



# VISION IAS

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## GENERAL STUDIES (TEST CODE : 1515)

|                   |                 |                     |            |
|-------------------|-----------------|---------------------|------------|
| Name of Candidate | DEEPIKA AGARWAL |                     |            |
| Medium Eng./Hindi | English         | Registration Number | 1017934    |
| Center            | ORN             | Date                | 06/12/2021 |

### INDEX TABLE

| Q. No. | Maximum Marks | Marks Obtained |
|--------|---------------|----------------|
| 1      | 10            |                |
| 2      | 10            |                |
| 3      | 10            |                |
| 4      | 10            |                |
| 5      | 10            |                |
| 6      | 10            |                |
| 7      | 10            |                |
| 8      | 10            |                |
| 9      | 10            |                |
| 10     | 10            |                |
| 11     | 15            |                |
| 12     | 15            |                |
| 13     | 15            |                |
| 14     | 15            |                |
| 15     | 15            |                |
| 16     | 15            |                |
| 17     | 15            |                |
| 18     | 15            |                |
| 19     | 15            |                |
| 20     | 15            |                |

Total Marks Obtained:

Remarks:

### INSTRUCTIONS

- Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).  
उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न-पत्र कोड, विद्यार्थी क्रमांक आदि)।
- There are **TWENTY** questions printed in **ENGLISH & HINDI**  
इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं।
- All questions are compulsory.**  
सभी प्रश्न अनिवार्य हैं।
- The number of marks carried by a question/part is indicated against it.  
प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
- Answers must be written in the medium authorized in the Admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in medium other than the authorized one.  
प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न-सह-उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
- Word limit in questions, if specified, should be adhered to.  
प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
- Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.  
उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।

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

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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



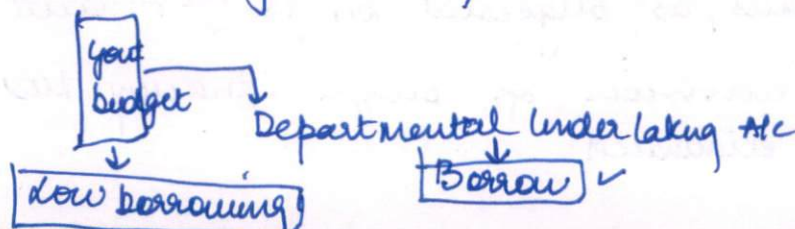
1. Explain the meaning of off-budget borrowings and its role in helping the government raise funds for various expenditures. Also, comment on its desirability. (150 words) 10

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।

In the budget 2020-21 the government announced that it would stop the practice of off budget borrowing and would bring all its dues in its books of accounts.

### Meaning

- Instead of the Government of India directly borrowing money to fund the fiscal deficit.
- Government/departmental undertakings borrow money in their books of account to fund their expenditure.
- Thus this budget is not reflected in government budget directly.





Importance

1. Helps in maintaining fiscal deficit at reasonable levels - which is needed to maintain credit ratings.
2. Source of funds in ~~the~~ areas of non developmental expenditure eg subsidy.

Eg: Food Corporation of India borrows heavily from Small Investments Bank.

3. Helps government in meeting revenue expenditure while budget can be used for Capital expenditure eg: subsidy for schools.

They however are not very desirable.

1. Hides the true status of government debts from public.
2. It does not undergo parliamentary scrutiny as not part of budget.
3. Increasing borrowing may create repayment problems / evergreening of loans.
4. Funds non-developmental expenses -
- ultimately 5. Increases interest burden which
- ⑥ affects operational performance of PSU.

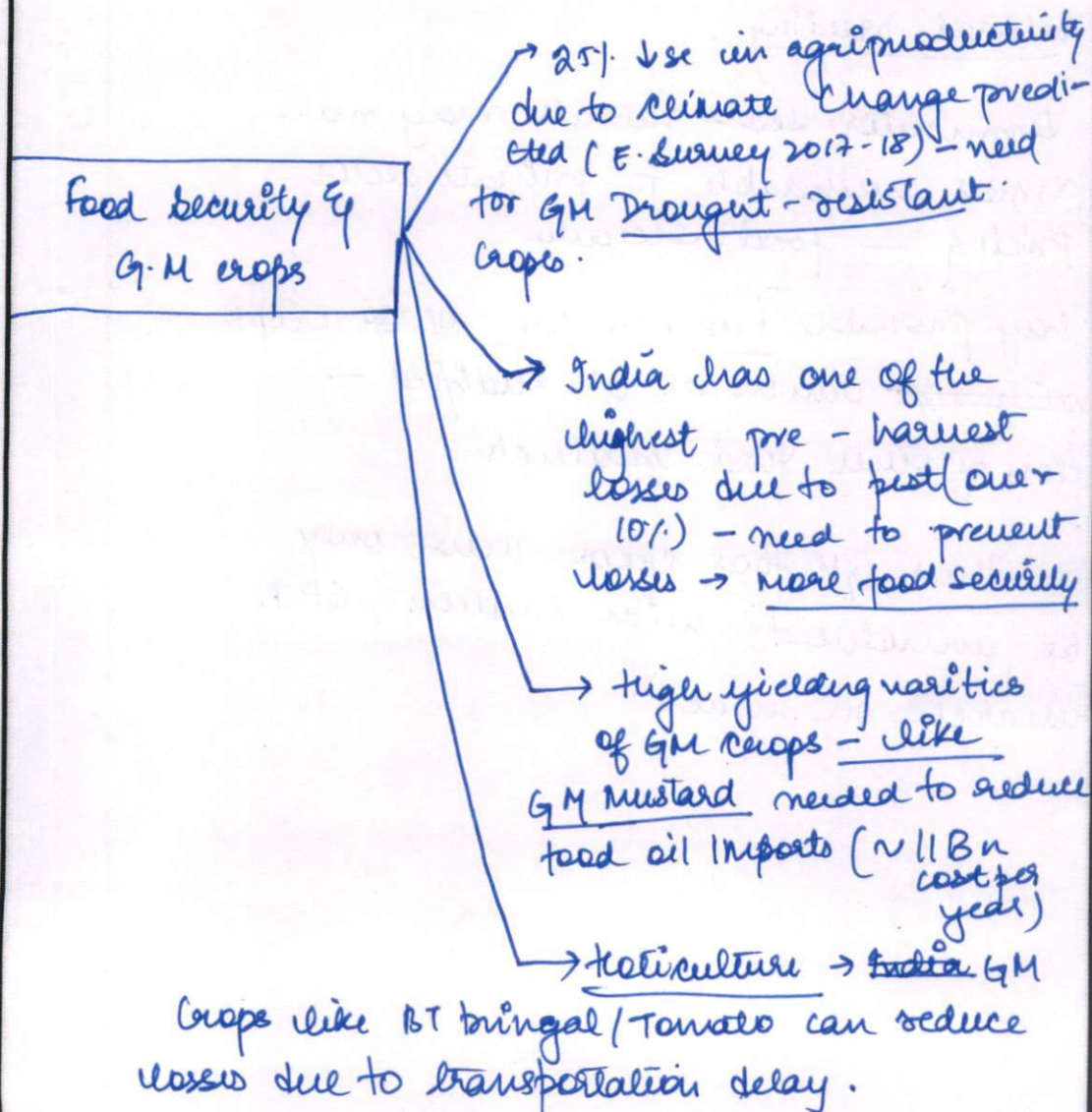
Thus, as suggested by 15<sup>th</sup> Finance Commission off budget financing must be eliminated.



