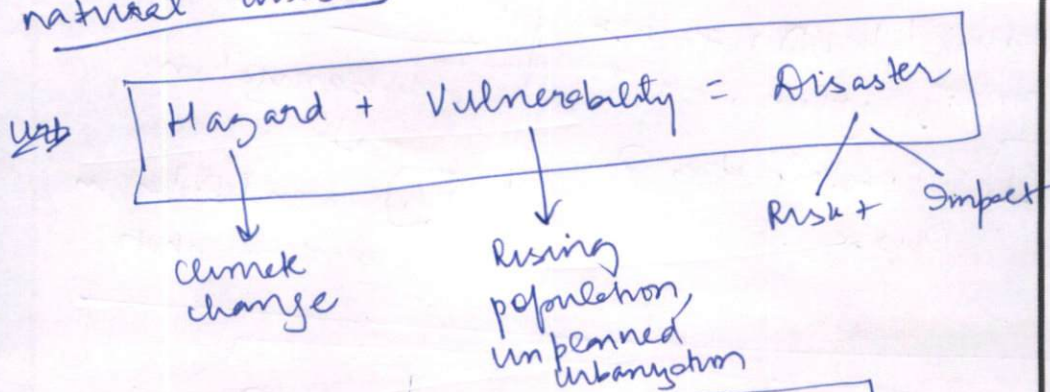
There is time for countries to shift from GDP to a more comprehensive instrument of development measurement, & country for eg, NCAAs - for sustainable & costly growth.



17. Rapid and unplanned urbanisation accompanied by population growth have increased both the risk and impact of natural disasters. Discuss the statement along with adequate measures to address the relevant concerns in India. **(250 words) 15**

जनसंख्या वृद्धि के साथ-साथ तीव्र और अनियोजित शहरीकरण ने प्राकृतिक आपदाओं के जोखिम और प्रभाव दोनों को बढ़ा दिया है। भारत में विद्यमान प्रासंगिक चिंताओं के निवारण हेतु यथोचित उपायों के साथ इस कथन की व्याख्या कीजिए।

As per UN-DESA, about 50% of India's population will live in urban areas by 2050. This, accompanied by climate change has increased both risk & impact of natural disasters



Urbanization: increased risk of disasters

Rapid urbanization	unplanned urbanization
1) increased burden on natural resources ↓ land, water, soil, etc ⇒ risk of droughts, degradation etc	2. Rise of <u>unplanned slums</u> with <u>high vulnerability</u> to <u>bio-disasters</u> from <u>contact with unhealthy conditions</u>

2) concretization
of natural habitats
↓
Urban heat Island
effect ↓
Heat waves, cloud burst
etc

3) Reduction in
green islands, due to
deforestation etc ⇒
Reduced buffer against
winds, cyclones etc
[eg]: Coastal cities of
Orissa

2) encroachment of
river beds &
other natural
habitats.
↓
[eg]: Assam flooding
annually

3) Lack of hazard
vulnerability
assessment before
urbanization
↓
[eg]: Landslides in
western hills

II Urbanization, increased impact of
Disasters

Rapid

1) lack of
sustainable approach
with adequate buffers
[eg]: Parks,
rainwater harvesting
regions - buffer against

unplanned

1) High population
concentration in
a small region ⇒
increased casualties
[eg]: Delhi-Mandi
fires

urban flooding2) Pollution of
resources - [Pg] -Groundwater, air etc↓
long-term health
detriments → impact of
disasters increases2) Lack of regard
for safety measures
in unplanned urban
constructions[eg]: Uphaas cinema
fire, Delhi3) Lack of proper
drainage

[eg] - Chennai floods

Measures to address :-(A) Infrastructure1) Concept of 'green cities' with green
material in construction. [Pg]: Ash - as
water adsorbent2) ~~Planned urban~~ Designated space for
buffers - like urban forests, parks(B) Institutional1) Comprehensive urban planning based on
hazard risk assessment2) Involvement of environmental experts
in urban planning. [Pg]: Beijing's Beijing's
air pollution monitoring system(C) Other1) Decentralized approaches with city & region
specific contingency plans.

