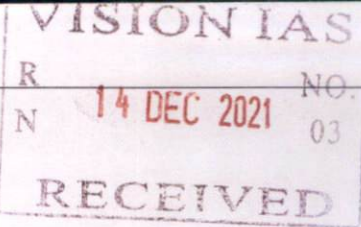




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GENERAL STUDIES (TEST CODE : 1515)

Name of Candidate	Anshu Priya		
Medium Eng./Hindi	English	Registration Number	500582
Center	ORW (Offline)	Date	14/12/2021

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, 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
Delhi- 110009

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.

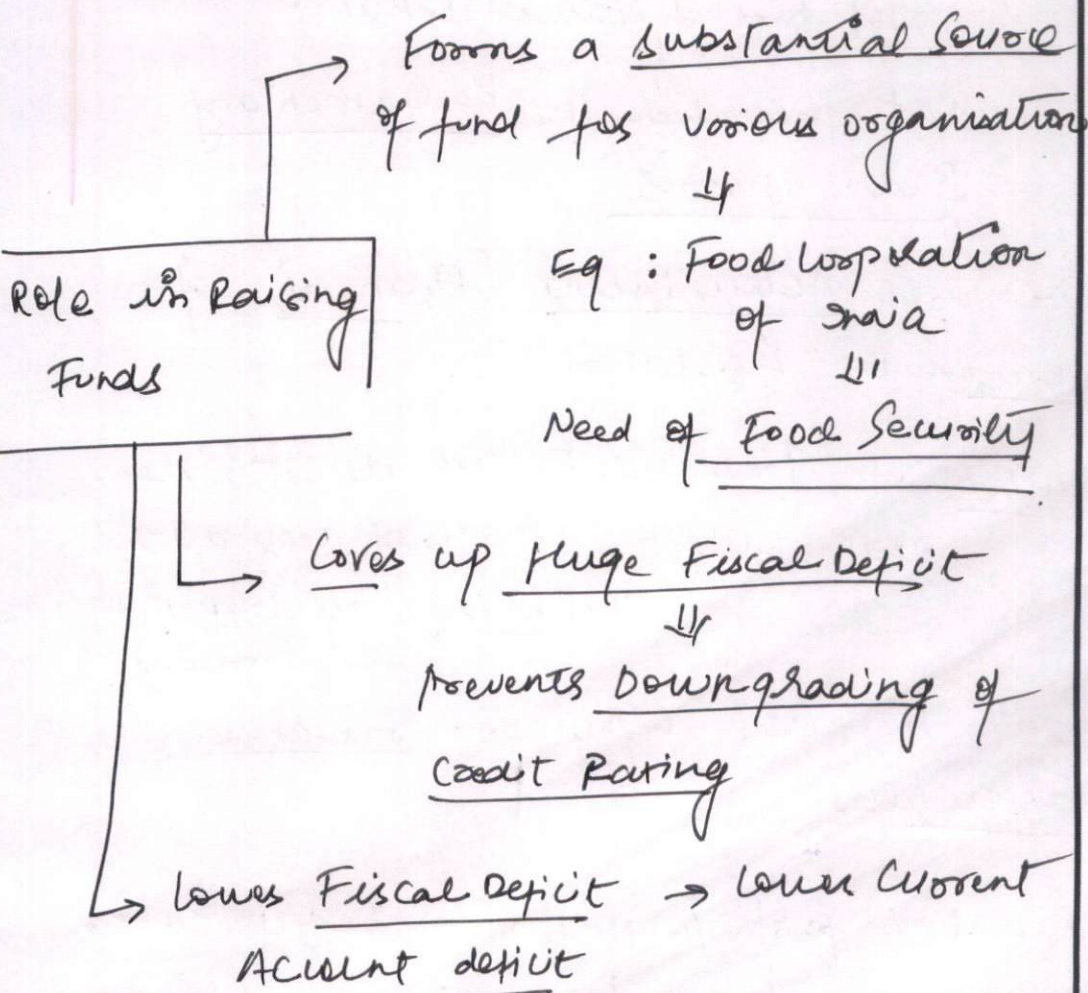
6.

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

बजट-बाहरी उधार (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 refers to those Borrowing, which do not create a direct liability on government as a part of debt and is not included in the Fiscal Deficit of the government.



→ Rising Expenditure in the midst
of Fiscal constraints

← Impact of Pandemic → Revenue Neutrality
of GST failed
down to 11.4%.

Desirability

↳ CAG report, highlighted the issue of
huge off budget Borrowings

Not part of Fiscal Deficit
Not presented in Parliamentary
Budget figures.

↳ Decreases Accountability (Financial) of
Executive to Legislature

↳ Actual vs presented Fiscal deficit in
2021 budget (9.9% of GDP after
including off Budget
Borrowing)

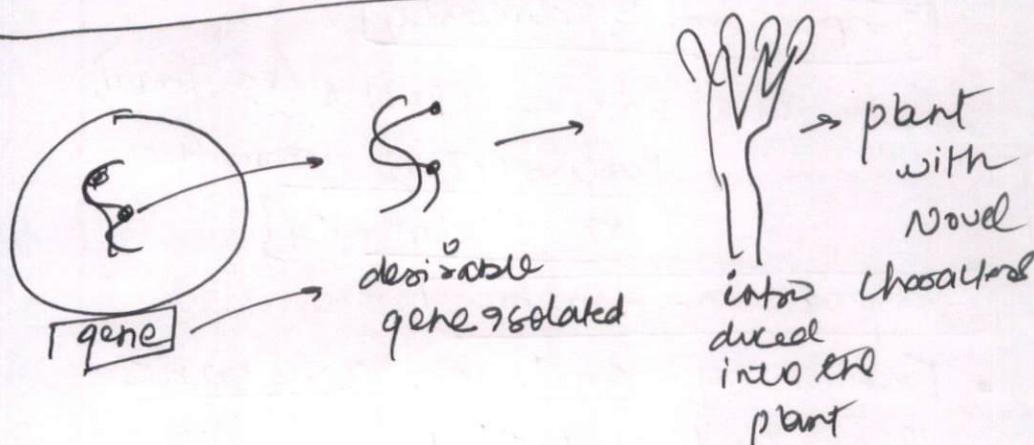
↳ 80% of Fiscal Deficit on Revenue
Expenditure

The Recent step of presenting off budget Borrow-
ings along with Budget figures is a step in right
direction

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।

genetically modified crops (GM) refers to plants obtained after introduction of novel genome into the plant to give it certain desirable traits.



Ex: Potatoes of GM crops.

Role in Food Security

① Resistant in Environmental Stress
e.g. - drought

② Presents food contamination by pests
e.g. → Bt Brinjal to fruit / shoot borer
→ Bt Cotton to Bollworms

③ Nutritional Security : Biofortification
↓
Addition of B-carotene genes
into the rice plant

④ Increase yield per hectare & India one
of the largest producers of cotton.

Precautionary Principle

- Full impact of all genetic mutations not known

Impact on Biodiversity

- wipe out native species (e.g. Bt) [parliamentary committee on Biodiversity]

98888

Impact on Health

- Transfer of Antibiotic resistance genes and mutations

Emergence of Superweeds

no conclusive data on productivity
↓

Countries without Bt cotton have
higher yield than India

As recommended by M.S. Swaminathan,
introduction of Bt GM crops should be
avoided in local native varieties.

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's price intervention policies in the field of agriculture has largely resolved food issue since independence.

However it creates several issues.

(I) Creation of a Broken System

→ Rise of intermediaries → fragmentation of marketing
 ↳ less profit to farmers
 ↳ increased cost to consumers.

