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9:00 - 12:00

GENERAL STUDIES (TEST CODE : 2369)

Name of Candidate	Satshee Mishra		
Medium Eng./Hindi	English		
Center	Online	Registration Number	889186
		Date	10/9/24

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
1	10	
2	10	
3	10	
4	10	
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6	10	
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11	15	
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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 **HINDI & ENGLISH**.
इसमें बीस प्रश्न हैं हिन्दी और अंग्रेजी 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।

Is student recommended for One-to-One mentoring?

Recommended

Strongly Recommended

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 & Sind 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

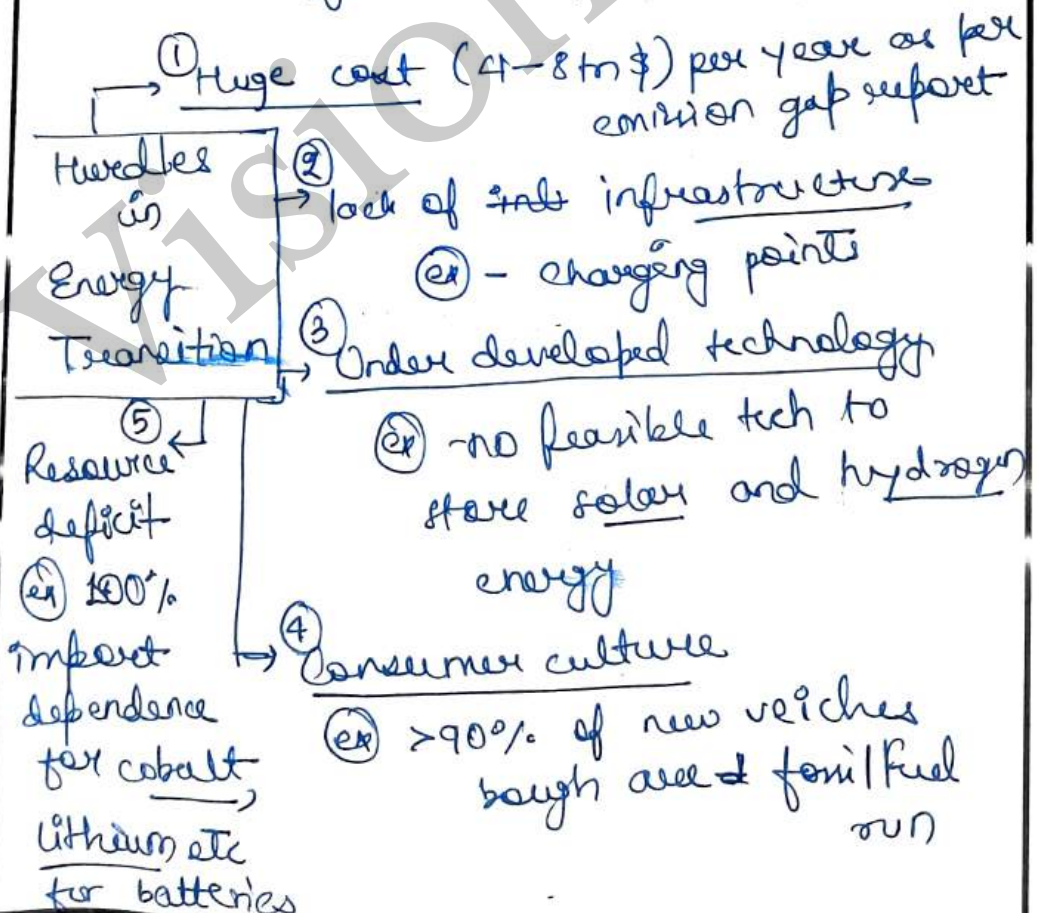
Q1.