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 शुरूआत से संबंधित चिंताओं के आलोक में परीक्षण कीजिए।

Dr. David Subramaniam panel had recommended that food crops like GM chana must be approved by the government.





However the food security can also be hampered by GM crops.

1. No scientific conclusive evidence on negative impacts of GM crops.

Precautionary Principle → must avoid till conclusive evidence.

2. No loss of biodiversity - GM crops can colonise the fields destroy natural breeding.

3. Terminator seeds patents may make farmers vulnerable to private sector pricing - food insecurity.

4. May promote monoculture of ~~the~~ crops with GM which are GM modified - loss of other food products.

Thus GM food crops must only be introduced with caution, EPCA research on impacts.



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।

India ~~franked~~ franked a minimum support  
policy to its price to its farmers to  
ensure that they receive fair remuneration.  
It has however been ineffective.

#### A. Broken System

- a) Distortion of cropping patterns - rice/wheat  
system promoted as they enjoy price  
guarantee (eg Punjab 78% cropping area)
- b) usurping MSP benefits by middlemen -  
→ (Shanta Kumar committee said only 6%  
farmers benefit.)  
→ further depresses prices for small farmers
- c) MSP distorts market price of products -  
prices do not reflect demand-supply.  
year on year same crops grown -
- d) Creates a system - which creates  
huge fiscal costs -  
- Over 12 lakh crore subsidy burden  
on government.  
- 2x buffer stocks - overflowing.



### B. Complicated International Rules

- a) Decreases competitiveness of India's exports as exporters cannot sell at such high prices  
(eg: Govt. Subsidy to Liquidating Sugar Exports)
- b) Challenges at World Trade Organisation  
→ Public stocking main point of contention with regards to Agree  
ment on Agriculture -

Thus MSP as such has ~~been~~ <sup>created</sup> huge market distortions - initiatives like PM-AASHA (moving to a deficiency payment system, private stocking system) is in the need of the hour



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।

India is number 2 producer of horticulture, rice, wheat in the world. Ranks in top 10 in milk, meat, millets, pulses - yet India accounts for only 2.5% of global food exports.

### Challenges of supply chain

1. Lack of on-farm management & storage facility - (86% farmers < 2 ha)  
low marketable surplus.
2. Lack of transportation facility - eg India needs 70000 reefer Vans has only ~2000 (~~the~~ Railway Committee)
3. Lack of modern warehousing facility.  
→ ~ 6-10 ~~the~~ Mn tonnes shortage of space  
→ 80% current storage only used for potatoes.
4. Lack of modern export / pack houses.  
→ India needs ~ 50,000 packhouses



had N300 (Dalemai Committee)

5. APMC's do not sort, label, grade produce.

### Marketing Challenges:

1. Lack of proper sorting/grading of produce.
2. Lack of testing labs/facilities in India (Only ~ 150 ANAB labs - NEast has only 5 labs)
3. Lack of private investment in packaging, primary processing.
4. Inadequate use of GI tags, traditional branding heritage by India.

Thus India needs to invest in Rural Infrastructure (2 lakh Cr funds under Atma Nirbhar Bharat) and marketing/labelling/branding eg APEDA export houses.

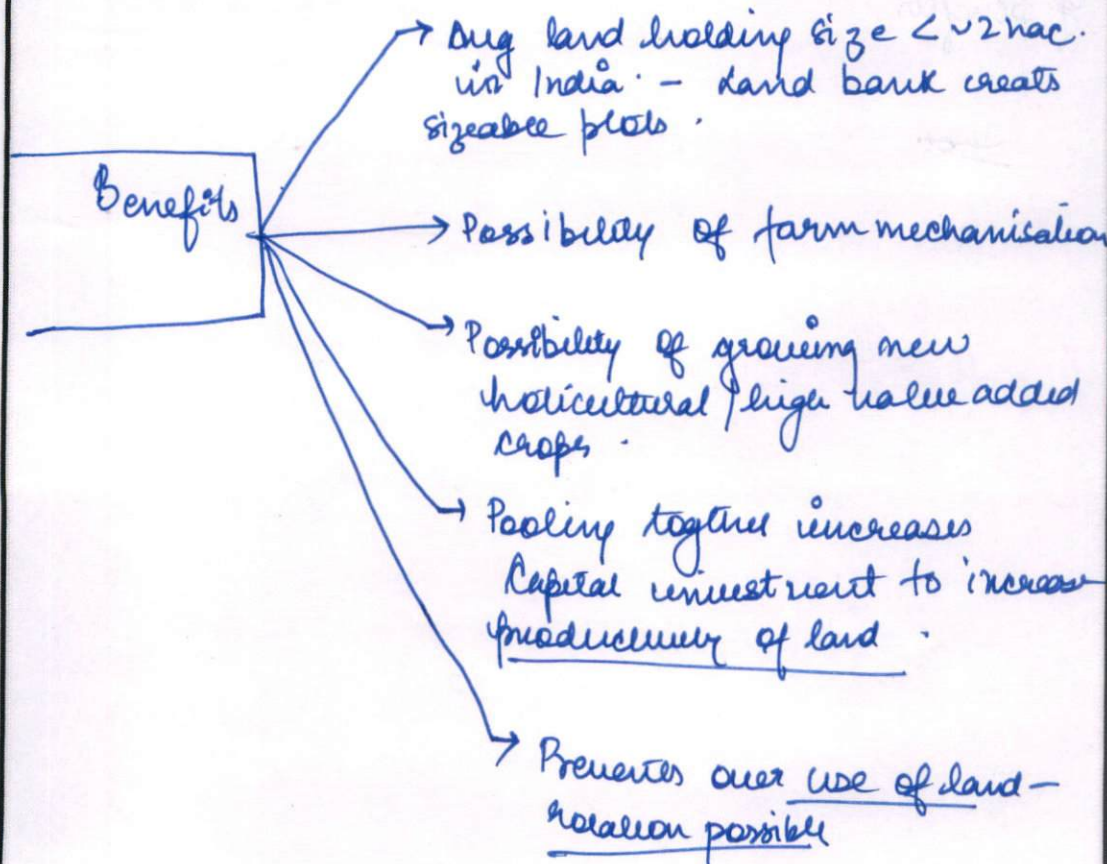


5. Land banks are increasingly gaining prominence in India to encourage land-use efficiency and enable economic growth. In this context, discuss the benefits of a land bank and state the concerns associated with it.