18. National Hydrogen Mission can be a game changer for India's rising energy demands. Comment. (250 words) 15

भारत की बढ़ती ऊर्जा मांगों के लिए राष्ट्रीय हाइड्रोजन मिशन एक गेम चेंजर हो सकता है। टिप्पणी कीजिए।

Budget Finance Minister in Budget 2021-23
announced a National Hydrogen Mission
to give a boost to green hydrogen-fuel in
India's energy mix

India's current energy status

Goal: 450 GW by 2030

Current status: 136 GW, 38 % of total
installed capacity

Rising energy demands: Reasons

1) Rapid urbanisation (50 % by 2050-
UN-DESA)

2) Increasing lifestyles (240mn out of
poverty b/w 2005-16, UNDP)

3) Boost of to manufacturing sector

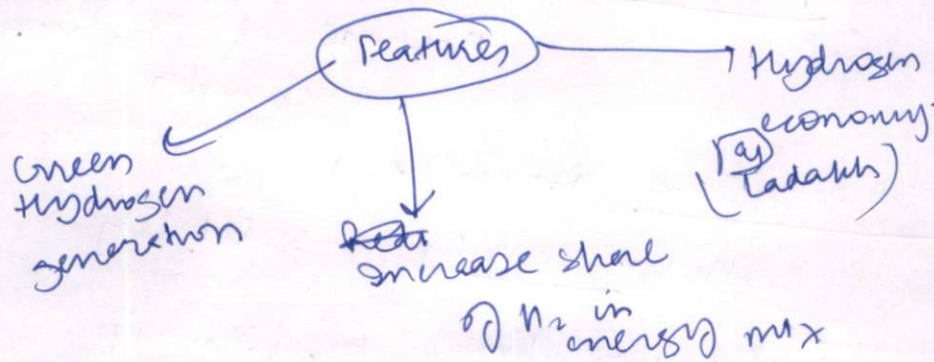
Atmanirbhar
Bharat

Make in
India

4) World's services exporter

5) Rise of disruptive technologies — AI
Big Data

National Hydrogen Mission: A game changer



~~Benefits~~ H_2 to Boost India's rising energy demand

- 1.) ~~2020~~ Fulfil India's INDC commitments of reducing fossil fuel mix in India's energy. (40% renewable share)
- 2.) Reduce dependence on import of fuel for strategic autonomy
- 3.) Save India's forex reserves through local fuel dependence
- 4.) Reduce problem of air pollution in India. (~15/20 most polluted cities are from India)

- 5) Abundant ~~natural~~ resources +
favourable geographic conditions $\Rightarrow$ huge
potential. [eg]: generation from
methane, electrolysis
of water
- 6) cost effective nature of $H_2 \Rightarrow$
energy security + scalability
- 6) sustainable development by powering
remote areas. [eg] PM's announcement of
zero-carbon Balakrishna based on H_2 -
economy.

Challenges:

- 1) expensive R&D on scaling NMM
needed.
- 2) a high initial investment in H_2 -fuel
cells.
- 3) storage & transport infrastructure -
would require investments
- 4) Green hydrogen $\rightarrow$ cost of carbon
capture & storage.

increased PPP models for investment as
well as policy boost can help the Mission
succeed to become a game changer in
energy