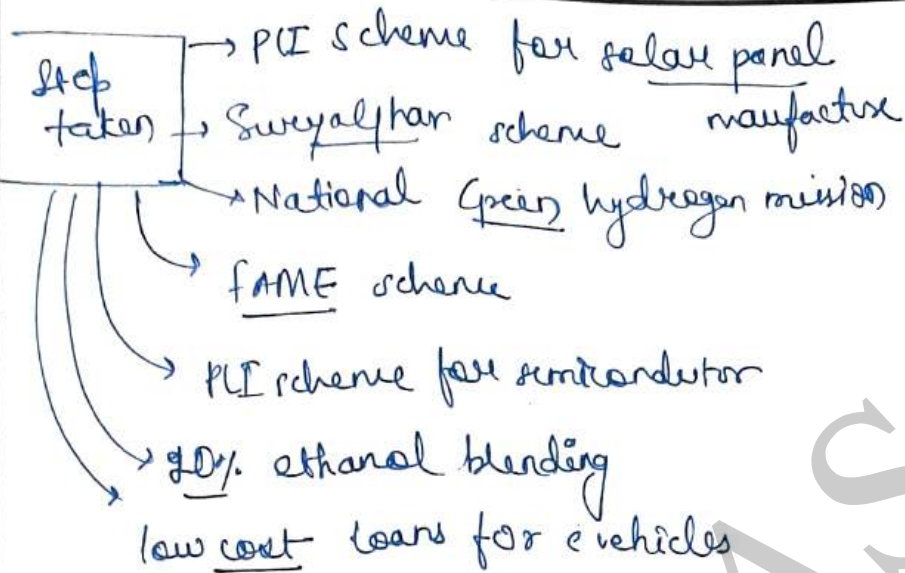
भारत के परिवहन क्षेत्र का ऊर्जा संक्रमण, जो 2070 तक नेट-जीरो उत्सर्जन हेतु भारत की प्रतिबद्धता को पूरा करने के लिए महत्वपूर्ण है, कई बाधाओं का सामना कर रहा है। विवेचना कीजिए। (उत्तर 150 शब्दों में दीजिए)

The energy transition of India's transport sector significant to fulfil India's commitment to net-zero emissions by 2070, faces several hurdles. Discuss. (Answer in 150 words)

10

While India is among 5 top emitters (8%), she is still dependent on fossil fuel for 80% of energy needs. On backdrop of net 0 aim by 2070 energy transition thus important.





Suggestions

- ①. Behavioural change - by consumer aware-
ness.
ex - civil society can give climate
concern info.
- ②. Reduce cost on interest for loans to buy
e vehicles.
- ③. Promote indigenous R&D (presently 0.67%)
- ④. Collaborate with australia & afrika for
critical minerals
- ⑤. Promote PDI in greentech sector.
- ⑥. Establish infrastructure for e vehicles.

These will ensure we achieve
'panch prar goals' & SDG 13.

Q2.

मत्स्यन सन्मिडी पर WTO के समझौते में कुछ हानिकारक सन्मिडियों को प्रतिबंधित करने हेतु नियम निर्धारित किए गए हैं। विवेचना कीजिए। भारत के मत्स्यन क्षेत्रक के लिए इस समझौते के क्या निहितार्थ हैं? (उत्तर 150 शब्दों में दीजिए)

WTO's Agreement on Fisheries Subsidies lays out rules for prohibiting certain forms of harmful subsidies. Discuss. What are the implications of the agreement on India's fisheries sector? (Answer in 150 words)

10

WTO recently brought a proposal to prohibit subsidies harmful to free trade in fishery sector, its yet to be signed by all members.

Need of such rules

- Promote open market competition in fishery sector.
- prevent overfishing detrimental to ecosystem. (ex) In South China Sea.
- To prevent unauthorized fishing in open waters.

Concerns on rules

- Huge population across world depend-
ent on fishery sector. (ex) - Peru

- ②. Poor fishermen in developing countries need handholding.
- ③. Subsidy key to modernization of this sector.

India's fishery sector with close to 10% growth rate can have following impact- if this becomes an agreement:-

- ①. >50% of population in coastal areas will face economic stress.
- ②. People will resort to non institutional lending.
- ③. Modernization of sector will be impacted
- ④. Reduction in export competitiveness