→ Restriction in intra state and inter state trade ⇒ surplus in one region and deficit in other } unbalanced phenomenon

→ Impact on Food processing sector

- untimely availability of produce
- wastage worth 9,000 crore

[which always continues]

③ Complication of International Trade Rules

↳ India a signatory of Agreement on Agriculture ⇒

subject to 10% de minimis limit
on Amber Box subsidy

↳ Frequent litigations ⇒ USA challenged
India's MSP as violative of free trade

↳ invocation of Peace clause (Bali Ministerial
Conference)
during Covid

However Issues remain

• Continuation to determine
MSP and Food subsidy
based on price figures
of 1985-1986

• Developed
nations
provide
huge quantum
as research
grants

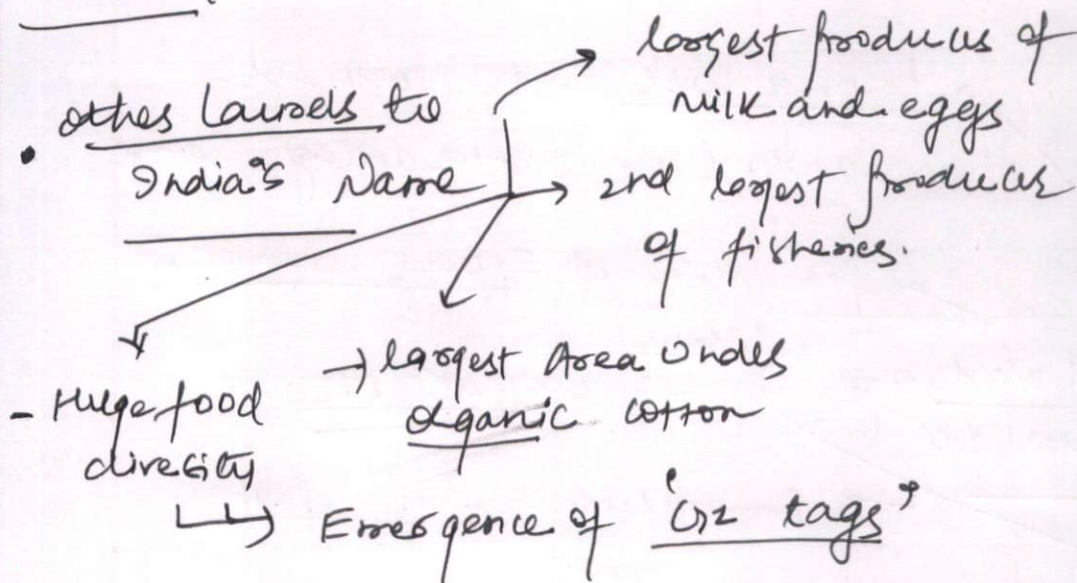
• MSP is
essential
for public
distribution
system

The recent initiative of PM-4SNA and
price deficiency payment scheme along
with procurement of 70P is a step
to diversify price incentive given by India

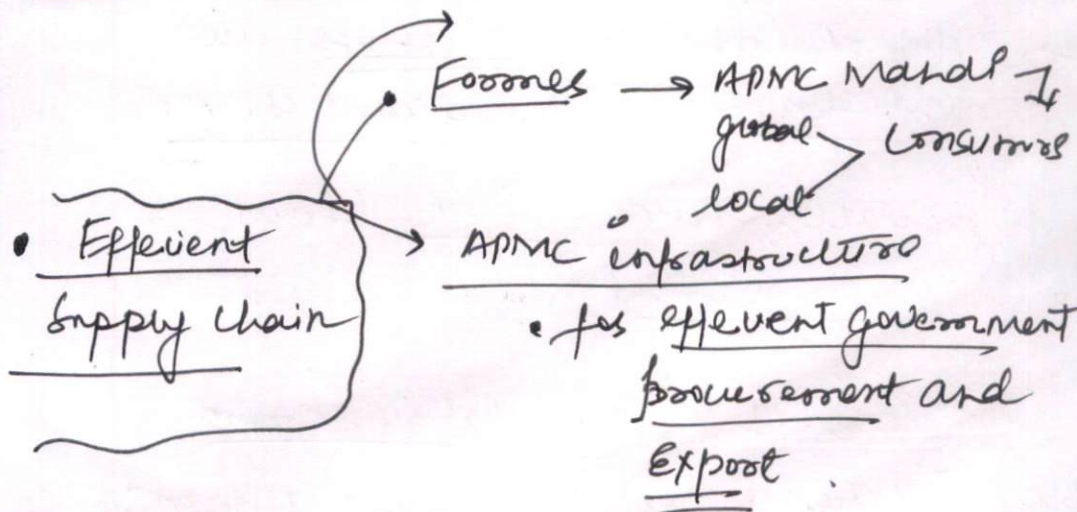
4. India has an opportunity to become a leading global food supplier provided it has an efficient supply chain and the right marketing strategies. Elucidate. (150 words) 10

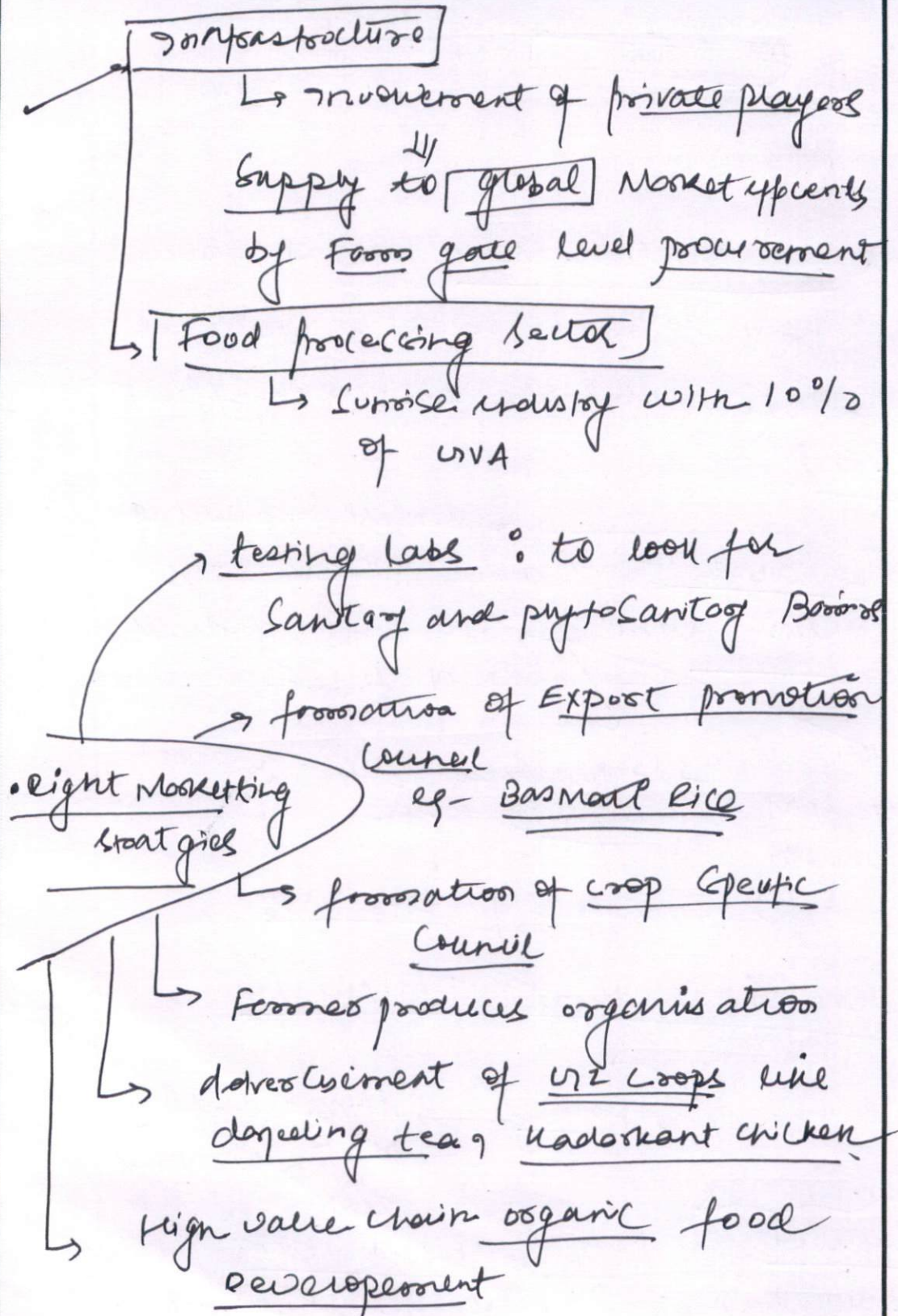
भारत के पास एक अग्रणी वैश्विक खाद्य आपूर्तिकर्ता बनने का अवसर है बशर्ते उसके पास एक कुशल आपूर्ति श्रृंखला और सही विपणन रणनीति हो। विशदीकरण कीजिए।

with 300 Million Metric tons of food grain production in 2021, India is all set to dominate the agri-Export Market



However it needs the Following.