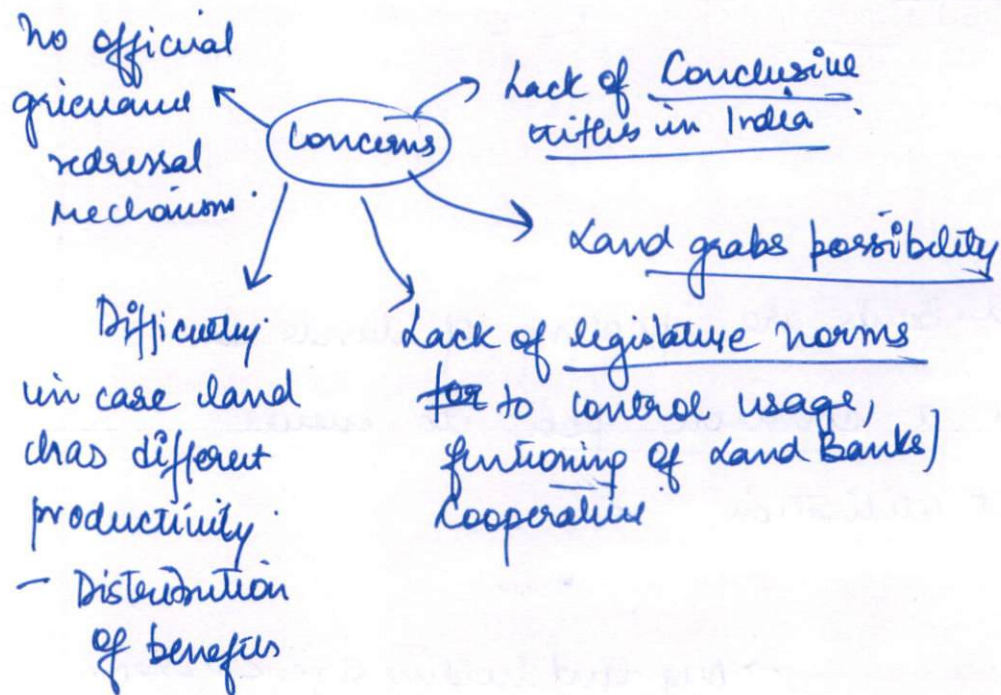
(150 words) 10

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 are pooling of lands ~~in~~  
with a common pool to ensure  
joint utilisation.







Three

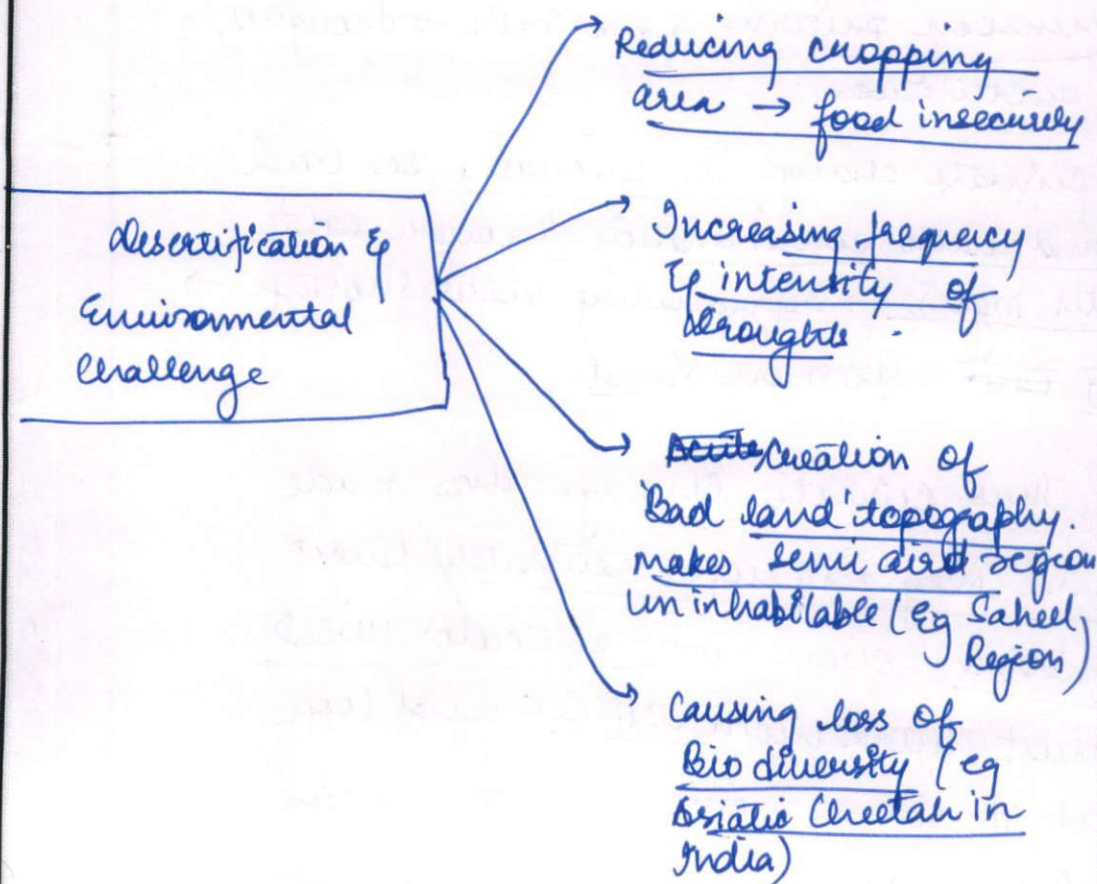


6. Desertification has been described as one of the greatest environmental challenges of our time and climate change is making it worse. Discuss.

(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।

The Second Special Report of IPCC on globalisation and Land Degradation states that the face of desertification has already doubled in the last few decades. and it's due to climate change.





### Climate change making desertification worst

1. Rise in temperature → causing reduced photosynthesis potential, destroying vegetation, foliage.
2. Reduction in soil moisture due to increase in evaporation - ~~not~~ ~~not~~ ~~not~~ aggravating bad lands.
3. Climate change has increased frequency of events like El Niño / La Niña → further changing weather monsoon patterns → less rain → droughts / desertification.
4. Climate change is increasing sea level ground-water contamination through salt water ingress → aggravating water shortage → eg less stress on land.

Thus climate change has made land degradation negatively target of 2030 even more difficult. UNCCD must work with UNFCCC and look at it in a more comprehensive manner.



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

(150 words) 10

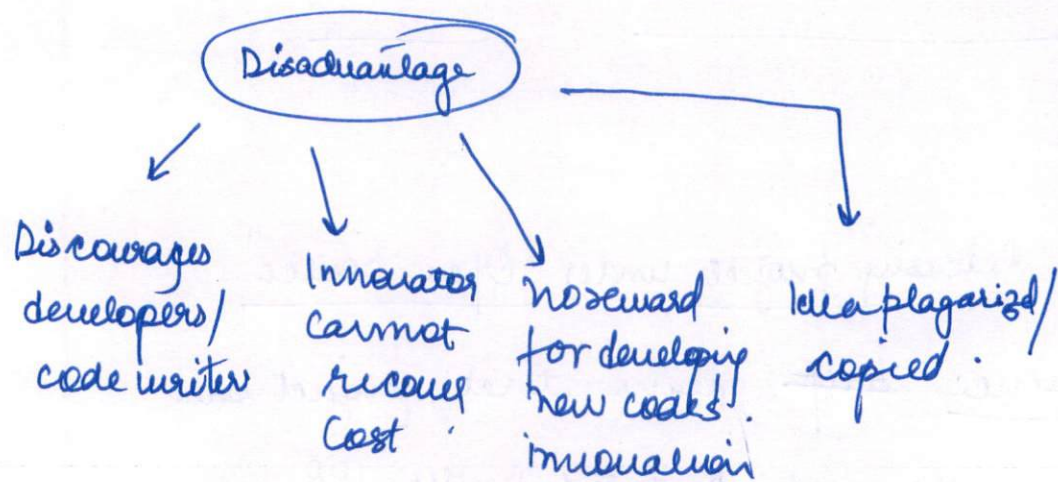
बौद्धिक संपदा अधिकारों के संदर्भ में, 'ओपन सोर्स' लाइसेंस के तहत परियोजनाओं को जारी करने के लाभ और हानियों पर चर्चा कीजिए।

### Releasing projects under 'Open Source'

Open source means that project base codes are not protected under IPR norms and the source can be used for new projects.





