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GENERAL STUDIES (TEST CODE : 1515)

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Medium Eng./Hindi	ENGLISH	Registration Number	545314
Center	CRN	Date	28/12/21

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). उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न-पत्र कोड, विद्यार्थी क्रमांक आदि)। 2. There are TWENTY questions printed in ENGLISH & HINDI इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं। 3. All questions are compulsory. सभी प्रश्न अनिवार्य हैं। 4. The number of marks carried by a question/part is indicated against it. प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं। 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. 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। 6. Word limit in questions, if specified, should be adhered to. प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए। 7. 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।
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Total Marks Obtained:			
Remarks:			

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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 Borrowing refer to borrowing of government from sources like RBI (internal Borrowing) or outside country (external Borrowing) to finance its fiscal deficit .

→ Role in government raise fund :-

- (1) Helps raise funds to infrastructure projects. eg: healthcare
- (2) To finance for welfare schemes
eg: - Pensions, PDS etc.
- (3) To strengthen its public institutions
eg: - Banks or FCI .

→ Concerns associated :-

- (1) It is not reflected in fiscal deficit yet needs to be repayed later thus, adding extra-burden on government finances.
- (2) Lessens accountability of government towards tax-payers.
- (3) It is unhealthy fiscal measure in long run.

With an unprecedented crisis like COVID, off-budget borrowing can be helpful for economic recovery, however, it should not be made into a regular affair.

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।

With 68% area susceptible to drought and 12% to floods (NDMA), climate resilient crops through use of GM crops is imperative for our food security.

→ GM crops for food security :-

(1) To withstand global climatic variation and their impact on crops.

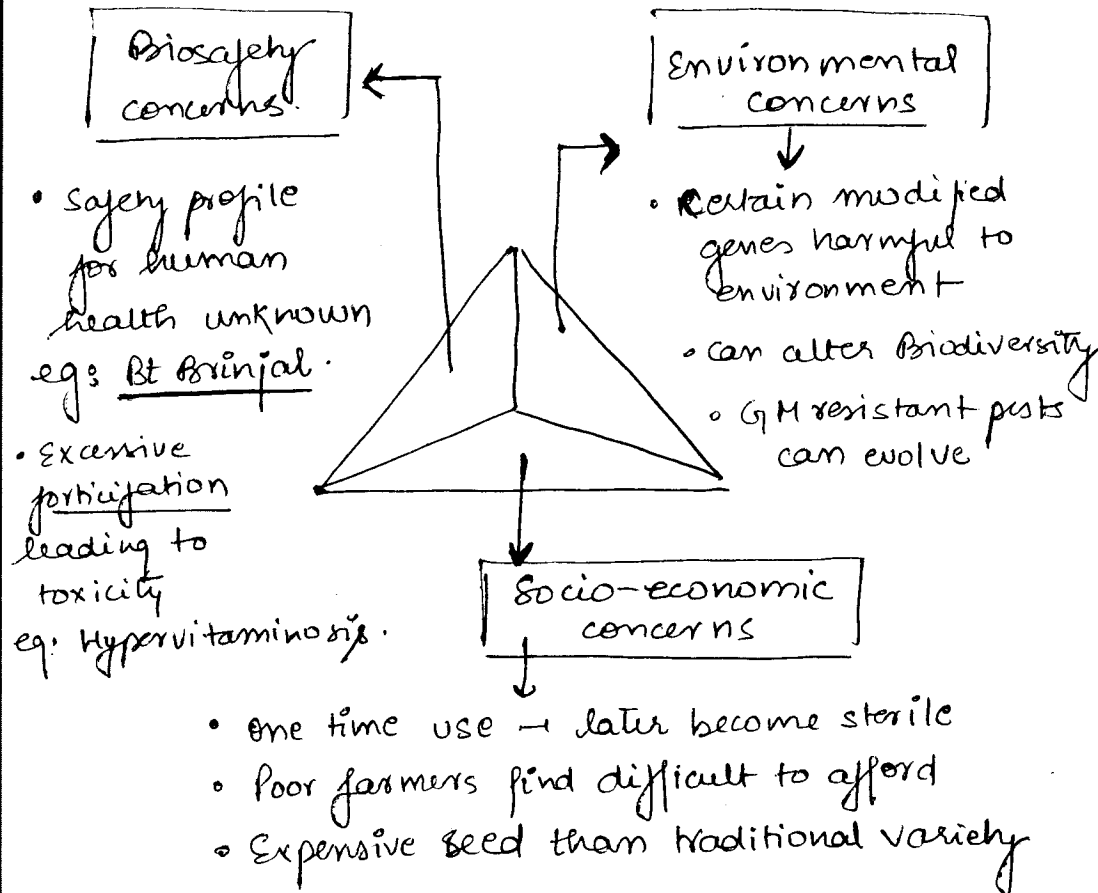
eg:- Droughts due to El-Nino.