The initiative of 'one district - one product' scheme is a step in right direction

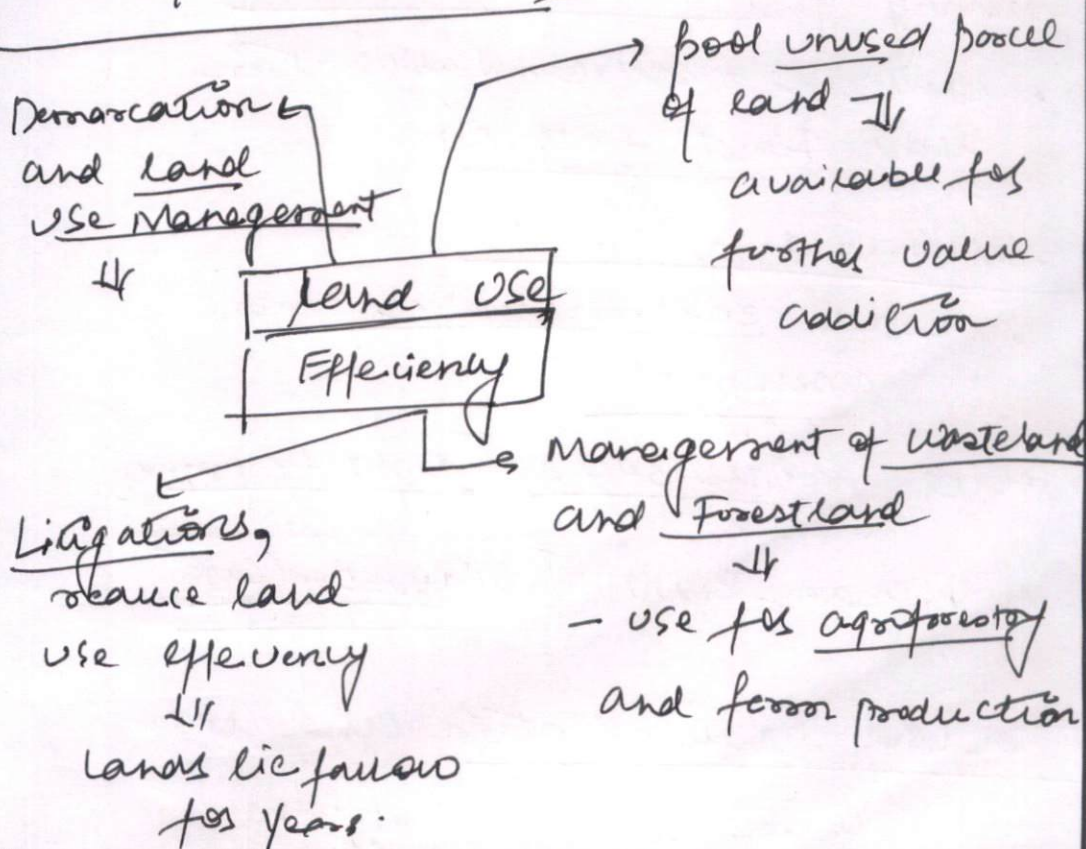
5. Land banks are increasingly gaining prominence in India to encourage land-use efficiency and enable economic growth. In this context, discuss the benefits of a land bank and state the concerns associated with it.

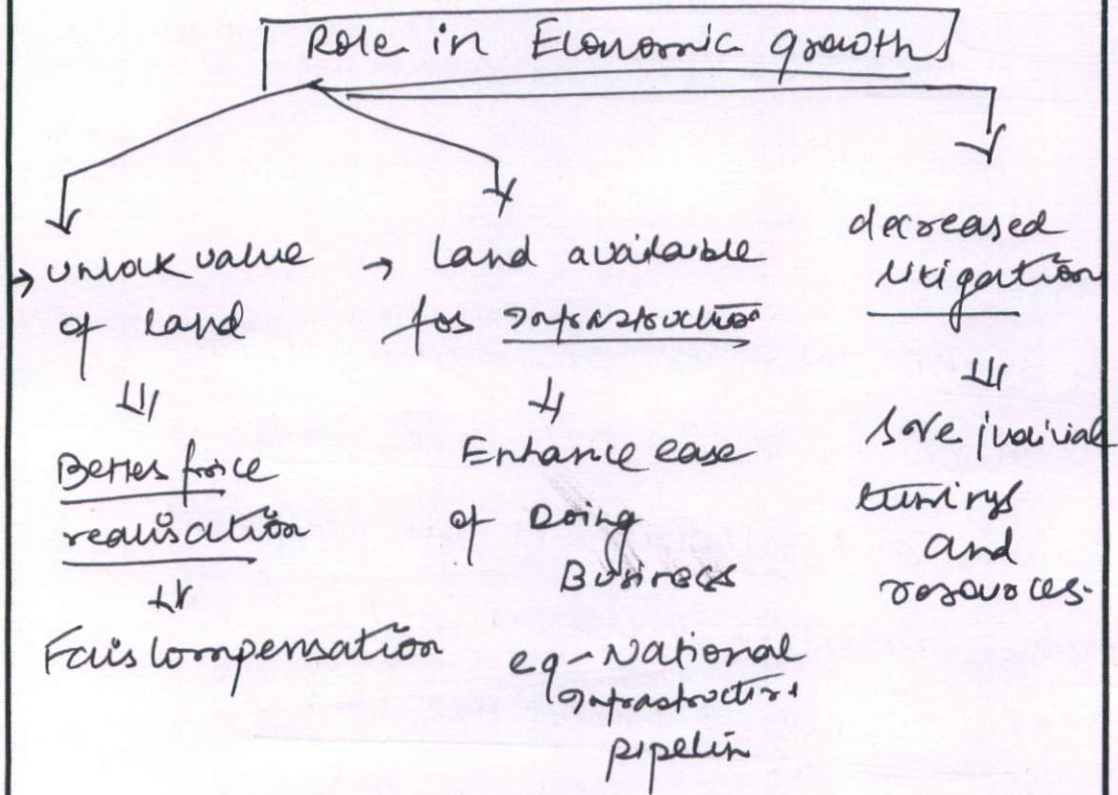
(150 words) 10

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 refers to an organisation which keeps record of all land area available and allocate it for different purposes. Recently government has set up 'Land Bank Infrastructure Limited'.

Role of Land Banks





However, Issues remain

↳ Bypassing of Fair Acquisition process

- land and resource rehabilitation under Forest rights Act

↳ Environmental Impact

- evade environmental impact assessment

↳ violate Article 300 A [Right to property]

II

A Human Right [Vijaya Devi Case]

Land record Modernisation and Computerisation

Give land title deed to computerised land Banks -

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।

Desertification is an extreme form of land degradation where the land becomes unproductive & infertile. Almost $\frac{1}{3}$ rd Area of India is under threat of land degradation [UNCCD].

Desertification as an Environmental Challenge :

① Impact on Agriculture

- ↓
• decrease yield of Maize, wheat
and endangers food security.

② Impact on Biodiversity

- water stress → Extinction of species

③ Impact on Soil

- loss of Soil organic Carbon ↓
decreased yield and
Soil Erosion

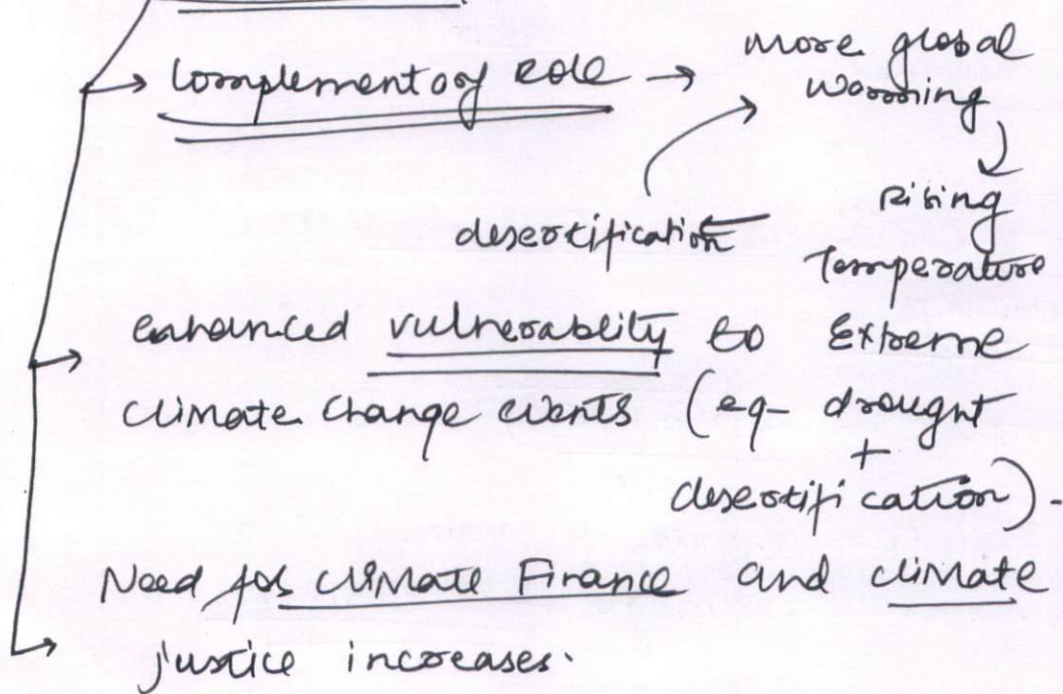
④ Impact on Vulnerable sections

↳ Women : water scarcity

⑤ Impact on Human Health

↳ Heat stress could lead to loss of productivity.