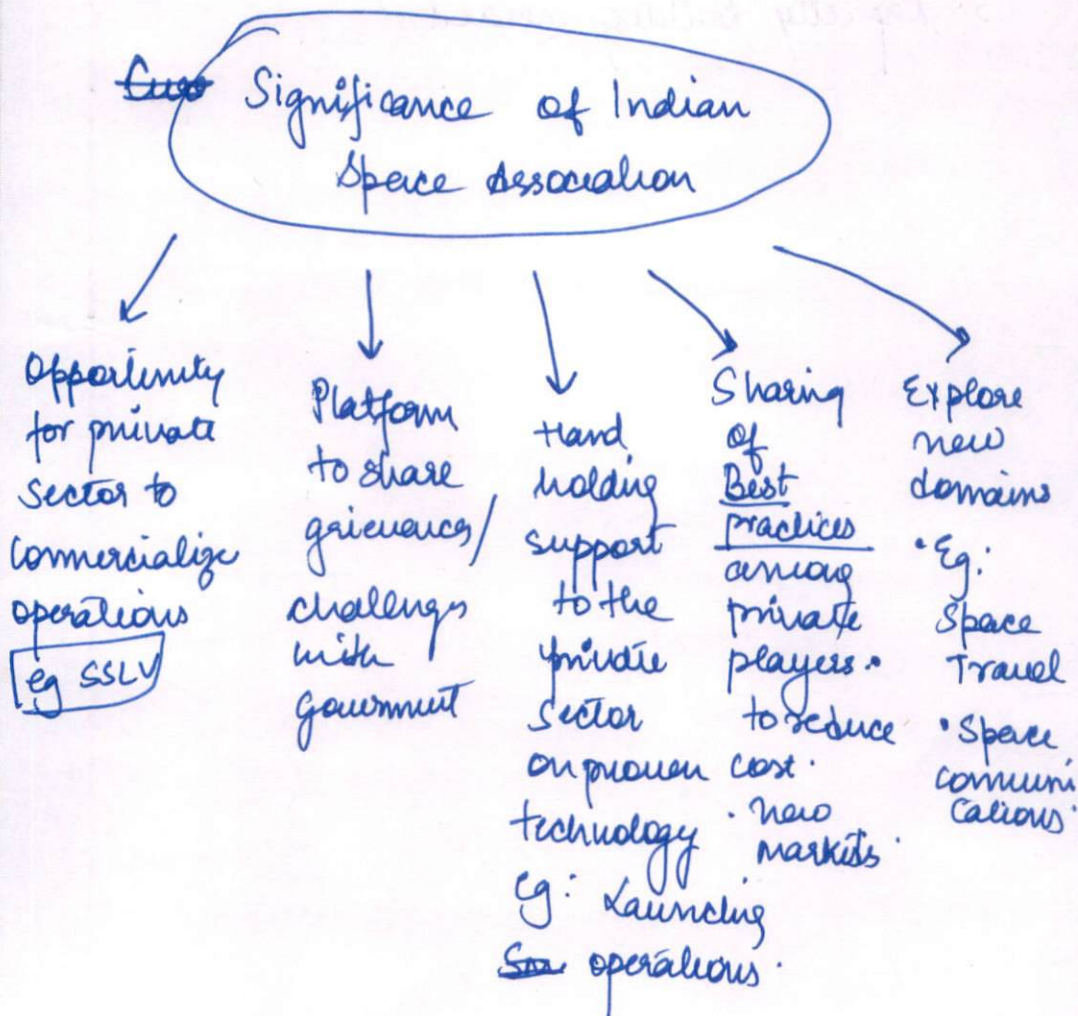




8. "Indian space sector has been dominated by a single umbrella of government and government institutions." In light of the statement, discuss the significance of Indian Space Association in providing an impetus to space technology in India. (150 words) 10

"भारतीय अंतरिक्ष क्षेत्रक 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।

The Indian space sector has been till date dominated by the government.





However this not a panacea

~~the~~ challenges still persist → InSpace,  
outair, NS12 and now NSA -

are positive steps but:

1. More joint operations support by ISRO
2. Transfer of technology
3. Capacity building needed.



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।

Urban areas in India are facing  
Challenges of extremism, ~~the~~ fear of  
terrorism, cyber terrorism, Organized crime  
Technology has a key role to play in  
~~also~~ ensuring their security.

### Role of Technology

1. Ensure security of border areas -  
drone surveillance, smart fencing,  
technology based weapon inventory  
management can reduce infiltration  
→ reduce threat of attacks like the  
Mumbai terror attacks
2. Surveillance/patrolling of urban areas.  
→ Drones in high density areas.  
→ AI Based sensors can alert the  
Police regarding urban security  
threats



3. Role of Technology in gathering intelligence

Eg: NATGRID/CCTNS platforms help in reducing ~~the~~ risks of urban area attacks.

4. Technology to prevent organized crime  
Syndicates.

→ AI based tools to track financial  
payments records of Drug Cartels.

5. Use of technology to prevent radicalisation/  
clashes.

Eg: Use of Social Media by police in  
north east Delhi riots case.

Thus India must invest in technology -  
modernisation of police, Smart policing,  
strengthening nat grid is needed at the  
same time data protection must be ensured.



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 was formed post 1980's to provide a counter  
terror special force in India's security architecture.

Mandate :

1. Gather intelligence/use it to prevent any  
planned terror attacks in the country.
2. Develop a strong force capable of conducting high stake operations - in case of  
a terror attack.
3. Support the state police forces and  
~~train~~ in ensuring terrorist ~~hot~~ hotspots  
identified.
4. Conduct counter-terror operations (preventive)  
to prevent attacks.
5. Ensure safety of national assets from terrorists.
6. Prevent use of India's Marine area by terrorists.



7. ~~Expt~~Achievements

1. ~~Post~~ has been able to prevent major  
terror attacks - post ~~#~~ 26/11 ~~&~~ India  
has not seen any major attack.
2. Failing infiltration of terrorists from  
cross border.
3. Early detection of youth being radicalized  
by ISIS
4. NSG commands one of the most skilled  
forces eg 26/11 operation, Muzaffarabad  
operation

Thus NSG is the pride of the  
nation



11. What do you understand by asset monetisation? Why is it needed in India? In this context, discuss the <sup>②</sup>issues that need to be addressed for the National Monetisation Pipeline to succeed. <sup>①</sup> (250 words) 15

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

Recently the government launched the asset monetisation mission that is aimed to release value of over 6 lakh crore for the government.