(2) To enhance yield in line with demand of growing population of India.

(3) To provide nutritional security
eg:- fortified Vitamin A rice

(4) To develop crops resistant to pests.
eg:- BT Brinjal, DMH-mustard.

→ Concerns with GM crops



Despite concerns GM crops have propensity to ensure food security and with regulation/control of Genetic Engineering Appraisal Committee (GEAC) & FSSAI such crops usage could be useful in long run.

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।

Price intervention policies such as MSP regime have evoked farmer protest and also raised concerns at WTO for its inclusion under Amber Box.

→ Price intervention & Broken system :-

(1) MSP :- → Skewed crop production towards 23 MSP notified crops.

- open ended procurement then results in wastage.

- ~~MSP also~~ Present MSP also considered inappropriate.

eg:- C2 as Basis of calculation is demanded resulting in protest

- Doesn't result in long term growth of the sector.

eg:- Price Support Scheme under PM-AASHA a short term measure.

→ Price intervention : International concern

(1) Against WTO's rule of Price support for agriculture.

eg:- USA demanding MSP's inclusion in Amber Box.

(2) ~~WTO~~ Trade facilitation Agreement has yet not been concluded due to the price intervention since 2013.

(3) Evoking of Peace Clause as done recently by India is seen as restrictive practice by developed world.

However, considering the concerns of our agricultural structure such as low farm income etc. such schemes are needed at present. Government should work towards overhauling in form of strengthening food processing & market linkage to reduce dependence on such schemes.

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।

Indian food exports currently form
2.5% of the world food exports as per
Economic survey 2020-21.

→ India as leading food supplier

(1) With efficient supply chain :-

- Diversifying raw materials to be exported
eg:- At present rice, wheat dominate
in world export.
- Strengthening logistics to reduce wastage.
eg: use of Kisan-Rail for perishable
commodities.
- Investing in infrastructure such as
cold-storage, food processing
industry to convert waste → wealth
eg:- Agriculture infrastructure fund can

be utilised for this.

(2) With Right marketing strategies:-

- Diversifying market: eg:- recent rice export to Timor leste
- Proper certification: eg: for organic products which often fail to pass sanitary & phytosanitary measures.
- Quality check: eg: In fisheries and meat products to be ensured.

Indian export saw 18% increase in COVID times that can be further enhanced by use of schemes like participatory guarantee scheme for organic products and GI tag to ensure originality & high quality in world trade.

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 a method of ^{data} pooling in land _{data} belonging to government under one roof for its better utilisation.

→ Benefits of land banks :-

- (1) Utilisation of resource lying idle
- (2) Better information on existing land parcel to be able to use it for development.
- (3) Will help address issues such as fragmentation of land holding which hampers credit supply.
- (4) Will speed up acquisition process.
- (5) Better claim over taxes such

as property tax can be ~~at~~ made with clear information.

(6) Will speed up infrastructural development
eg: Affordable housing.

— Concerns with land banks :

- (1) No proper information on ownership rights of land.
- (2) Technologically system eg: GIS need to be developed to succeed.
- (3) Land & Property are sensitive issues & could increase disputes

Land Banks could be helpful in speeding up development projects in the country that remained stalled owing to acquisition delay & thus, need to be effectively utilised.