How Climate change makes it worse



The recent upgraded commitment of India to bring 350 million hectares of degraded land under Bonn Challenge is a step in right direction

SDG goal : life on land should guide us.

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।

open source license refers to those software which are available in the public Domain for free, can be freely used by all without any upfront payment [e.g. wordpress]

Advantages

↳ Leads to Innovation

- allows people to contribute freely towards improvement of software

↳ Democratisation of Technology

- India's Arogya setu freely available for use by common man.

↳ Cost Effective → Technology could reach to last man in the Queue.

↳ Useful for public go policy and
enables of good governance

Eg - Arogya setu is used for Basic
Numeracy and literacy mission
under National Education policy

However, Challenges remain

↳ Hidden cost

- ↳ The company is not liable for
any damage
- ↳ No warranty in case of any
mishap.

↳ Skill inaccessible → Digital Divide in
Rural areas

↳ There is No free lunch

↳ Quality of open source
software doesnot match the
payed software.

open source software can be an
enabler of 'Frugal innovation'.
Regulatory guidelines are required.

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।

Recently the government of India formed Indian Space Association to act as a bridge between Industry and Space Sector. It includes both ISRO and Telecom Sector as its Members.

Significance of Indian Space Association

- ↳ A platform of Exchange of Information between ISRO and Space.
- ↳ Space Exploration based on values of 'human - development'
- ↳ policy inputs to department of space for involvement of private players in space.

↳ Development of Future technologies
like Small space launch vehicle and
go for Commercial adventures

Need for Indian Space Association

↳ Limited role of India in global
space industry < 2% in 300 Billion
USA Dollars

↳ Act as an adjunct to ISRO and
NSIL

↳ more private participation on the
lines of SpaceX & Boeing etc.

Free up resources of
ISRO for interplanetary
Mission

Hence, Indian Space Association seeks
to galvanise the space sector

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।

The use of technology has been an enabler in facing the many internal security challenges of India.

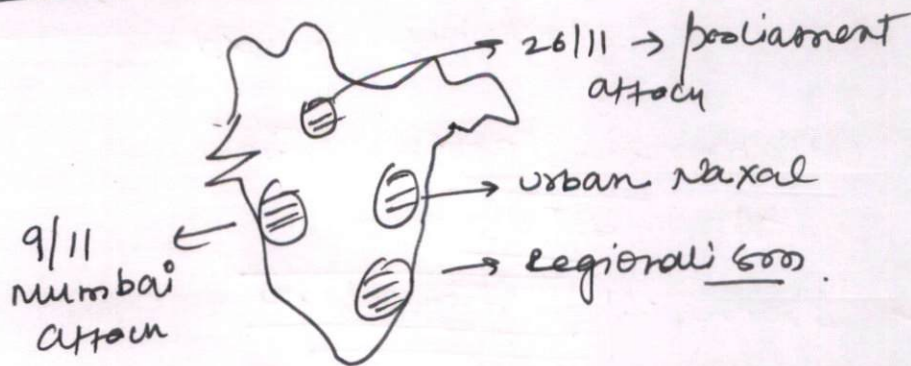
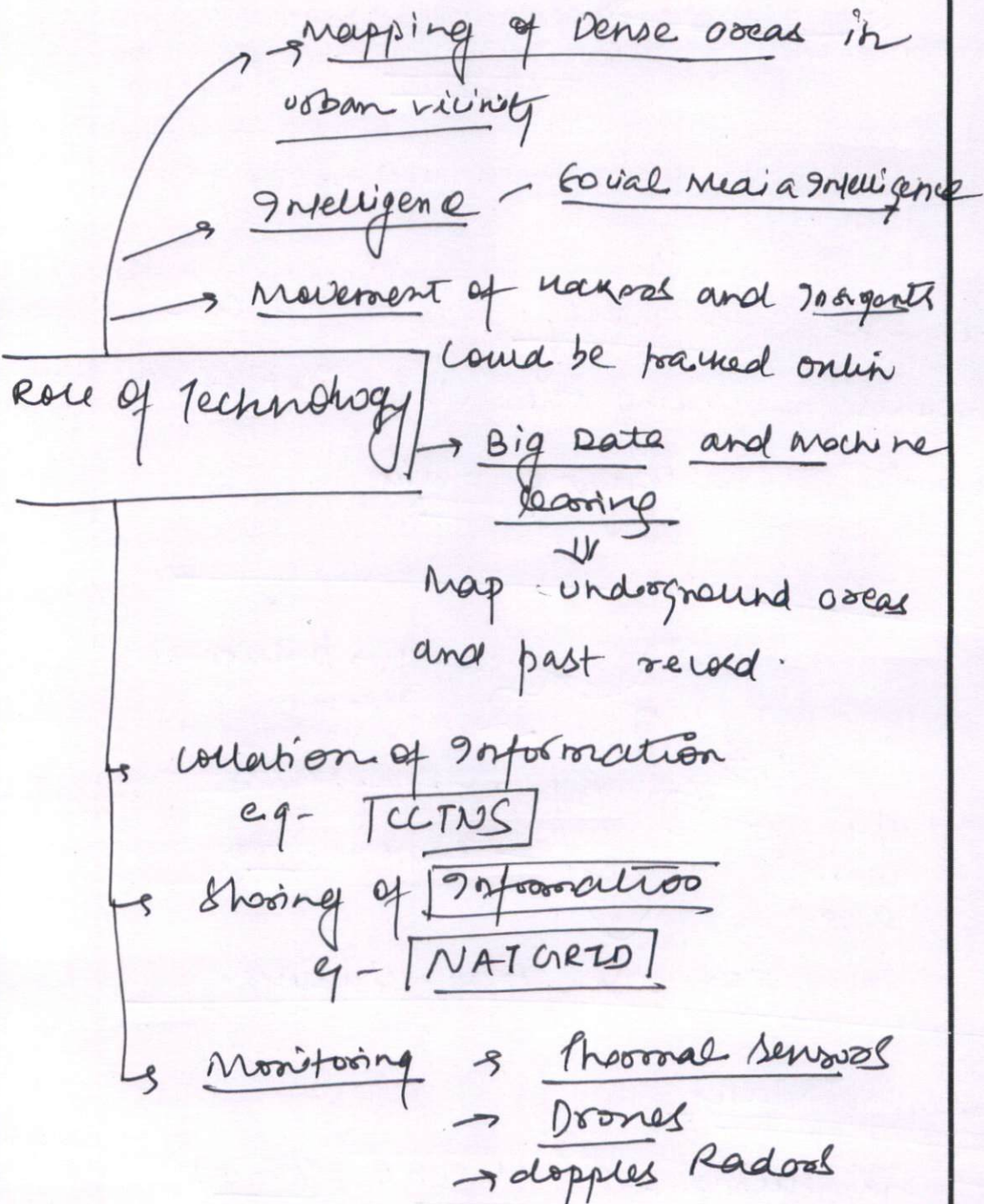


Fig: Urban Areas - Challenge

Role of Man

- ↳ For human intelligence (humint)
- ↳ For maintaining community solidarity to avoid division along communal lines
- ↳ For just and Ethical use of technology



However,
Technology can just be an enabler
in fighting the many challenges

↓

Hence need for a Comprehensive
National Security Policy

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 formulated
after the operation Blue Star of 1984
to emerge as a world class force.

Mandate of the Force :-

- ↳ Anti terrorist Squad
 - ↳ Security of VVIP especially Prime Minister and Home Minister
 - ↳ part of Bomb diffusion squad
 - ↳ offensive strategy
- e.g. - NSG coordinated during 26/11 Mumbai attack.