### Meaning

Asset monetisation means methods by which existing assets are put to use - eg lend out, rented, leased primarily to the private sector to ~~go~~ derive economic benefits of it.

Methods { Direct renting out (Def. Land)  
TOT (Roads)  
Financial product (REITs)

### Need for asset monetisation

1. Fiscal deficit: the government is expected to have a deficit of ~~over~~ over 6% - need to raise revenue from non-tax sources



- b) Asset lying untutilized/underutilized eg: defence land can be put to productive use  
eg factory.
- c) Increase private investment in economy
- d) need to generate employment (unemployment rate over 5%)
- e) need to increase operational efficiency of government assets [eg railway station xting capacity]

### Issues to be addressed

- a) Documentation / Survey of existing pool of assets need to completed.  
Eg Extensive encroachment on government land.
- b) Inter department coordination would ~~not~~ be needed as assets under separate department but coordination by finance &
- c) Transparency: Bidding and lending has to be done without possibility of corruption (eg deal Black Sams)
- d) Contracts must be attractive for private sector  
→ Rigid concessionaire agreements



→ very high ~~to~~ reserve price for  
bids.

→ lack of earning potential of asset.  
(eg road in back ward area)

e) lack of skilled professionals

way forward

1) Government must set up independent agency  
for monetisation (eg DIPAM for disinvestment)

2) Professionals for designing contracts,  
clear terms.

3) Guidance advisal (for public also)  
through greater utilisation a win-win for both private and public  
sector.



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 Exchanges are exchanges that list companies that invest in social projects that increase welfare of the people.

Need for SSE

1. Social development projects lack financing potential in India.
2. Underdeveloped capital markets/ bond markets → investment only for high profit making projects. low investment for social projects.
3. Maturation period for benefits from social projects long (eg impact of community schools) — it is difficult to monetise the gains and thus raise capital.
4. need to provide means for socially conscious investors to invest in social projects — eg Green Bonds
5. need to increase investment in



social sector - in India majority investment in social areas like health, education, environment by government. Private sector less than 15% of such investments.

6. need to generate employment through more social sector investments.

### Challenges :

1. Lack of standardized & benefits evaluation mechanism for social sector companies.

eg: How to evaluate benefit of shifting to cleaner fuel or adopting organic farming.

2. Low profitability in the sector creates low prospects for raising funds.

3. Lack of standard functioning of social companies - eg some are NPO's some are profit making :

4. Lack of awareness among investors / public on benefits of investment in Social Sector -

5. Lack of 3rd party assessment - Frame in India for producing trustworthy



audit reports"

6. Overall slow development of social sector in India -

Way forward

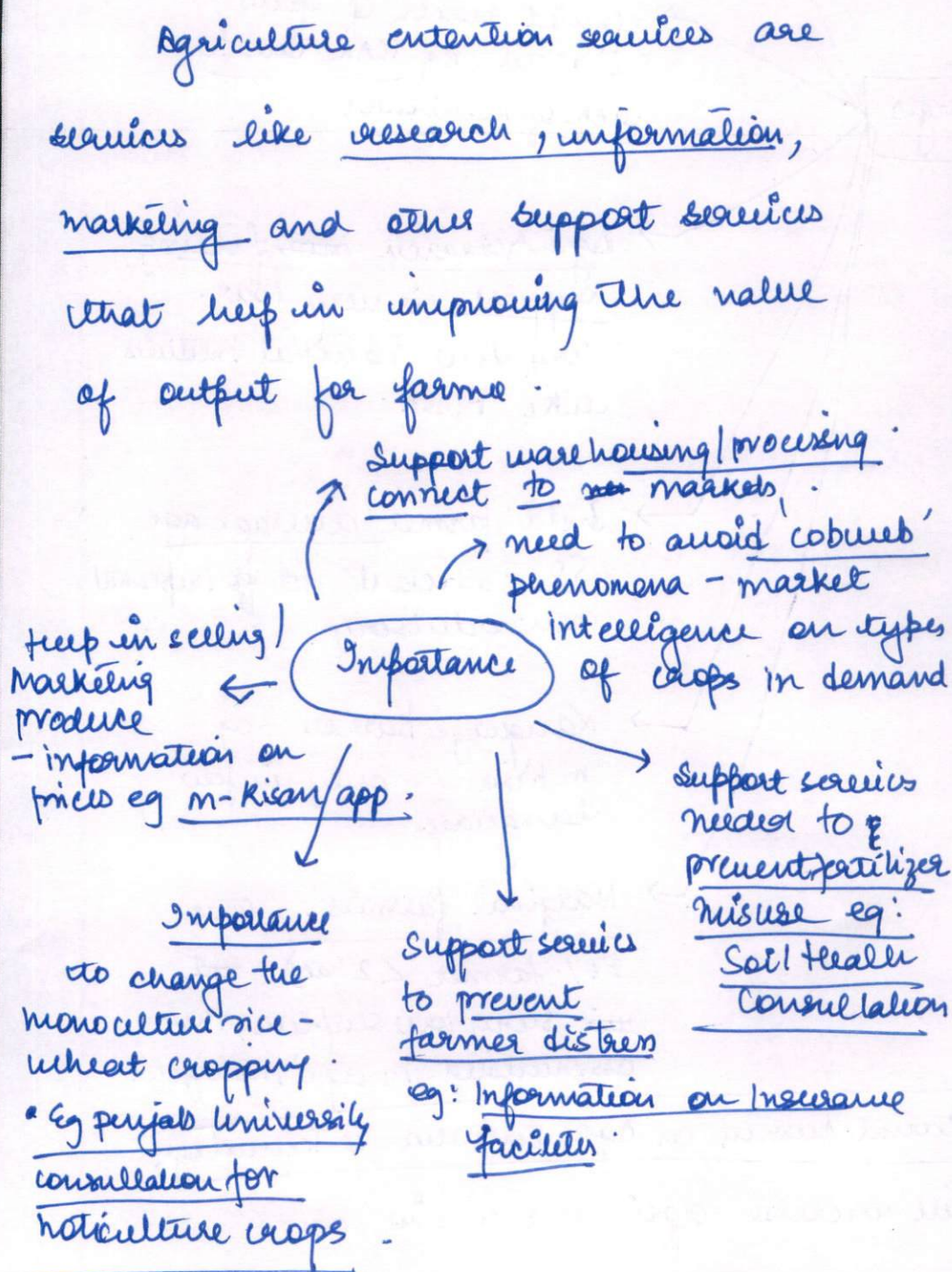
SSE's is a proposal whose time has come - northern countries have driven large investments in e-vehicles through SSE.

Measures like tax incentive, support for listing, third party audit promotion can help in promoting this success.



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?





### Challenges

→ Farmers in India averse to new ideas, trust deficit.

→ Lack of digital penetration in rural India (<43%) limited

→ Limited reach of govt. initiatives eg ICAR due to lack of manpower

→ Agri research not finding support is very low.  
· Very few national institutes like PUSA.