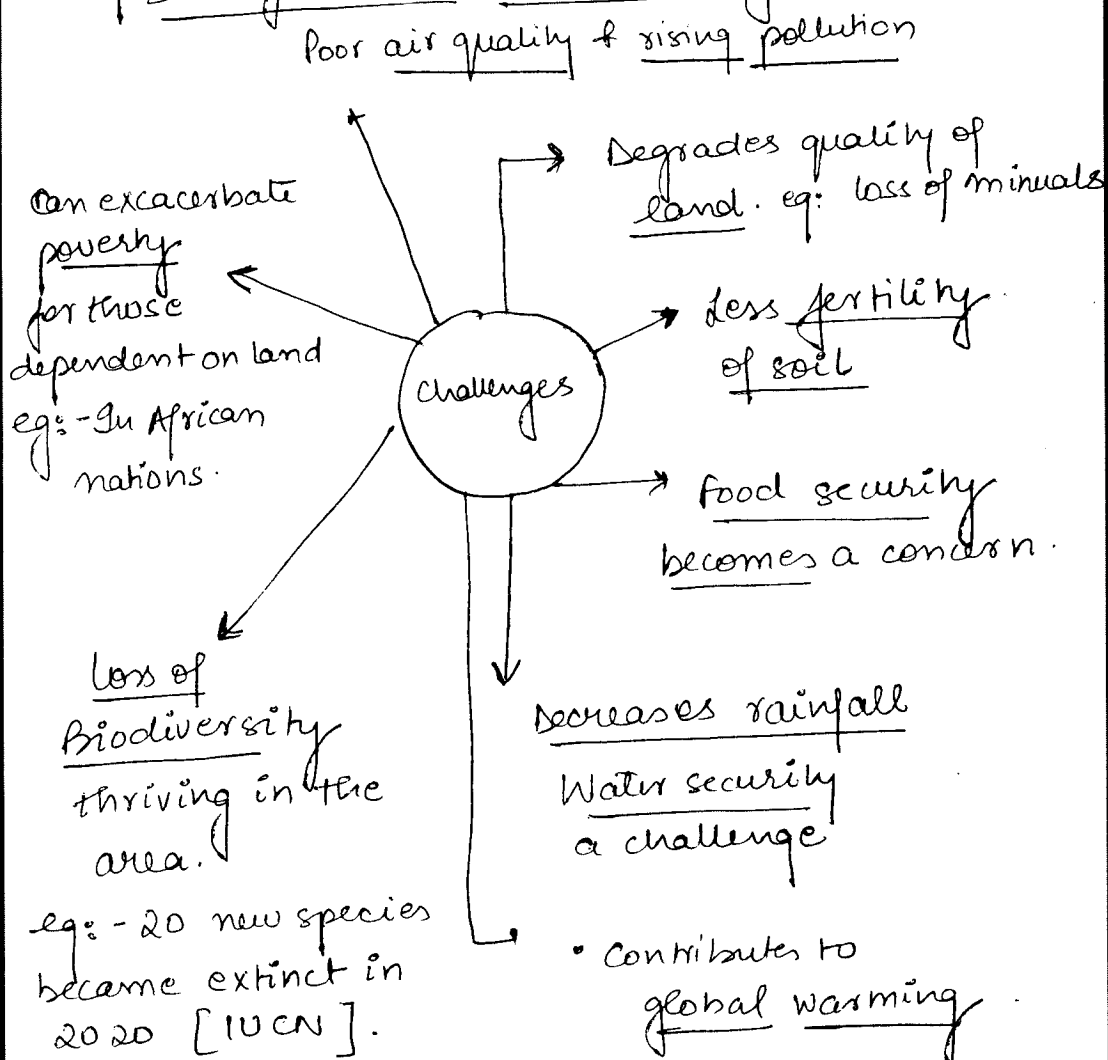
6. Desertification has been described as one of the greatest environmental challenges of our time and climate change is making it worse. Discuss.