Achievements

- ↳ Successful in anti terrorist campaign

eg- Mumbai attack

— Attack on Parliament Building

↳ No Breach of Security of Prime
Minister till date after Indira
Gandhi

↳ Diffusion of Explosives and Bombs

↳ Not called for other Counter insurgency
operations

II/

dedicated Cadre

However, its cadre is often headed
by Z.P.S, there is often a lack of
soft skill and less attention on
mental health of Commandos.

NSG, with Major Shawaja Chakravarti,
promoted Chakravarti to its name
has held high the flag of India's
Internal Security

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।

Asset Monetisation refers to monetisation of the unused and idle assets with government in order to generate revenue for it.

As an alternative to strategic disinvestment and outright privatisation

Need for asset Monetisation

Revenue mobilisation by government
(Fiscal deficit $\rightarrow$ 6.6 % of GDP)

Huge need for capital investment

$\Downarrow$
Gross fixed capital formation
Rate decreased to 30%

Unmask true value of unused assets

Eg- NAL Monetised land to
mobilise capital for further
infrastructure development

↳ ownership of asset lies with the
government
↳ leads to ' minimum government
and maximum governance,'

However, issues remain

↳ Assessing the true value of monetised assets ↓

to determine the revenue sharing formula

↳ Long lease period of assets (almost
100 years) ↓

perception of being privatisation
in hidden form

↳ Interest of private players remains uncertain due to regulatory uncertainty and incomplete model concession agreement

Steps Needed

↳ A committee to determine the true and real cause of Asset

[Ramakrishnan Commission]

↳ Revenue to be used only for infrastructure - development of that sector and not to plug fiscal deficit

↳ Information dissemination to general public

How it differs from privatisation

Both National infrastructure pipeline and Asset Monetisation can be stepping stone towards a 1 trillion Economy.

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 refers to the listing of stocks of both for profit and non profit companies engaged primarily in social service and Social Capital.

Need for setting up SSEs

↳ Underfunding of SSEs and many
NPO's
↓
Delay in Developmental work

↳ Enhancement of Human Capital
by galvanising funds for school,
Education
↓
Development of Social Capital

↳ As an alternative to Corporate Social Responsibility

⇓

→ Skewed in geography and sectors

→ huge corpus of unused funds

↳ legitimate way of philanthropy

↳ address concerns regarding foreign Funding of various NGOs

⇓

listing on stock Exchange

⇓

Enhance Transparency and Accountability.

However, concerns remain

↳ Rules remain unclear

- Duration of listing.
- type of investors involved.

- upper limit of capital base required for being listed

↳ Taxation issues

- whether tax rebate could be claimed by listed entities

↳ guidelines regarding participation of Foreign portfolio investors

↳ Not an immediate source of funding

Awareness needed.

↳ Lack of public investment especially in case of Not for profit organisations.

Clear regulatory guidelines by SEBI is needed to source adequate Funds to Social Stock Exchanges.

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 refers to the chain of information dissemination to farmers regarding various stages of agriculture from input to production to marketing.

Challenges in provisioning of services-

↳ Language Barrier

- not available in vernacular and easily comprehensible language.

↳ Digital Divide

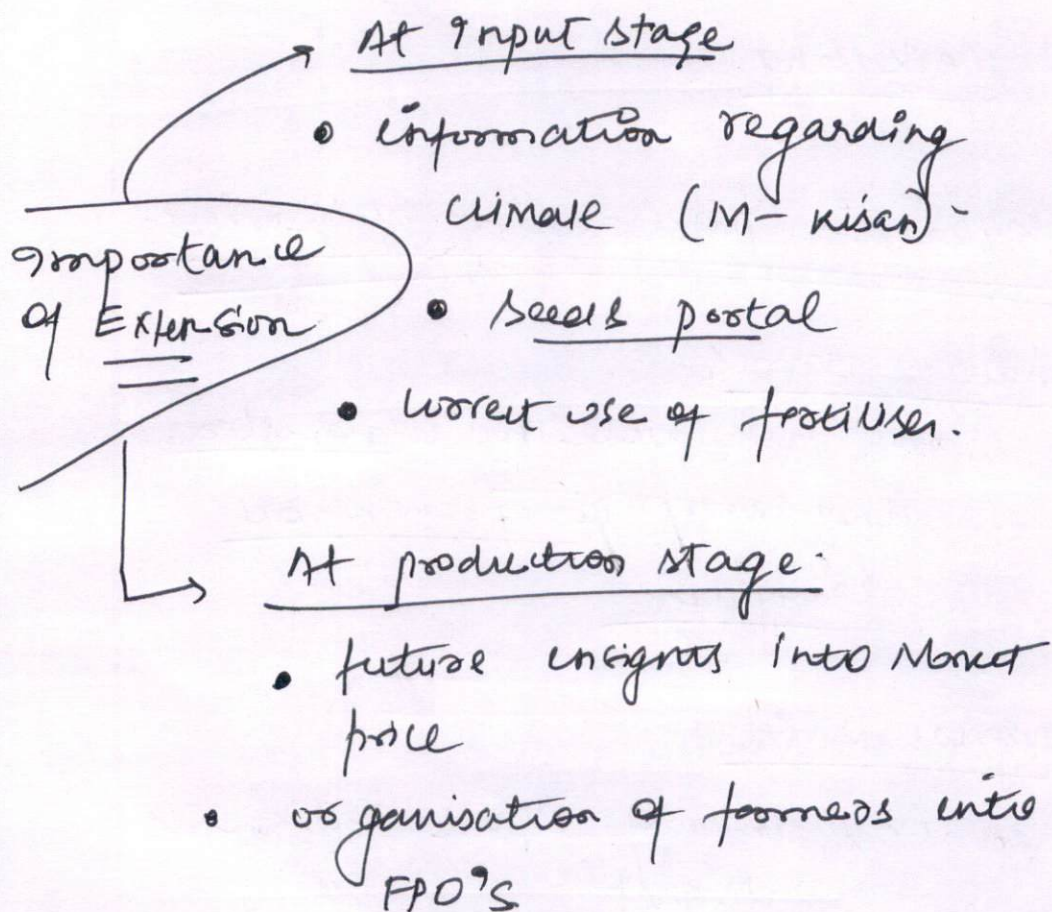
- only 45% of rural India uses internet

↳ lesser participation of private
sector

⇓

Information does not reach the
Farmers:

↳ Digitalisation of Service without
changing its nature.



→ At marketing stage

- Market intelligence to avoid price depression
- Listing on Agricultural produce on Commodity Exchange
- Integrate with E-NAM

National Mission on Agriculture Extension

- ↳ Availability of information in vernacular
- ↳ relevance redressal of farmers.
- ↳ institutional integration with Agricultural Technology Management Agency
- ↳ Submission on plant Quarantine
⇓
one health approach.

Adequate
in Agriculture Extension could lead to
doubling of Farmers income

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।

According to the periodic labour force report, ^{un}Employment rate in India is 6.4% (the highest in a decade).

Unemployment problems Faced by India.

① Structural Unemployment

- Introduction of IT and automation of jobs

② Low skill of workforce → less

suited for white colored jobs

(only 11% of graduates are employable, India skills report)