→ India farmer average age 50 - reluctant to ~~to~~ implement new advisory.

→ Language barriers - eg mKisan - only in few languages.

→ Marginal farmers. (only 86% farmer < 2 ha) - ~~not~~ very low surplus, thus disinterested in agri intelligence.

National Mission on Agri Extension & Technology

1. will increase agri research in new



domains eg hydroponics, aeroponics.

→ involve private sector, promote agro-prone in India.

→ Easy use technology eg  
whatsapp for queries - as penetration  
is higher in India.

→ Involvement of ~~young~~ millennials youth -  
the mission ~~from~~ intends to encourage  
local youth who are migrating to  
move them up the value chain.

'Information' is power and so  
is true even for agriculture.



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।

The unemployment rate in India had reached a 45 year high even pre pandemic and now post pandemic it is said to have breached the 6% mark..

Unemployment problem in India - overview/delineation

a) Rural unemployment :

→ Marked by large scale invisible unemployment → more people working in same farm than needed marginal productivity = 0.

b) nonagriculture sector in rural area only accounts for less than 15% of the jobs.

c) urban unemployment - large scale automation of industry, inability of services sector to create 'new skilled' jobs -

d) Over 1 crore added to workforce every



years but less than 50 billion jobs created.

e) women unemployment much higher -  
despite very low participation rate (<19%).

f) Demographics - highest unemployment in  
(15-29) age bracket as per PLFS-2018/19.

g) Informalisation / Seasonal employment / gig economy - 92% of workforce.

### Reasons

### Unemployment Issue

→ Inability of the farm sector  
to create new jobs - land  
fragmentation, lack of food  
processing.

→ Slow Manufacturing - accounts for  
less than 25% of jobs - increasing  
automation; slow growth rate -  
• Make in India target of 25% of  
GDP missed - currently only 16%.

→ Services sector → over 50% gdp.  
but < 25% workforce.

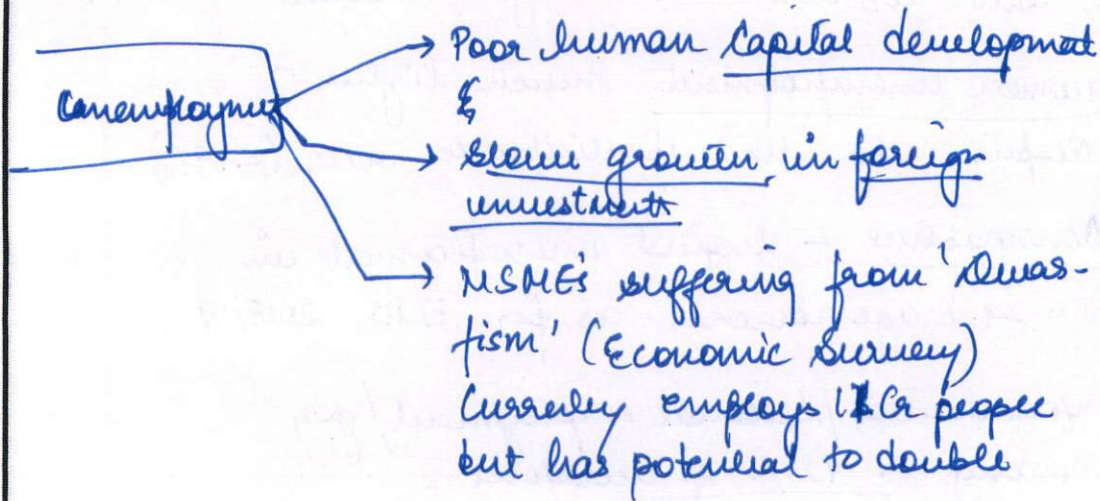
→ Lack of growth in trade,  
tourism.

→ Inability to create more  
jobs in services / IT sector.  
(already 27% of services  
export)

→ Low level of skills.

• Less than 25% of Engineers  
employable (CII survey)





### Solutions

- 1) Atma Nirbhar Bharat, Assembly in India  
↳ Create low skill mass production jobs (E. Survey 2020)
- 2) Food processing industry, move farmers up the value chain.
- 3) Upgrade MSMEs - EODB reforms eg service sector
- 4) Skill Development - PM Kaustubh Kumar

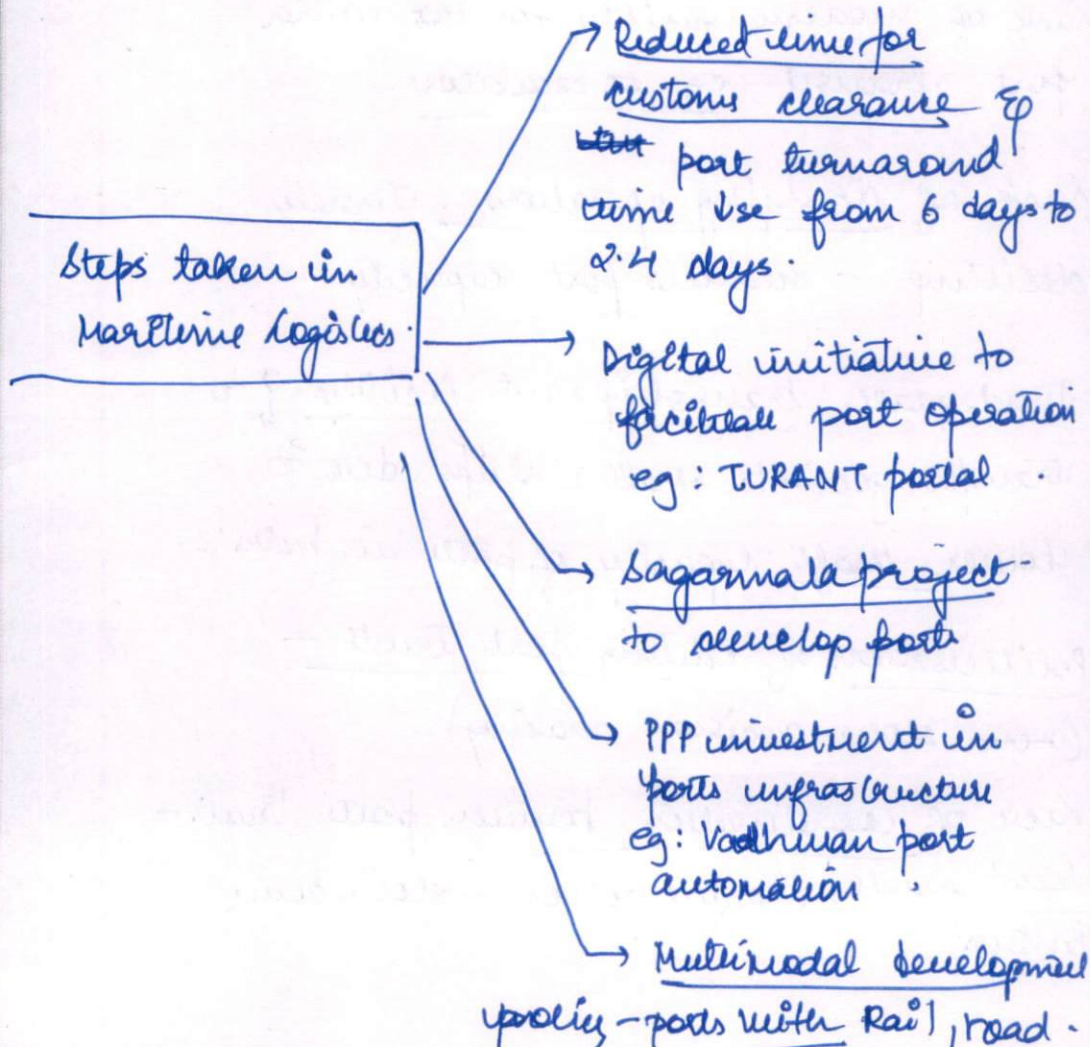
growth without employment is meaningless. ~~to harness divi d~~