(150 words) 10

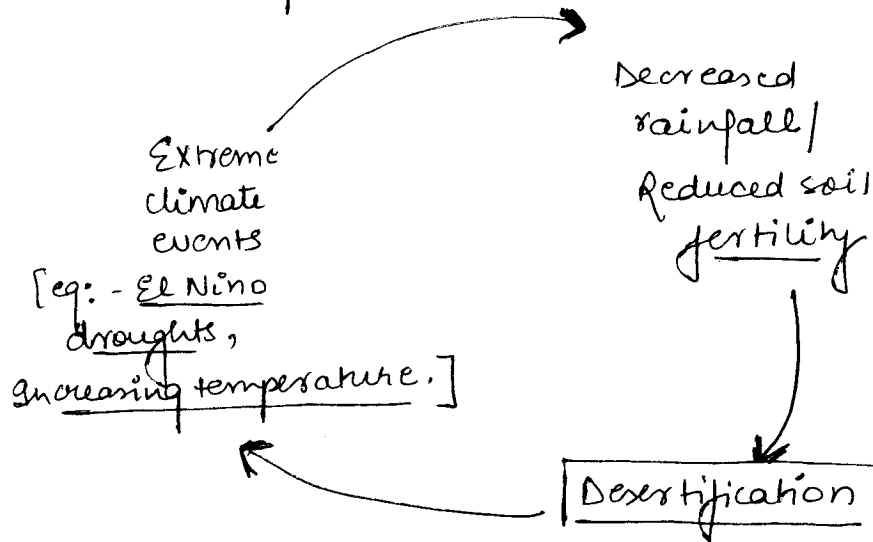
मरुस्थलीकरण को वर्तमान समय की सबसे बड़ी पर्यावरणीय चुनौतियों में से एक के रूप में वर्णित किया गया है तथा जलवायु परिवर्तन इसे और बदतर बना रहा है। चर्चा कीजिए।

Desertification refers to process of degradation of land due to various factors such as deforestation and climate change.

→ Desertification as a challenge :-



→ Climate change enhancing desertification :-



→ To curb desertification :-

- (1) Enhance afforestation eg:- Great African Wall.
- (2) UN Convention on Ecosystem Restoration
eg:- 350 mn hectare degraded land to be restored by 2030.
- (3) UNCCD :- India's pledge to enhance tree cover.

Desertification, thus a global challenge and would require collective efforts and use of international forum for collaboration to stop its progression.

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 refers to rights of the owner over the product. It includes patents, copyrights, trade marks, GI tags etc.

→ Advantages of 'open source' license

- (1) can speed up the process of innovation.
- (2) Reduce litigation with regard to patent & infringement of ~~innov~~ rights.
- (3) Can help in discovery at times of crisis
eg: Patent pooling for COVID vaccine development.
- (4) Will be helpful for start-ups & developing countries who

often find it challenging to pay
for the rights.

— Disadvantages :-

- (1) concern with regard to data breach
- (2) could result in anti-competitive practices
- (3) Stagnate innovation & only incremental changes would be made on existing products.

IPR needs to be protected as it is owner right over creation
however, open license if used judiciously could be helpful in strengthening of innovation & lead to newer discoveries.

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।

The majority of Indian space achievement
eg:- Chandrayaan, Mangalyaan have
been accomplished by ISRO, funded
by government of India.

→ Dominance of government in space sector :-

(1) ISRO, being leading space research organisation for space projects which is Govt undertaking.

(2) Projects largely designed to strengthen government functioning.
eg:- NAVIC for Regional navigation use by Navy.

(3) All international collaboration done under government of India.
eg:- Indo-Russia collaboration for Gaganyaan.

(4) Control of functioning under Ministry of science who funds >90% of the projects.

→ Significance of Indian Space Association

- Would enhance participation of private sector thus, lessen monetary crunch
- Would diversify focus areas
eg:- Satellite Based internet.
- Lessen Burden of work on ISRO, so better output in existing projects
eg:- Chandrayaan - II.
- Would allow for innovation & growth eg:- Digiantra: a start up in space - sector
- Increase foreign investment in space sector.

With evolving time and widening horizons of science & technology a collaboration between public & private sector can strengthen India's space programme.

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।

India faces myriad of internal security issues like naxalism, terrorism, border insurgency to cyber-threats that can be dealt effectively with use of technology.