Therefore India has not signed this rules

alternatives like

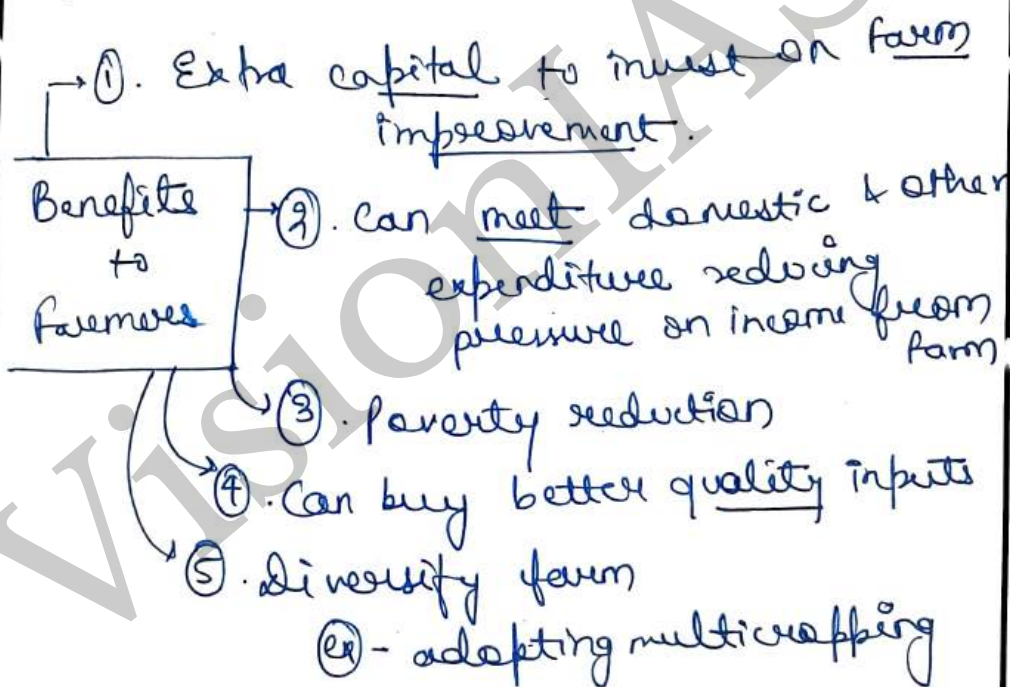
- Capacity building of fisherman
- Aquaculture promotion
- Domestic rules ~~and~~ against unauthorised fishing are better option than such agreement

Q3.

यद्यपि पीएम-किसान (PM-KISAN) योजना ने अनेक किसानों को लाभ प्रदान किया है, फिर भी इसे कई महत्वपूर्ण चुनौतियों का सामना करना पड़ रहा है। (100 शब्दों में लिखिए)

Although the PM-KISAN Scheme has provided benefits to numerous farmers, it continues to face several significant challenges. Discuss. (Answer in 150 words) 10

PM-KISAN Scheme is a income supplementing scheme by Central govt giving 6000 ₹ / per farmer, per annum in three installments.



But it faces significant challenges :-

①. Under inclusion : No land owning small & marginal farmer are out of PM-KISAN scheme.

②. As installments are delayed no benefit in cropping season.

(ex) - In Chhattisgarh

③. May be used for unproductive activity like celebrations etc.

④. Burden of govt treasury will build up year-on-year.

⑤. Farmers not having bank account can't benefit.

⑥. No benefit to agri labourers majority being women.

- Solution
- ①. Exclude big landowning farmers
 - ②. Include tenants & share croppers who are landless.
 - ③. Can tie PM KISAN to only agri-development expenditure
 - ④. Ensure installments are released on time
 - ⑤. Financial inclusion

If implemented more effectively PM-KISAN can significantly reduce rural poverty & help in SDG 1.

Q4.

भारत में पशुपालन को रूपांतरित करने में डिजिटल प्रौद्योगिकी क्या भूमिका निभा सकती है?
(उत्तर 150 शब्दों में दीजिए)

What role can digital technology play in transforming animal husbandry in India?
(Answer in 150 words)

10

Animal husbandry ^{has} ~~add~~ 7%
growth rate between FY22-24 as
per economic survey 2024, it involves
rearing of livestock for agricultural
production.

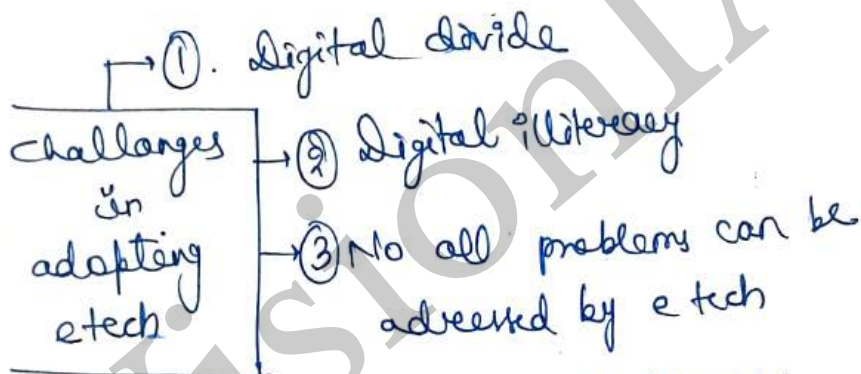
- Challenges faced
- ①. low market access
 - ②. lack modernization
 - ③. animal disease
 - ④. No fixed income like MSP
 - ⑤. High cost of livestock
 - ⑥. under production.