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।

~~about~~ 70% of India's trade by value and 90% by volume takes place through the sea route. 85% of our oil needs are met through maritime trade - true importance of this sector cannot be under emphasised

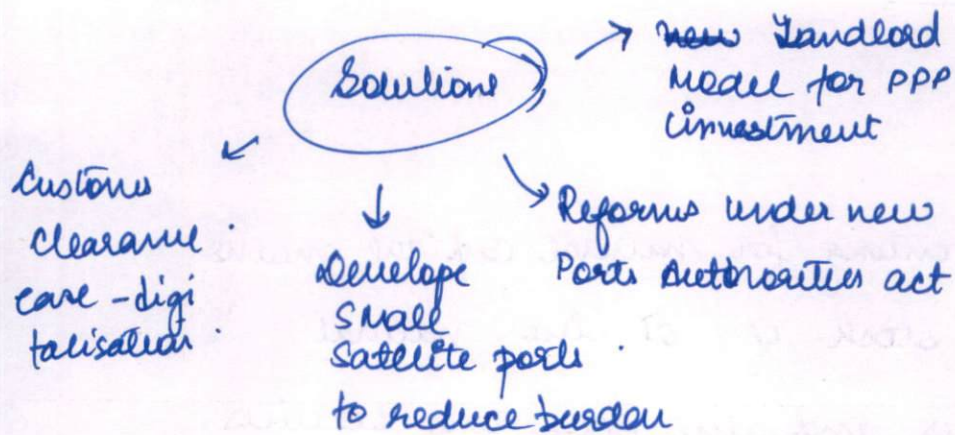




But much more needs to be done

1. Port turnaround time still very high.  
 eg India: 60 hrs  
 Italy (best in EODB) - 1hr.
2. Port handling costs very high.  
 India - : ~250 USD  
 Italy - 0.
3. ~~Too~~ requirement of inspections very high at ports.
4. Lack of modern facilities for ~~the~~ intra port transit eg escalators.
5. Lack of dredging operations, timely desilting - reduces port capacity.
6. Inadequate transshipment facilities to transfer goods to smaller ships due to lower draft capacity of ports in India.
7. Politicisation of existing port trusts -  
 (now slow decision making)
8. Lack of coordination between port trusts -  
coast guard, marine police - slows down  
process





The new JLN ports connectivity with  
madhuan port helped to reduce port  
 turnaround time such ~~as~~ innovations  
must be carried to ~~make~~ make india  
 maritime powerhouse



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।

Accounting for natural capital means taking stock of the natural resources and the ecosystem services they provide.

In India 'NCAVES' - 'Natural Capital Accounting' ~~and~~ is the key project that is involved in natural capital measurement.

Importance in understanding link between economy & environment :

1. Helps in giving an account of natural assets that exist which facilitate economic production.  
(eg usage of river waters by factories)

dr



2. keeps in counting cost of negative externality of economic development on Environment.

(~~eg~~ Initiative : Carbon pricing mechanism aims to charge the companies as per emissions in environment)

3. keeps in counting real GDP which is not only of manufactured goods but also year on year increase in ecosystem assets.

[Initiative : Uttarakhand government's Green Domestic Product to count increase in ecological assets)

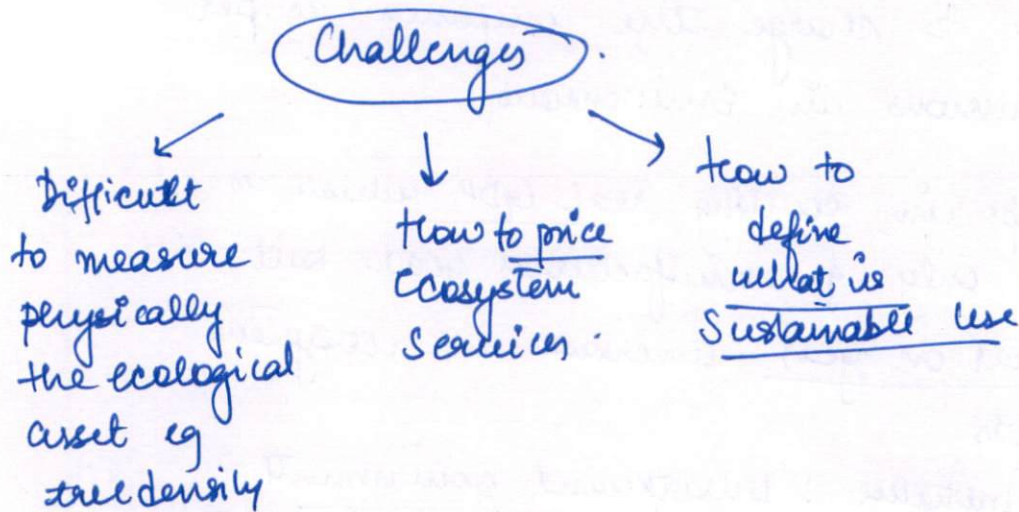
4. keeps in planning for measures to ensure sustainable use of resources by by economy.

[Initiative : Carbon budget for Thermal power plants to cap and trade.

5. ~~helps~~ helps in revisiting ~~for~~ better pricing of ~~for~~ economic goods by taking into account ecosystem cost.



[Eg CANPA funds charge the development agency by finding Net Present Value of the forest region]



In perspective of challenges taking in account the 'Environmental cost' is means of creating aiga awareness and the ~~economic~~ first step in conservation



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।

Urban India currently accounts for over 30% of the population which is set to increase to over 40% in the next decade — increasing pressure of population and urbanisation is major cause of disaster vulnerability in India.

### Increase in risk

1. Increased possibility of disaster due to excessive heat generation → Urban heat island effect → the risk of urban floods
2. Encroachment of natural wetlands — eg Salt lake Kolkata → risk of flooding increased.
3. Increasing concretisation leading to increased stress of water shortage, ground-water falling @ 30cm rate.

4.