Technology as major stakeholder in dealing internal security issues :-	
Issue	Use of technology
(1) Use of drones :-	
(1) <u>Insurgency and Infiltration</u> :- In areas inaccessible due to difficult terrain & changing river flow.	eg:- Use of <u>CIBMS</u> Comprehensive Integrated Border Management System and <u>BOLD-IT</u> along <u>India-Bangladesh</u> border.
(2) To keep check on <u>miscreants</u> .	eg: Use of <u>Drones</u> to keep a <u>vigil</u> on

(3) Broader coverage
and avert
attacks

majorities or terror
affected areas.

eg:- Satellite monitoring
of areas and use of
jammers and radars
to block signals.

(4) Protection of
cyber system

eg:- cyberdome project
of Kerala or anti-virus
system installation for
threats like malware

(5) Enhance
awareness &
support in rescue

eg:- Use of telephones &
TV / social media.

Use of technology to be accompanied
by strengthening skill set of the manpower
of security agencies to operate these
systems, in addition to their existing
capabilities can be helpful to
prevent any major security attack.

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 (NSG) or black-cat commandos have been crucial in handling the terror attack of 26/11 in Mumbai in 2008.

→ Mandate of the force. :-

- (1) It includes soldiers recruited from various state police & central forces
- (2) Special training is provided to deal with terror attacks
eg:- Search & rescue operations.
• Dark night searches etc.
- (3) Administration is under the control of ministry of Home Affairs who is responsible for payment of allowances etc.

(4) Under conditions of peace such commandoes continue work in their respective forces.

→ Achievements :-

- (1) Successfully handled the 2008 Taj-Hotel [26/11] Mumbai terror attacks.
- (2) Played significant role in 2006 blast in Delhi market.

NSC has thus been a important branch to handle terrorism which emerges as biggest internal security threat to India owing to proximity to countries like Pakistan & Afghanistan

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 generating income from the existing assets such as land, infrastructure projects etc. to effectively utilise them for economic growth.

→ Need for asset monetisation in India :-

- (1) Plenty of assets lie idle and could be used to generate revenue.

eg:- Land parcels of government can be used for development.

- (2) for Better maintainence of existing projects eg:- Habibganj Railway Station functioning improved post monetisation.

(3) For faster completion of Brownfield projects

eg:- leasing airports in Tier 2 & 3 cities under UDAN scheme.

(4) Income generated by government can be utilised in other areas eg:- health & education creating a virtuous cycle.

(5) generating employment :-

eg:- Development of areas around National Highways.

→ Issues to be addressed for National Monetisation Pipeline :-

(1) Better price realisation of assets leased:- Swiss-challenge method can be used for the same.

(2) Administrative inefficiencies :-

eg:- Bureaucratic delay, information on land parcel existing in silos need to be corrected.

(3) greater involvement of private sector
by enhancing their confidence.

eg:- Previously disinvestment plans saw only
1-2 major companies participating.

(4) Prioritising assets to be monetised:
else few assets would only be developed
& rest neglected.

Thus, 6 lakh crore investment
in national asset monetisation
pipeline has potential to transform
India's infrastructural scenario &
enhance development but existing
issues of the same need to be addressed
at the earliest.

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 stock market wherein equity & Bonds related to socially relevant projects eg:- healthcare, urban infrastructure area traded.

→ Need for SSEs :-

(1) To provide funding support for social projects that can often neglected eg:- smart cities

(2) Will support resources of local Bodies eg:- Municipal Bodies traded by Pune Municipal Corporation.

(3) Would direct private investment towards
improvement of development of
social indicators eg: Nutrition

(4) Would help attract foreign-investment
for social work
eg: support to NGOs for fund-
raising.

→ Challenges in implementation :-

(1) lesser participation of people in
such bonds.

(2) low awareness with regard to
feasibility of SSE.

(3) government support to such
programmes is lacking.

(4) Initial funding support
would create extra burden on
the government.

however, social stock exchange can
help solve many problems of
underdevelopment of Indian
economy & need to be promoted.

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 extending agriculture & agriculture related services to enhance food security & economic growth.

→ Importance of agriculture extension :-

(1) Enhance agricultural support to vulnerable/poor farmer :-
eg: Through use of Kisan-Credit Card.

(2) Strengthening forward-Backward linkage
egs - Incentive for raw materials like seeds & fertilizers and logistics support for transport.