③ Fictional Unemployment

— due to cyclical nature of Agriculture,

Manufacturing and Construction industry

④ Disguised Unemployment and Under Employment

→ 50% of workforce Employment in Agriculture

⑤ Jobless growth

↳ Service sector contributes 64% to GVA but only 16% in Employment

⑥ Gender dimensions

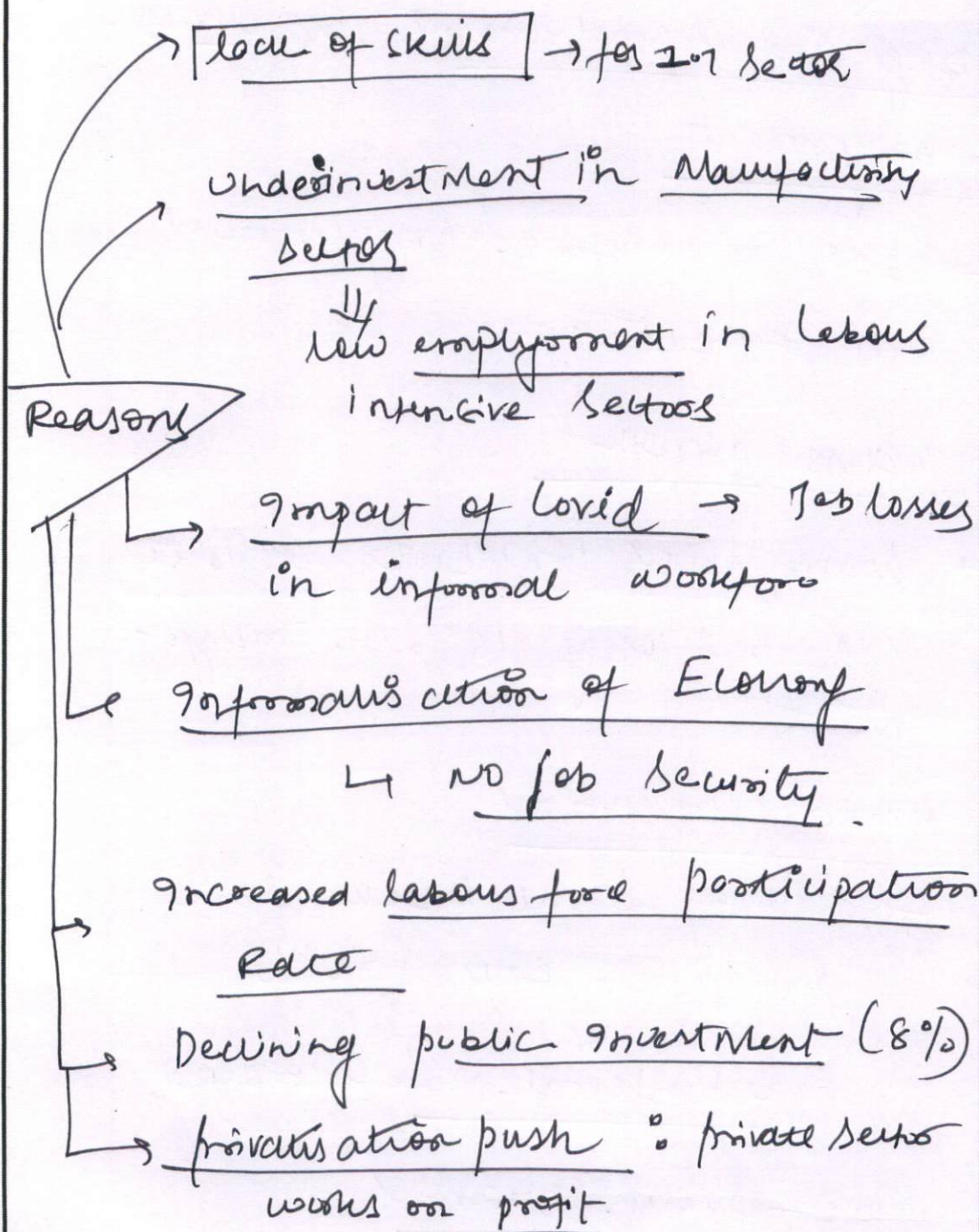
↳ declining female labour force participation rate (20%)

↓
Urban female more unemployed

⑦ Rural-Urban dynamics

↳ Rising number of Urban unemployed youth [Eiu survey 2020]

⑧ Increasing proportion of Self Employed
and casual wage [Economic survey]

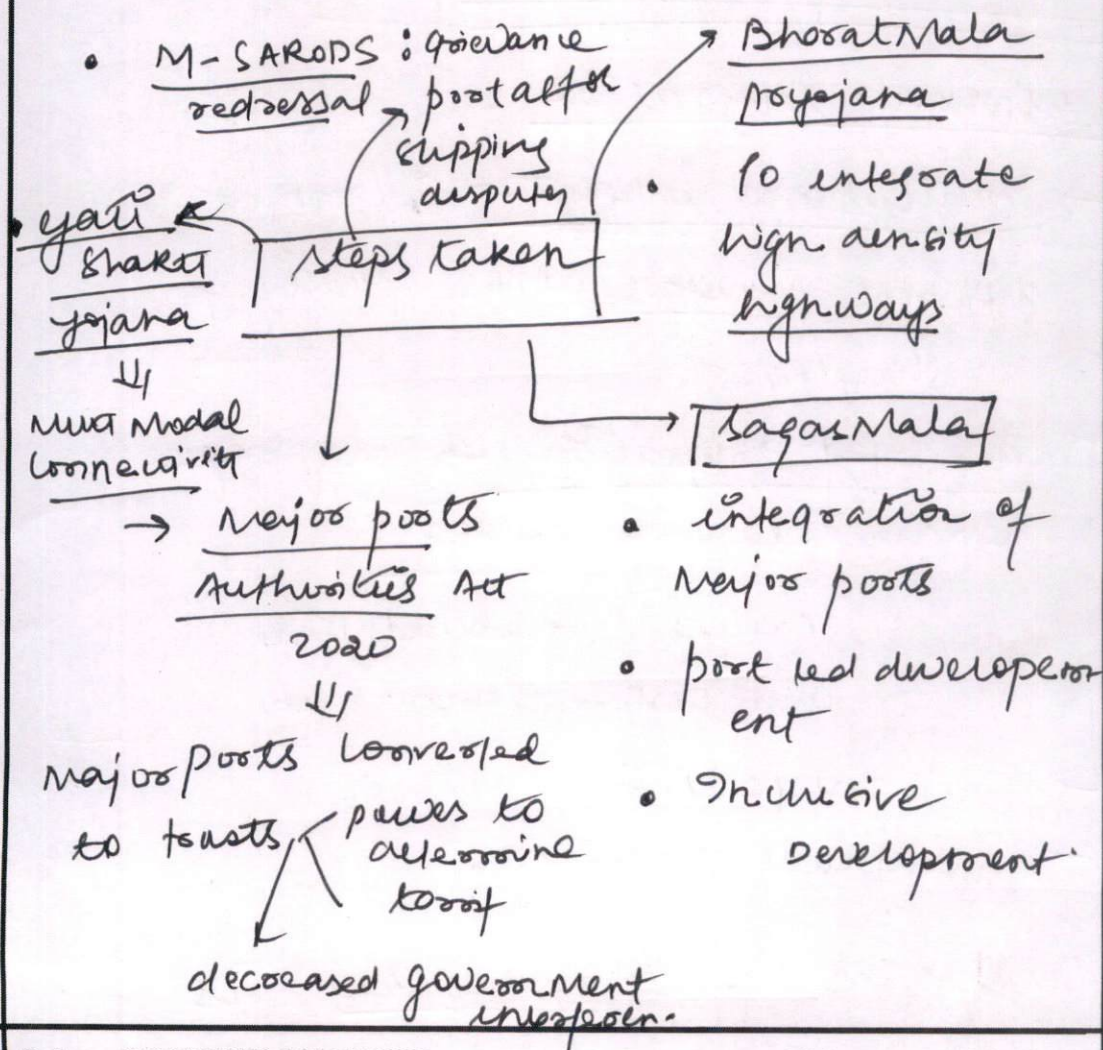


A comprehensive Employment policy
is need of the hour.

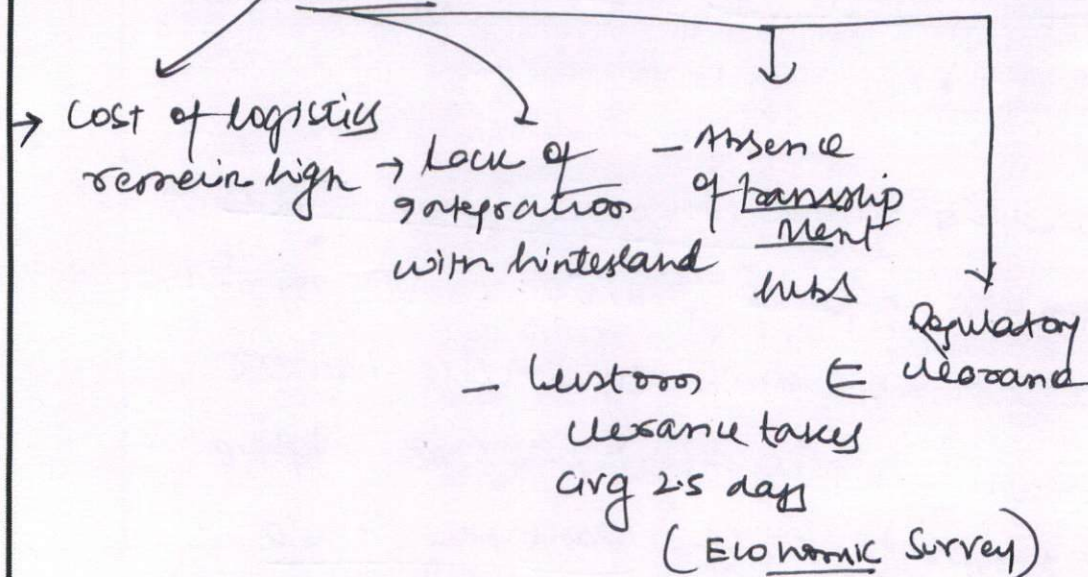
15. Although steps have been taken for integrating the dispersed logistics activities of maritime trade, much more needs to be done to make India a maritime powerhouse. Discuss. (250 words) 15

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।

According to Economic Survey 2020, almost 90% of India's trade by volume and almost 60% by value travels through water routes. This highlights the importance of Maritime Trade.