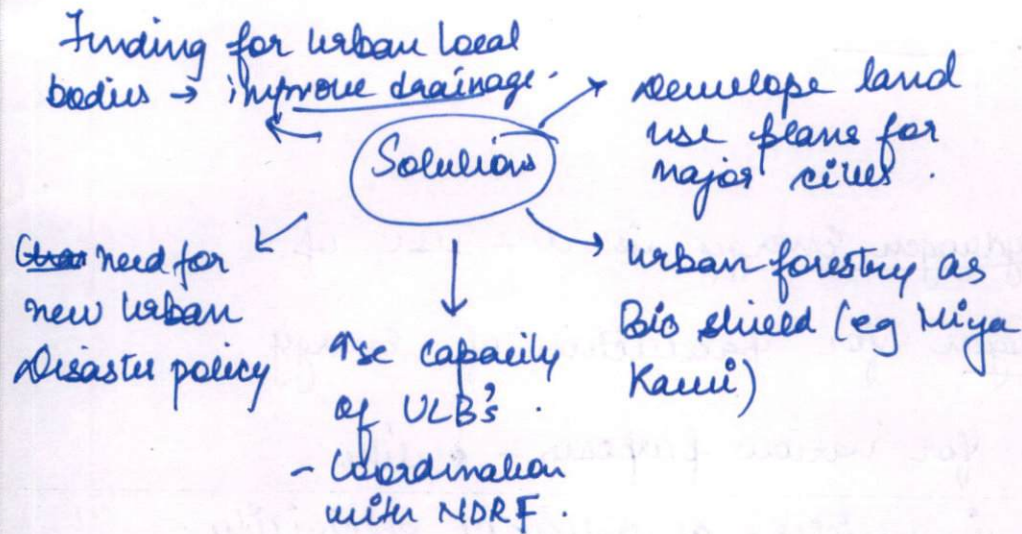


4. Increased risk of detrification/droughts due to encroachment of forest areas
5. Increased risk of manmade hazard -  
eg Fire, Styrene gas leak

### Increase in Impact

1. Higher population density - in urban areas (costal density 4x) causes more casualties, harm.
2. More economic losses as urban India has more concentrated infrastructure
3. More impact due to of urban floods due to lack of sanitation in ~~area~~, health care as they are overburdened.  
[eg: ↑ in malaria cases after flooding in Chennai]
4. difficult to ~~rehabili~~ ~~respond~~ provide disaster response due to our crowded urban infrastructure  
(eg: electricity poles → short circuits)
5. More difficult to rehabilitate population due to shortage of space.





Cities account of for over 60% of  
our GDP - urbanisation has to thus  
go hand in hand with disaster  
risk reduction



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।

Hydrogen Energy is the use of Hydrogen for production of energy ~~also~~ for various purposes - like use in vehicles, generation of electricity.

National Hydrogen Mission

- announced as a part of budget 2021
- over 4000 Cr to be spent on research & development of hydrogen energy sources in India.
- long term mission → create hydrogen fuel cells, green hydrogen.

It will be a game changer for rising energy demands as:

1. Hydrogen is most abundantly available gas - no country has monopoly over it like oil.
2. Hydrogen ~~so~~ energy potential is much larger than existing renewable



Sources

3. Energy efficiency of hydrogen fuel is much higher as compared to other sources.
4. It does not release any pollutants - thus is in line with India's CO<sub>2</sub> commitments -
5. It can be deployed even in remote/backward areas where energy demands are likely to rise.

6. It can be a source of transformation of ~~the~~ vehicles in transportation sector as India does not have rare earth elements for ~~the~~ batteries and vehicles.

However, the challenges with regards to hydrogen are equally grave - which may prevent it from driving any substantial impact.

- Costs are very high - no ~~serious~~ commercial viability.

Challenges

Lack of technology, inadequate research on large scale deployment

Production of hydrogen  
- mostly grey/brown  
- green hydrogen tech. not developed

Storage of hydrogen very difficult  
- highly inflammable.



Thus hydrogen energy though has immense potential — it is at only a preliminary stage

India must:

1. Invest in more research.
2. Collaborate with international partners
3. Involve private sector for commercialisation



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 has been ranked as among the top ten countries in terms of cyber security risk by the Risk Report of World Economic Forum.

Increasing use of technology for Transnational crimes

- Pornography
- Crypto currency for Drugs trade through Afghanistan
- Dark net

geo strategic  
in stability  
&  
Cyber threat

Increase in cyber warfare practice globally - [eg. Israel hub of cyber weapon development]

Proxy war by Pakistan ISI

- Use of Drones
- Use of Social media - Kashmir for radicalisation
- Bit coin for arms imports.

Increasing use of technology for terrorism  
• ISIS using social media to radicalise youth in India.

Threat of China.  
• Chinese based groups like red echo targeting Indian assets.



Realising the above challenges India has  
made some remarkable progress

- India number 2 in ITU global cybersecurity index
- state of art Cyber Crime Control Centre, Cert In etc

Yet, modest progress

1. Mital infrastructure in India still vulnerable to cyber attacks [eg attack on western power grid]
2. Lack of contingency management plan in case of cyber attacks.
3. Cyber crimes - divisions in state. Still weak - police modernisation lacking [eg Santara / Newat Cyber financial frauds - state police capacity lacking]
4. Lack of data Protection Bill - delay in ~~act~~ bringing act.
5. Regulation on social media - not very stringent (eg twitter delay in complying to state orders)
6. Lack of awareness among people -



inadequate reporting mechanism for cyber frauds.

7. Modernisation of intelligence wings - still  
pending - to prevent usage by anti-social  
elements.

Thus cyber security needs a serious  
relook - pegasus issue has further  
~~also~~ exposed the vulnerabilities in  
India - we need to invest in smart  
solutions, reform policing, army &  
~~infrastructure~~ ~~build strong~~ Invest in  
technologies like super computing.



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।

Developmental interventions is a key part of the 'Clear-hold-develop' model of dealing with internal security challenges that India has faced.

→ Developmental initiatives has had substantial role in resolution in the past - even in a time bound manner

1. ~~Review~~ It helps in bringing peace.

Peace in Kashmir valley post the revocation of Article 370 result of developmental process like 50,000 cr package, village development / Block Council elections)

2. Development has swayed the youth away from anti-state elements.

Eg: Youth of Santenada - Education city model.

3. It has provided economic security



to people thus, less likely to ~~to~~ support  
anti state elements -

[ eg Andhra Pradesh - rubber plantation  
helped in curbing left wing  
extremism ]

4. creates linkages / bonding with rest of the  
country - prevents ~~misuse of~~ creation of  
secessionist tendency

eg: Bodo Development package, Karbi Anglong  
development promise has reduced conflict  
in north east

this even in short run → ~~this~~

[ → Promise by Government  
→ Investment in infrastructure, industry  
→ Employment ]

has created resolution

[ But ] they are alone not capable :

1. extreme radicalisation, attacks ~~by~~ on  
civilians, armed forces require retaliatory  
operations (eg: Gadchiroli & Unconvales)
2. need to ~~sanitise~~ <sup>prosecute</sup> eliminate / hardliners  
who prevent development requires use of  
force sometimes.
3. ~~by~~ Guerrilla war tactics → require armed  
intervention



4. Funding of anti-state elements ~~is~~ by  
outside forces eg Pak sponsored terrorism  
in Kashmir - needs intervention of army -

5. Increase in ~~case of~~ use weaponisation  
of LWE areas (now using sophisticated  
grenades, guns) ~~is~~ need

Thus in the short run to deal with  
challenges force becomes vital, but it  
is also true that development is  
what creates more sustainable solutions.