(3) Use of Better + efficient technology
eg:- Micro-irrigation techniques

(4) Strengthening the post harvest
system to reduce wastage.
eg:- Mega food Parks for food -
processing.

→ challenges faced :-

(1) Lack of funding support :->
eg: In absence of collateral
reduced credit to farmers.

(2) Infrastructural issues :->
eg:- Usage of old bore-wells for
irrigation.

• Lack of road - connectivity to
reach market.

(3) Lesser participation of private
sector due to lesser returns.

(4) Lesser focus on use of technology like nano-urea, drip irrigation etc.

→ Significance of NMAET:-

- (1) To provide funding support to address infrastructural issues.
- (2) greater coverage of farmers
- (3) Better awareness with regard to use of newer technology.

Agriculture extension can thus enhance contribution of agriculture sector to the GDP from current 17.1% despite it employing almost 50.1% of the population.

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 recent PLFS survey outlined an unemployment rate of 4.8% for year 2020 and majority of which fall between 15-29 years of age.

→ Employment problem of India :

- (1) 50% unemployed population is the youth (15-30 years)
- (2) low participation of women in workforce
(PLFS → 18-19% participation)
- (3) Informal nature of work.
80% population in informal economy according to ILO
- (4) Jobless growth. i.e.
GDP growth & existing unemployment

→ Reasons for the problem. :-

- (1) Traditional issues eg: Patriarchy & low female participation
- (2) Lack of adequate skills among youth.
- (3) Mismatch between employer & employee demand
eg:- Minimum wages.
- (4) Poor work efficiency due to infrastructural issues.
- (5) Lack of social security to workers

→ To address the issues :-

- (1) formal skill training :- Through use of Skill India Mission, Pradhan Mantri Kaushal Vikas Yojana.

- (2) Industry relevant skill through
accredited institutions eg: NEVER.
- (3) Enhancing female participation
through proper incentive eg: -
Stand-up India scheme.
- (4) Providing credit facility for
start-ups & self-employment
eg: Start up India.
- (5) Unemployment allowance eg:
MGNREGA till employment
available.
- (6) e-cham Portal to connect with
employers.

Given 1.2 billion of Indian
population, India holds great
demographic potential that needs to
be utilised with skill training to
contribute to a Atmanirbhar Bharat

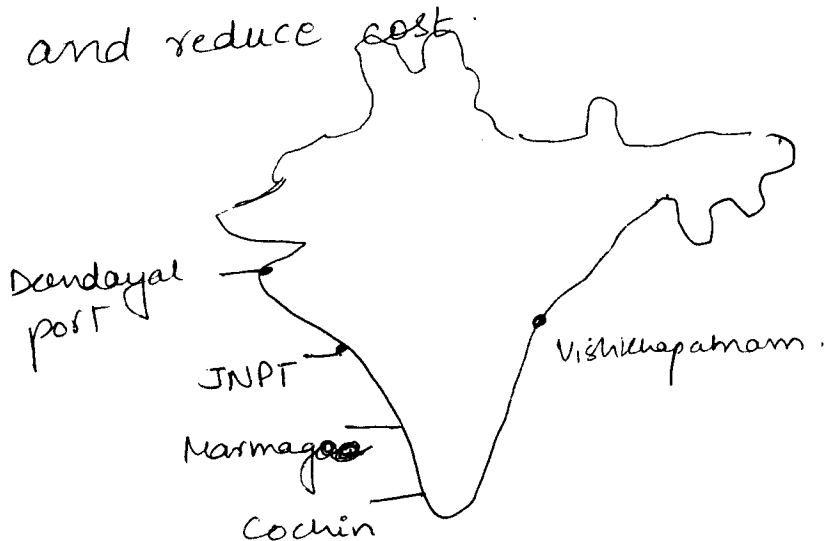
15. Although steps have been taken for integrating the dispersed logistics activities of maritime trade, much more needs to be done to make India a maritime powerhouse. Discuss. (250 words) 15

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।

Logistics cost in India remain high at 13-14% and thus, require integrated efforts to strengthen the trade & economy.