In overcoming these challenges digital
technology can play following roles:-

- ①. Awareness - about types of disease
spreading in animal, market rates
etc help in informed decision.
(ex) - AI sens. apps can do this.

②. Market access - a e-NAM like scheme for livestock sector can give access to bigger market.

③. Increasing productivity - through online content provided by animal scientists
(ex) - for increasing milk production



→ ①. Improve digital literacy
solution → ② LHGs can assist farmers in use of e tech.
(ex) - pashu Sakshis.

③. Common service sector for getting information
④. e nam like market.

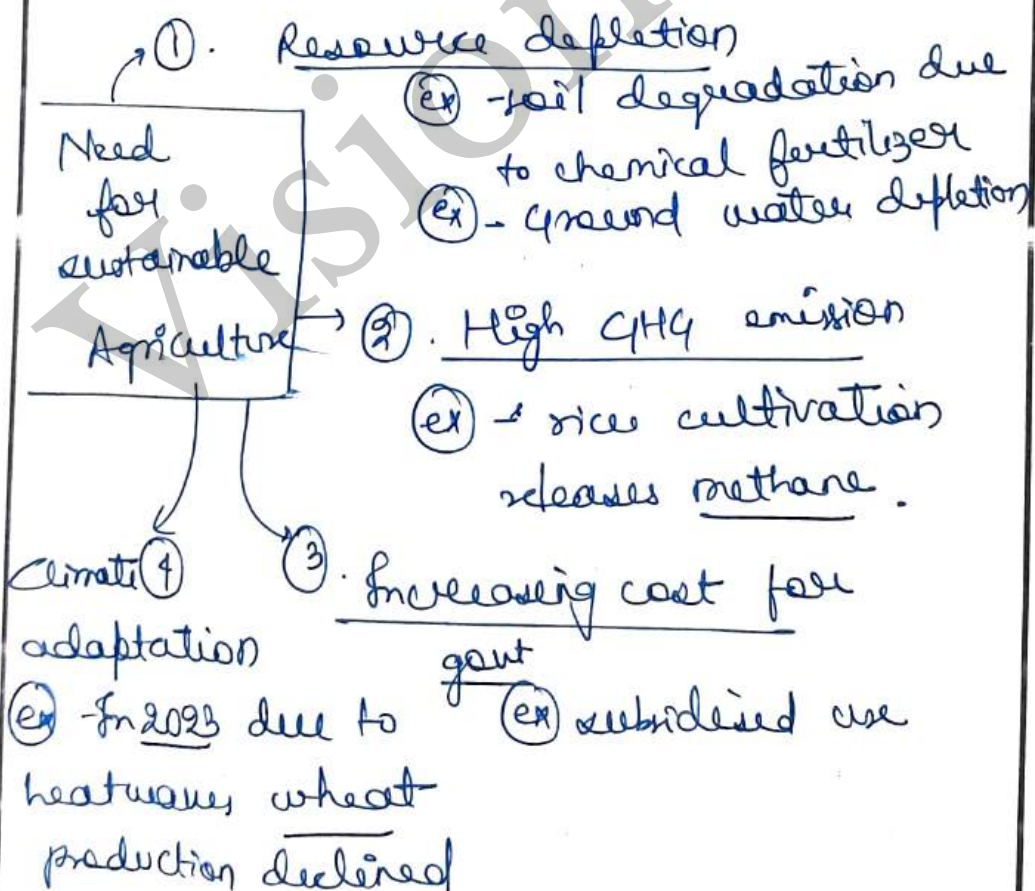
All these will help optimize performance of livestock sector to achieve \$5trn economy goal.

Q5.

भारत का पारंपरिक ज्ञान पर्यावरण संरक्षण हेतु कृषि को संधारणीय बनाने के लिए समाधान प्रस्तुत करता है। उदाहरण सहित स्पष्ट कीजिए। (उत्तर 150 शब्दों में दीजिए।)

India's traditional knowledge offers solutions for making agriculture sustainable for environmental conservation. Illustrate with examples. (Answer in 150 words) 10

India has been practicing agriculture since last 6000 years starting from lithic age. Traditional knowledge of agriculture practiced if applied now can make Agriculture more sustainable.