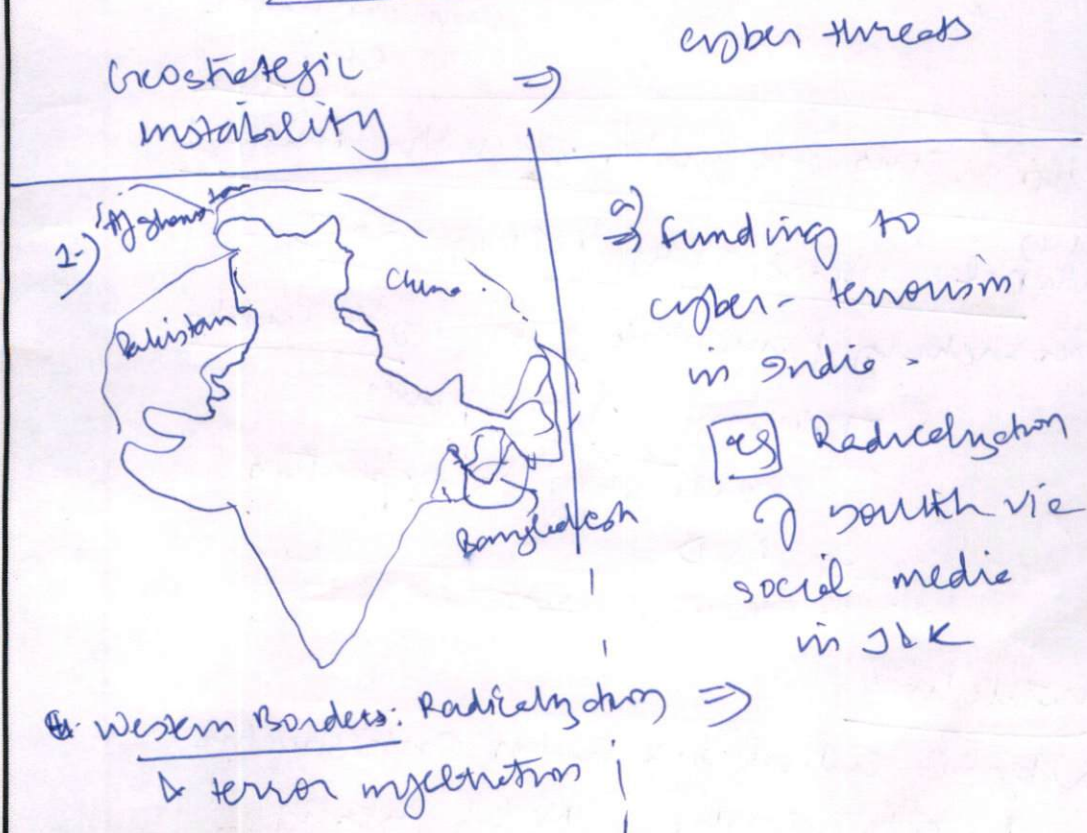
19. Despite geo-strategic instability of its region and a keen awareness of the cyber threat it faces, India has made only 'modest progress' in developing its policy and doctrine for cyberspace security. Critically examine.

(250 words) 15

अपने क्षेत्र की भू-रणनीतिक अस्थिरता और इसके समक्ष विद्यमान साइबर खतरों के संबंध में व्यापक जागरूकता के बावजूद, भारत ने साइबरस्पेस सुरक्षा के लिए अपनी नीति और सिद्धांत विकसित करने में केवल 'साधारण प्रगति' की है। समालोचनात्मक परीक्षण कीजिए।

India is surrounded by ~14500 km of land boundary & ~7500 km of maritime international borders, faced by a variety of security threats. Also, recent use in cyber-attacks poses a new frontier.

India's Geostrategic instability & cyber-threats:



- eastern borders :

unmanned,
unmanned &
different
terrain.

→ Rise of advanced
threats such as
drone attacks,
funding of
terror activities

2). NE-region, J&K :-
insurgency + Naxalism
+ communalism

~~Use~~ use of
deep-fakes, AI
etc for radicalization
etc

3). New & emerging
forms of threats.

→ [eg] power-bleachout
in Mumbai,
ransomware
etc.