→ Steps to integrate dispersed logistics in maritime trade :-

- (1) Sagarmala project :- Construction of ports along the coastline to better handle cargo and reduce cost.



(2) Construction of transit ports :-
~~ports~~ wherein ships can rest
and refuel before reaching final
destination.

(3) Development of feeder network
through Dedicated freight corridor.
eg:- JNPT to Delhi (Western
corridor.)

(4) Development of warehousing &
cold-storage facilities in ports for
storage of perishables.

→ Issues that still persist :-

(1) slow pace of development of
the infrastructure at ports.

(2) funding constraints: Most of the
projects are under government
control & suffer bureaucratic
apathy.

(3) greater & faster linkage with
the source region lacking.

→ To address above issues :-

(1) public private participation in port
development

(2) speeding up National Waterways
for better connectivity.

(3) landlord model of port development
eg:- Vadhavan port Maharashtra
can be followed.

With 95.1% of trade by volume
through ships (Economic Survey 2020)
It is important to address structural
issues for better trade prospects.

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।

Economy and environment are linked both positively (+ resources used for revenue generation) or negatively (+ development harming environment) & therefore, need concrete assessment.

→ Natural Capital & Ecosystem Services accounting & its role :-

→ To understand the potential of existing resources in economic terms eg:- fisheries, land etc.

→ It gives a monetary assessment of loss being made on degradation eg:- Water pollution or land degradation.

→ helps in better utilisation of

resources for the benefit of the economy
eg:- solar energy usage as a source
of energy.

→ To understand role of ecosystem in
growth of socio-economic indicators
eg:- Promoting fishing as alternate
source of protein

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graph TD
    A[Promoting fishing as alternate source of protein] --> B[Nutrition provided]
    A --> C[Poverly alleviation]
  
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— India's initiative :

1. India has started NCAVES project
with support from World Bank
& Ministry of Environment to
account for natural capital.
2. It'll help in synergising with
existing stakeholders eg:-
government, tribals and other
locals for better output.
3. Will help in preserving ecosystem
in its natural habitat.

Natural accounting of ecosystem
services can thus, be helpful to
achieve our SDG of no poverty (SDG 1),
SDG 14, 15 | land and water
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।

Urbanisation i.e. rural to urban shift is occurring at a rapid scale and by 2050 it is expected that 50% of Indian population would reside in cities.

→ Urbanisation : increasing risk & impact of disaster.

→ (1) Unplanned construction causing urban floods e.g. - Chennai floods.

→ (2) Too much congestion in cities : No escape avenues in case of earthquake.

→ (3) Rapid deforestation resulting in increasing landslide.

→ (4) Extension of cities to coastal areas & thus increased life loss & infrastructure damage by cyclones.

→ (5) Anthropogenic disasters eg:- Industrial & household fires or stampede in markets are common in urban areas.

→ (6) Enhanced investment in urban areas & thus, greater economic loss

→ measures to address the concerns

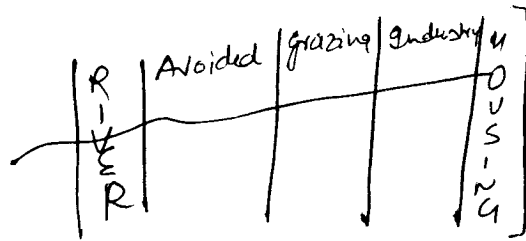
Structural Measures

(1) Building construction in urban areas to adhere to National Building code.

Non-structural Measures

(1) Enhancing awareness with regard to urban disasters.

- (2) Proper drainage system to be present to tackle urban floods
- (3) Waste management to avoid drain clogging
- (4) Construction to be away from river beds



* Land use plan for cities.

- (5) Construction in hills to be accompanied by strengthening measures
eg:- Rock Bolts, Geotextile usage.

- (2) Early Warning system eg:- IMD rainfall forecast to be strengthened

- (3) CRZ rules to be adhered in coastal areas.

- (4) Afforestation & mangrove growth in coastal areas.

- (5) Conduction of Mock Drills to better deal with such disasters.

Thus, an impact Based forecasting of urban disasters also need to be done to pre-assess the extent of damage & to avoid it.