Traditional practices to make agriculture sustainable :-

- ①. 'Beejamarita' :- conservation of indigenous seeds for cultivation in next cycle.
- ②. 'Jivamarita' :- use of earthworms to increase soil fertility & pest management by 'Neema' use.
- ③. Mulching :- green cover over land reduces water loss due to transpiration & weed growth.
- ④. Zero tilling :- Enabling soil to maintain natural profile.
- ⑤. Integrated Farming :- Combination of agri & animal husbandry
(ex) - cowdung as manure, straw as fodder.
- ⑥. Zero fertilizer use :- natural manure
- ⑦. low water use (ex) growing millets.

Panchamrita These will help achieve goals.

Q6.

भारत में आपदा प्रबंधन में मीडिया की भूमिका पर टिप्पणी कीजिए। (उत्तर 150 शब्दों में दीजिए)

Comment on the role of media in disaster management in India. (Answer in 150 words)

10

India with 60% land prone to drought, 59% to earthquake & 7500km coast to cyclones & hills to landslide needs better Disaster management & in this media can play important role

Media's Role :-

①. Broadcasting of information of

on IMD's prediction $\Rightarrow$ Awareness

① - news coverage on Amphan cyclone before it hit India.

②. Impart Information about

people dead & rescued - only source of information to relatives

② - during Uttarakhand floods in 2013.

③. keeping actions & efforts of administration in preventing disaster in public gaze.

② - highlighted no action by kerala govt. to stabilize waynad hills.

④. Providing case study of rescue & mitigation effort ⇒ help in planning

② - report on how Japan handled earthquake.

⑤. Camera coverage of rescue mission to bring out lapses.

Concerns → ①. false information
→ ②. false allegation of conspiracy behind floods
→ ③. Increasing panic by over stating facts

Thus, responsible & ethical media is important medium to support DM.

07.

औषधि विकास और विनिर्माण के संदर्भ में, प्रौद्योगिकी किस प्रकार भारत के फार्मास्यूटिकल उद्योग को रूपांतरित कर रही है? (उत्तर 150 शब्दों में दीजिए)

How is technology transforming India's pharmaceutical industry in terms of drug development and manufacturing? (Answer in 150 words)

10

India is largest exporter of generic medicines in world & pharma industry as per Eco survey 2024 is a sunrise sector.

Technological Transformation of pharma industry:-

①. Drug development

- Gene engineering technology helps in testing of drugs.
- Nano technology can help in precision medicine.
- Use of DNA editing to develop development.
- (e.g.) - Covid 19 vaccines.
- Artificial lab grown cells help in testing drugs.

⑤. Use of technology to simulate drug trials.

②. Drug manufacturing

①. Modern machines — help in faster production

②. Testing of quality through computer analysis

③. Use of robots to assemble drugs module.

④. In sterilized packaging.

ex - of eyedrops, syringes etc

⑤. Reducing human error.

①. Help Ministry pharma setup with suggestion latest tech

②. Update Biotechnology act to address privacy concern on drug testing

③. Reduce number of regulations

A prosperous pharma sector can make India 'Pharmacy for the world'

Q8.

कृषि के साथ सौर ऊर्जा को संयोजित करने वाली एग्रीवोल्टाइक प्रणाली किस प्रकार भारतीय कृषि के लिए एक गेम चेंजर सिद्ध हो सकती है? (उत्तर 150 शब्दों में दीजिए)

How can agrivoltaics, which combines solar energy with farming, be a game changer for Indian agriculture? (Answer in 150 words)

10

Agrivoltaics use solar energy for farming sector has huge potential to reduce use of fossil fuel and dependence on public grid,

It has potential to be a game changer as:-

①. Reduce cost of farming

(ex) - On site solar run pumps under PM KUSUM cost much less.

②. Reduce emission from farming sector - due to overuse of fossil fuel to generate electricity

③. Help farmers even by producing more energy than consumed

(ex) - selling extra to DISCOMS

→ ①. fragmented land holding
(1.08 ha/farmer) ⇒ no extra
land for solar panel
challenges

②. Seasonal nature of solar
energy
(ex) - no use in rainy
season

③. Lack of awareness
about sustainable practices
④. High cost of solar
energy installation
(ex) > 3 lakh without subsidy

→ ①. Increase coverage of beneficiary
solution under PM KUSUM

→ ②. Train farmers to use
solar pump

③. R&D on solar energy
storage

④. promote land consolidation.