India's current cyber-security Policy :

- A) Policy
National Cyber Security Policy 2013 -
over-arching framework for cyber security
- building of man-power
 - coordination & cooperation
 - R&D
 - infrastructure

B) Institutional

- 2) National Critical Information Infrastructure
Protection Centre, Nodal agency

to protect critical information
infrastructure

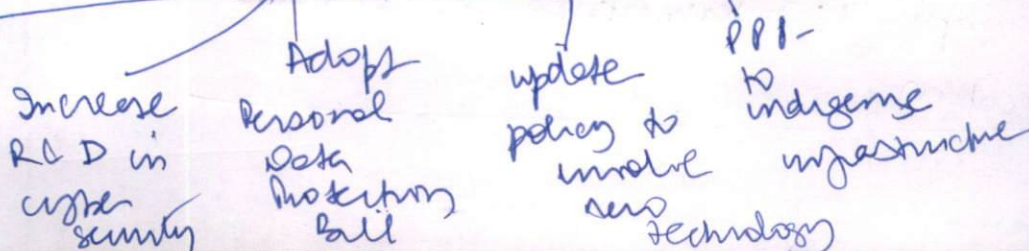
(C) Awareness:

- cyber security awareness
- cyber security awareness

Issues with current ~~for~~ framework

- 1) silos-based approach : eg:
NC II PC, Cent IV etc - multiplicity of
agencies
- 2) Lack of a comprehensive data analytics
framework
- 3) Concerns around privacy & surveillance of
eg: Aadhar Card, Passport software
- 4) Lack of indigenization of cyber-empire
eg: Dependence on China for 5G
- 5) inadequacy of trained manpower in
AI, Data etc

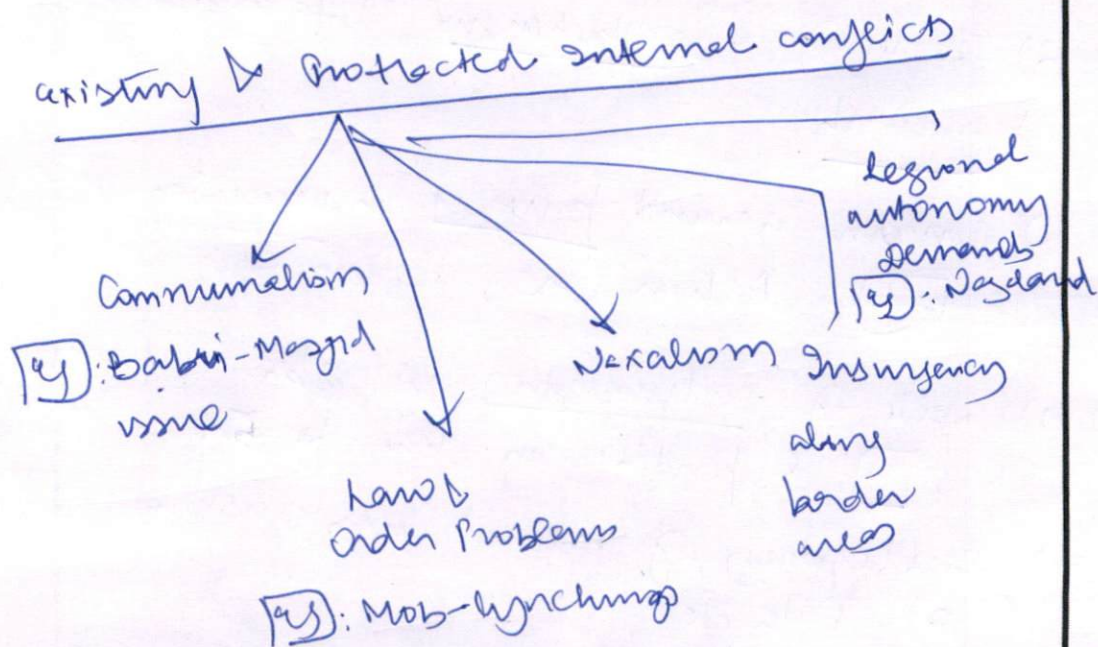
Measures needed:



20. Developmental interventions alone cannot play a defining role in the resolution of existing and protracted internal conflicts in various parts of India within a reasonable time frame. Discuss. (250 words) 15

भारत के विभिन्न हिस्सों में व्याप्त और दीर्घकाल से जारी आंतरिक संघर्षों को उचित समय सीमा के भीतर हल करने में केवल विकासात्मक हस्तक्षेप एक निर्णायक भूमिका नहीं निभा सकते हैं। चर्चा कीजिए।

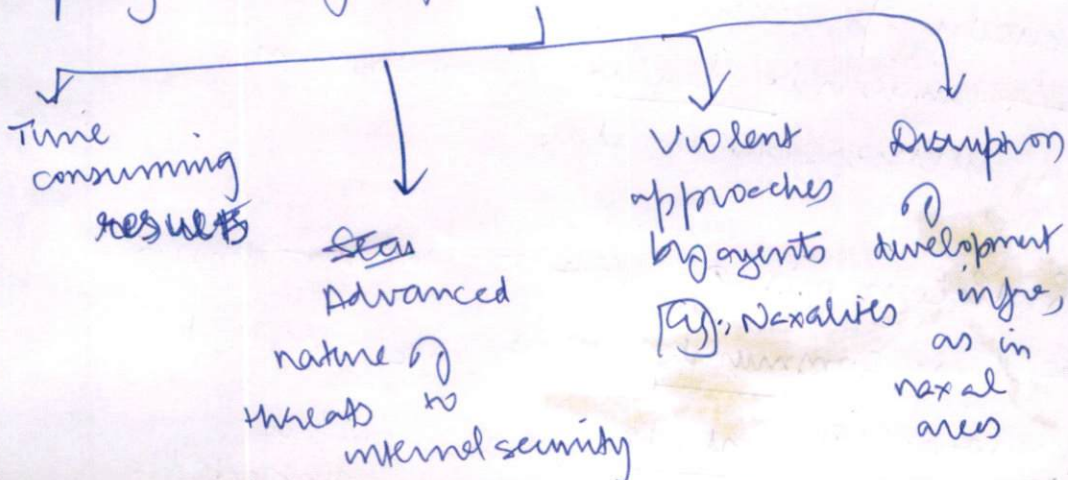
India is a diverse & multi-cultural country - with co-existence of various religions, cultures, ethnicities & languages - This may give rise to internal security threats at times - as seen in case of Tamil in Lankan & Naxal conflicts.



Development interventions for conflict resolution :

- 1.) Reduce regional disparities for balanced economic growth. [eg]: Chhatisgarh & sherkhand creation - to pacify demands.
- 2.) Reduced alienation among remote & excluded regions. [eg]: Aspirational Distt programme in Naxal districts
- 3.) Investments in health & education infrastructure $\Rightarrow$ improved citizenry, reduced Radicalization.
[eg]: Interventions in Manipur & Naghalaya.
- 4.) Socio-economic development $\Rightarrow$ restoration of social contract + trust in government.

Development interventions alone however, cannot play a defining role, as:



Measures needed:

- 1) Greater & effective decentralisation of powers [eg]. 5th & 6th schedule of Constitution, PESA Act $\Rightarrow$ to make them stakeholders in growth process
- 2) Security interventions to re-establish law & order & governance deficit
- 3) Policing models based on community participation [eg]: Community Policing in Meghalaya
- 4) Upgraded border security infrastructure
 $\Rightarrow$ Drones, Smart walls, CIBMS, against newer form of threat
- 5) Investments in greater technological upgradation to prevent damage to security personnel. [eg]. 26-CR Block Panther Infantry Commando deaths last year in Chhatisgarh incident.

A judicious mix of soft & hard means based on community trust are needed for resolution of conflicts - both current & protected.