However issues remain



Hence Following steps Needed

① Multimodal integration

- Institutional integration : Connect different ministries with Ministry of Shipping
- Regulatory integration → one single window clearance needed.
 - ∴ Reduce turnaround time and customs clearance cost
- Fair integration
- Manpower integration

② Development of Transshipment hubs

as in Mauritius → facility for vessels to
dock and refuel
↳ Better regulatory Environ-
ment

③ Connectivity to Winterland and Congo
Diversification → Many ports competing
same cargo [NITF Nayag
@ 75].

④ See Ship building as an Infrastructure
⇓
• New technology to increase speed
and local community involvement

⑤ Connect to inland waterways
⇓
→ maintain regular depth → regular dredging → Attha ganga
and gauri ganga

⑥ Economic development around ports
⇓
ports as vibrant Economic hubs.

The envisaged 'National Infrastructure
pipeline' should be used for augmenting
and unlocking the powerhouse potential
of this sector.

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 refers to the total stock of Natural resources around us in the form of land, water, soil and Biodiversity Services.

Need for Natural Capital Accounting

- ↳ To know the contribution of Natural resources in Economy
- ↳ calculation of gross Environmental product
- ↳ To estimate Carrying Capacity of Ecosystem
 - proper planning of resources
 - Development of urban agglomerates
 - ↳ land use planning
- ↳ To quantify the pressure on Natural

resources

- Data is vital for policy making.
- Awareness and Behavioural change
Communication

- Earth Hour by world wide Ford.

↳ planning for Sustainable Development

How much resources used?

How to plan with the left over resources?
eg. Coal reserves depleting
↳
Need for Renewable
push.

↳ Policy implications

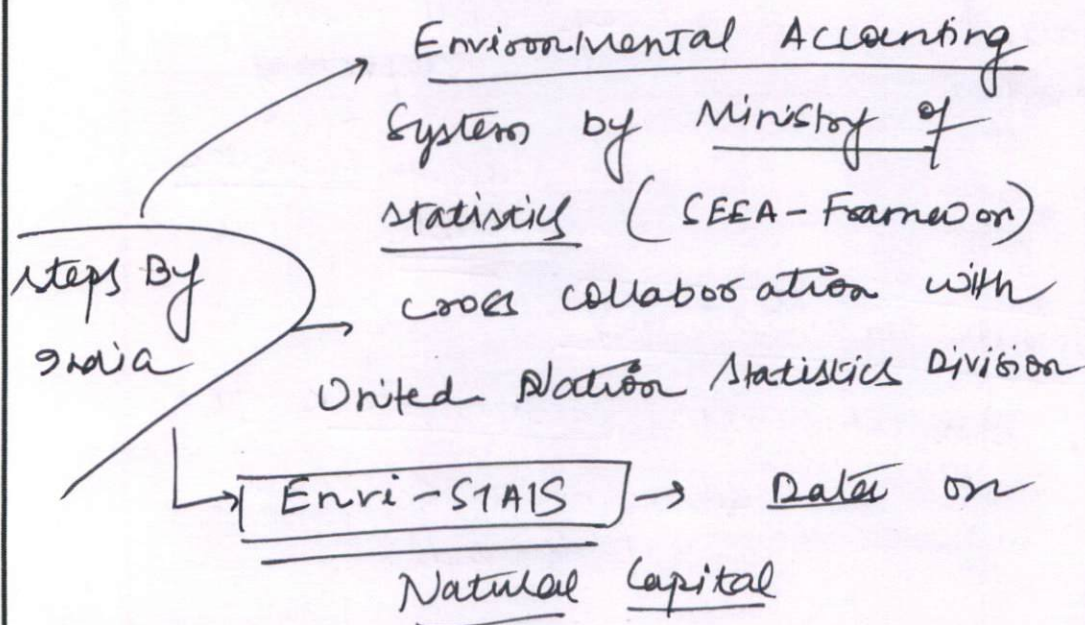
- Quantity total Carbon Stock ↓
↳ Commitment under
Paris deal
- Economic and climate justice
↳ impact of resource depletion
on coastal areas
- planning of Sustainable tourism,
Blue Economy, ecotourism.

Ecosystem Services and Link to Economy

↳ one tree gives services worth Rs 1 trillion dollars

↳ replacement of these services would require financial resource mobilisation

eg - cooling services under National Cooling Action Plan



Natural Capital Accounting is a powerful tool towards realisation of a \$ trillion economy with the goal of 'Prakrati Rakshati Rakshita'

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।

Almost 50% of Indian population is expected to live in cities by 2050. This necessitates the need of India for rapid urbanisation.

However, urbanisation has been unplanned and led to

(A) Increased Risk of Natural disasters.

- loss of urban wetlands due to Encroachment

⇓

Urban Floods e.g., Chennai
Mumbai

- Concretisation of ground leads to reduced groundwater

⇓

Almost 70% of India is water stressed [Niti Aayog Composite water Management Index]

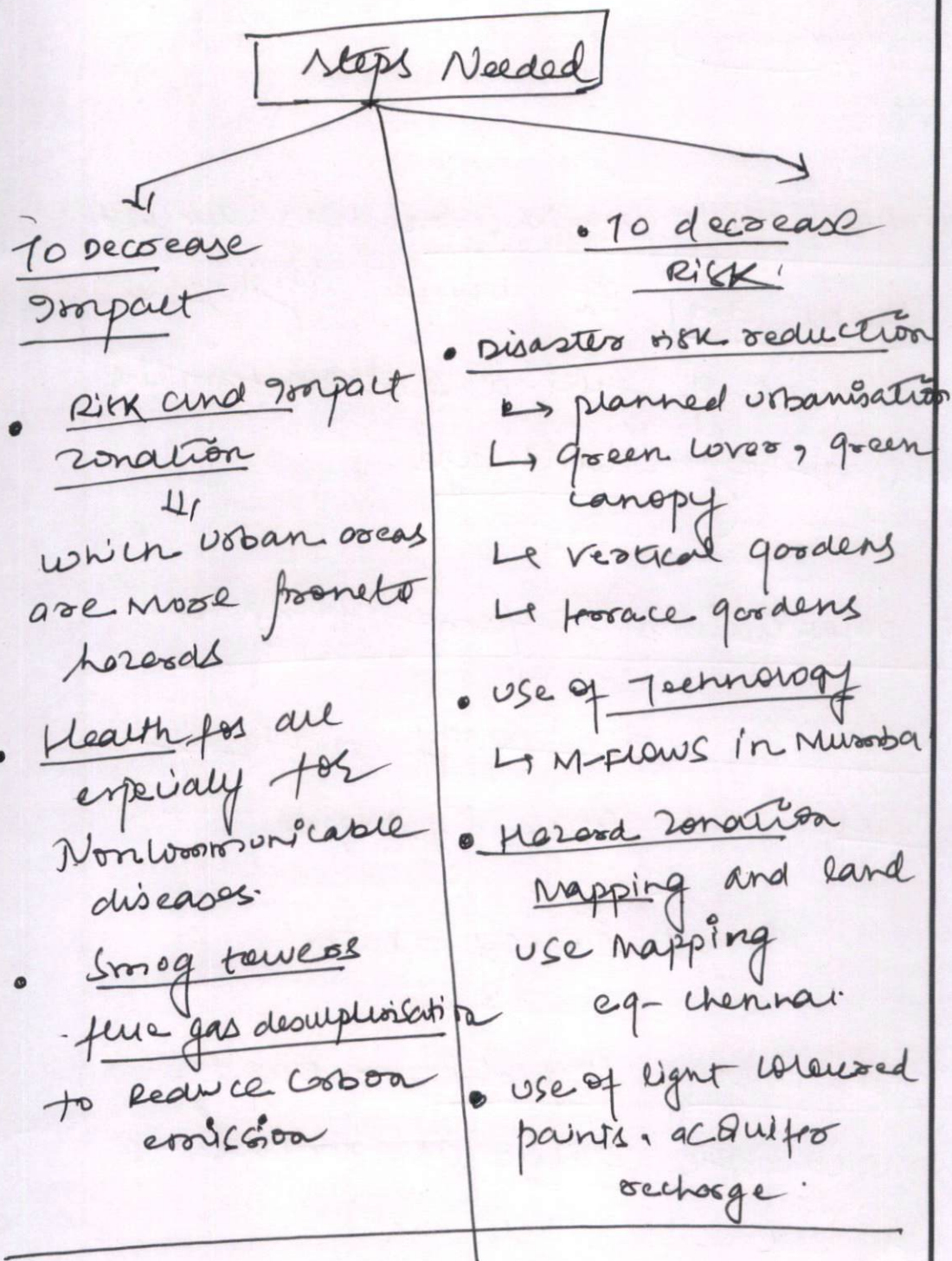
- Use of Asphalt, vehicular pollution and skyscrapers
↓