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 has been launched in Budget 2020-21 to utilise potential of renewable hydrogen energy for meeting growing energy demands.

→ Hydrogen Mission as a game changer :-

- (1) Promote growth of renewable energy:

India pledged 50% energy generation by renewable by 2030 in COP-26.

- (2) Reduce import Bill:

currently 1/5th of coal is imported from outside resulting in widening current account deficit.

- (3) Promote environment sustainability:-
as hydrogen is a clean fuel with
no/minimal emission, thus help
to achieve SDG By 2030.
- (4) Shift from non-renewable
dependence eg:- coal crisis recently
threatening energy supply.
- (5) fulfill commitment made at
NDC and COP-26:-
of reducing energy intensity by
33-35% [NDC] and 40% [at
COP-26]
- (6) Development of new methodologies
for transportation:-
eg:- hydrogen fuel-cell vehicle
OR
H-CNG usage.
- (7) Attract investment in the sector
eg:- India H2 alliance involving
private sector participation.

→ Concerns that need to be addressed

(1) Hydrogen energy production is expensive → funding would be an obstacle.

(2) More focus needs to be on green & blue hydrogen as grey & brown cause emission.

(3) Infrastructure to be developed to produce hydrogen energy
eg:- Storage & Transportation of hydrogen gas.

(4) Trained manpower & innovation of new techniques would be needed.

Hydrogen energy with its huge energy potential can certainly be a game changer helping address major energy concerns of India.

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 faces multiple threats such as infiltration & incursion from Pakistan & China border to piracy and cyber-attacks as internal security challenge.

→ Progress made in cyberspace security :-

(1) Legislative measures :-

eg:- IT Act to deal with cyber-terrorism
Section 70, Section 67.

(2) Institutional measures :-

eg:- • Establishment of Indian cyber
Crime Coordination Centre (ICCC)

• National critical Information
Infrastructure Protection Centre to

be able to protect its critical infrastructure such as power-grids, telecommunication etc.

(3) Infrastructural measures :-

eg:- Establishment of Cyber Swachta Kendra for Botnet clearing

- Cyberdome project in Kerala to guard against malware attack.

→ Issues that need to be addressed :-

(1) strengthening of detection system

eg:- Recent attacks like Petyransom at JNPT breaching existing system.

(2) Develop system to tackle new modalities of attack :-

eg:- Pegasus attack that affected What's App.

(3) Enhancing cyber-awareness & literacy:-

With 825 million internet users (MHA report), cyber literacy is important to avert attack.

(4) Development of cyber forensic labs is still pending as recommended by Gulshan Rai committee.

With evolving technology cyberspace is becoming new arena of warfare & would require enhanced focus to avert any disruption of critical Indian infrastructure.

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।

Internal conflicts in India are a result of issues ranging from mal-governance, poor development, denial of rights etc. with each requiring special focus for its resolution.

→ Role of Developmental interventions in internal security challenge :-

- (1) Helps generate employment
eg:- use of Skill India mission
- (2) Better infrastructure provided
eg:- Border area development programme (BADP) building roads.
- (3) Improved health & nutritional indicators.
eg:- Aspirational District Programme
use in Naxal affected area.

(4) Would lessen the dissonance of the locals with regard to denial of rights

(5) Lessen poverty & unemployment cited as major reasons for naxalism & terrorism.

(6) Would strengthen infrastructure.
eg:- Use of ICT and skilled manpower.

→ Other interventions needed :-

(1) Strengthening security measures :-

- Better trained force
eg: Cobra Battalion CRPF for Naxal area.
- Integrated force.
eg:- one border, one force.
- Enhancing power of force
eg:- BSF jurisdiction increased
- Better infrastructure for force to work eg:- Bunkers, fortified police stations.
- Better arms & equipments.

(2) Psychological management:

Use of pamphlets, media outlets etc.
to enhance awareness of local against
terrorism etc.

(3) Technological intervention :-

eg:- Indian cyber crime coordination centre
against Cyber Threats.

(4) Enhanced Political Participation

eg:- Decentralisation

- Strengthening governance in
5th & 6th schedule area.

Internal security is important
for socio-political & economic
development of any country and
should be thus, given utmost
priority for its proper management.