↳ Urban Heat Island Effect

- Delhi Air pollution → Almost 95% of pollution contributed by urban industries and transport
- Shift in Rainfall pattern due to formation of photochemical smog → decreased photosynthesis

③ Increased Impact of Natural Disasters

- In case of Urban Floods → NO Natural seepage due to loss of green cover
↓
Road blocks and traffic jams.
- Land Encroachment → Unavailability of land for green parks and green spaces.
- Slums and ghettos → Risk of Health Hazards compounds Natural Vulnerabilities.



India has had a brilliant history of planned urbanisation since Indus valley. It needs to be integrated again to fulfil SDG - 'inclusive cities and growth'

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।

National hydrogen Mission was launched in Budget 2021 to utilise hydrogen as a source of fuel and transform the vibrant hydrogen landscape.

Its potential as a game changer

- 1) clean source of Energy → use of green and Blue hydrogen

↓

Almost Energy Neutral.

- 2) High Energy Density → due to high calorific value as compared to other source of fuel.

- 3) As an alternative in internal combustion engine

↓

Reduce vehicular emission.

4) Combination of Hydrogen and CO₂ $\downarrow$
counteract air pollution
and particulate matter release

5) widely available $\rightarrow$ can be
generated through Electrolysis of
water

6) Reduce Current Account Deficit $\downarrow$
India's 3rd largest importer of
oil worldwide

7) International obligations

- India committed 950 GW of
Renewable Energy by 2030

[Glasgow Climate Summit]

however challenges remain

1) low of scalable infrastructure

$\rightarrow$ ~~electrolysis~~ Electrolysis of water

required at large scale to produce
scalable Energy

-) Safety concerns
 - ↳ highly inflammable and
no smell on leak.
-) Not all colour as yet green
 - ↳ grey hydrogen from fossil fuels
Emits CO₂
-) It is not combustible by itself
but acts as a carrier of Energy.

steps taken → National Hydrogen Roadmap
for land holding of industry
↳ move with USA for better
utilisation.

Hydrogen is the future of changing
Energy paradigm worldwide. Roping
in private sector and innovation in
usage can be a big Boost.

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।

According to World Economic Forum,
cyber security is one of top 10 risks
facing human kind. The interconnected
nature of world further compounds the
issue.

Need for cyber security

- Geo strategic instability
 - ↳ Technologically advanced China hacked MIND servers
 - ↳ Threat to internal security in case of breach of sensitive infrastructure
 - ↳ Damage to critical
- Awareness about cyber threats
 - ↳ Nehru formulated a policy on cyber security in 2013
 - ↳ use of IT Act for interception
 - ↳ Home Ministry alert on 600%

Infrastructure can
create economic
instability in the
region

eg- D-TRAK compromised
data of Banks
↓
cyber financial
Fraud

Increase in
cyber crime since
2016

→ involvement of
cyber swachta
kendras

↳ Threat to Energy infrastructure
eg- Kundakulam Nuclear
plant

Despite of the above, India's progress has
been modest as

- 1) NO dedicated law for cyber security
- 2) inadequate implementation of cyber
security policy of 2013
 - ↳ no data scientist recruit
 - ↳ cyber security volunteers remain
inadequate
- 3) limited capability for offensive and

Defensive attack due to lack of an
active 'hit back doctrine'

- 4) Comparison vis a vis other Nations
→ USA has 'Active cyberspace command'
- 5) Imports Hardware and Software
→ Breach of Sovereignty is easy
- 6) No Data Protection Law
→ Leads to cyberfinancial Frauds,
cyber Stalking.

However, India has also taken many

steps

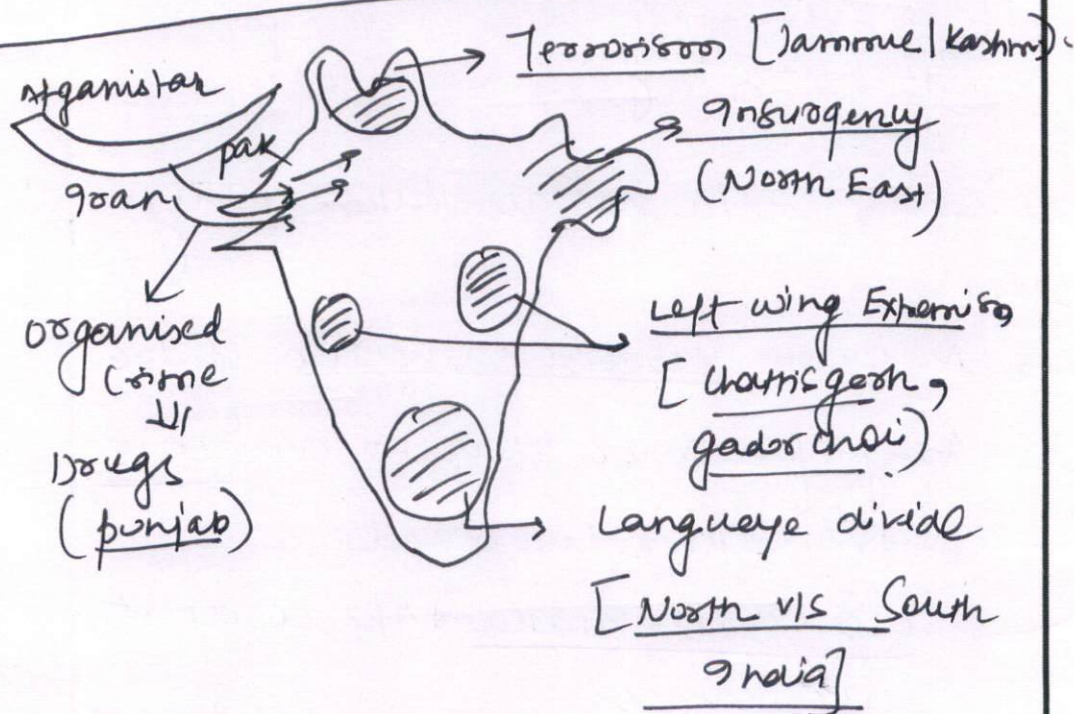
- National cyber coordination centre
- Army plans to develop an active
cyber defence command
- USB-Pratibha App to report
cybercrimes.
- Integration of cyber security with
National Security

Further, a new cyber security policy is
the need of hours.

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।

The internal conflicts of India are a result of multiple factors. Developmental deficit, poor governance and inequitable growth being some of them.



File: Major Internal Conflicts

Role of developmental interventions is limited because

→ Issues having an Emotive Basis

Eg - language divide between
North and South India

→ Issues have religious Basis

Eg - lynching of paghars and muslim
youth.

— Communalism

↳ Inequitable distribution of wealth

— Lack of Social & Economic justice
to reach Tribals under forest
rights Act

↳ Adamant nature of portected groups

— NSCN in Nagaland doesnot want
to give up idea of separate flag
and constitution.

↳ Developmental intervention doesnot
reach the lower section due to

Corruption.

However Development still remains
relevant and fulcrum to fight these
Conflicts

↳ Economic well Being and poverty
eradication

- Elimination of left wing Extremism
through 'SAMADHAN DOCTRINE'

↳ Educational attainment of minorities
eg → Nai Rokhini, Manzil for girls.

↳ Economic deprivation begets social
and communal deprivations
eg- Muslims (40% out of 14000)

↓
Sachar Committee

India needs to Enlarge the Canvas
the Development Beyond Economy. For
Development has to be inclusive
and participatory with Sabka Saath, Sabka
Vikas, Sabka Viswas.