All these will help to achieve
SDG 13 and SDG 7 & also promote
agriculture growth.

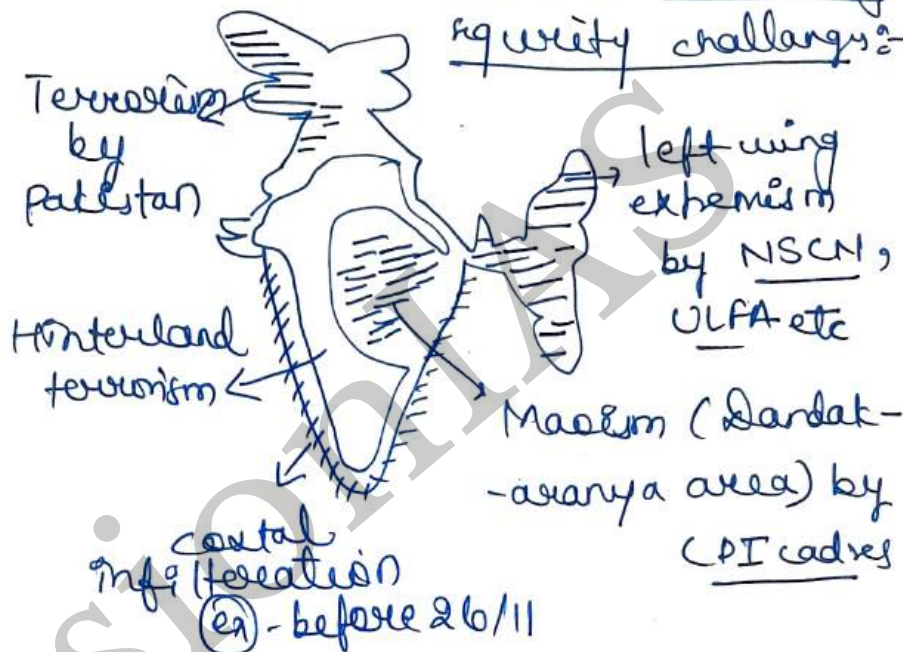
Q9.

क्या केंद्रीय सशस्त्र पुलिस बलों (CAPFs) की संयुक्तता भारत के विभिन्न भागों में सामना की जा रही

Can jointness of the Central Armed Police forces (CAPFs) help in tackling the major security challenges being faced in various parts of India? (Answer in 150 words)

10

With > 15000 km of land & > 7000 km of coast border India faces following security challenges:-



Jointness of CAPF can help in better tackling as:-

- ①. Reduce overlapping actions
(ex) - By anawaffles & SSB in NE area
- ②. Sharing of modern weapons & infrastructure.
(ex) - anti mine vehicles with CRPF.

③. Integrated Intelligence

- all CAPP have some intelligence,
if combined can help in joint
action plan.

④. Coordinated attacks

(ex) - In LWE areas role of ITBP &
COBRA in combined attack.

⑤. Reduce inter-service conflict - which
delays response.

→ ①. Different service needs
Hurdles → ②. Under different ministries
③. lack of integrated
training
(ex) - AR under Defence &
ITBP & BSF under Home

If CAPP work in coordination
our action will be → faster
→ effective
→ deterrent.

Q10.

ड्रग्स, इंटरनेट और आतंकवाद के बीच संबंध किस प्रकार भारत के लिए एक गंभीर खतरे के रूप में उभरा है? (उत्तर 150 शब्दों में दीजिए)

How has the linkage between drugs, internet, and terrorism emerged as a significant threat for India? (Answer in 150 words)

10

facing Pakistan sponsored terrorism in J&K and sandwiched between golden crescent & golden triangles make India prone to combined effort of drug dealers & Terrorists who extensively use internet



significant threat from the af:-

①. Internet with no boundaries

can't be effectively regulated.

ex- use of whatsapp in drug dealing etc.

②. funding of Terrorists by drug dealers in return of safe passage

- ③. Use of internet by terrorists to radicalize youth.

(ex) By IBIS

- ④. Drug dealers using internet to create more customers (ex) - in Dark net

Adverse impact

- ① promote terrorism via funding
- ② Drug addiction in youth
- ③ - In Punjab

Adverse impact

→ (2) Drug addiction in youth

② - In penyab

③. spread of communal feelings

④. Difficulty to ~~trade~~ trace drug dealers

①. Modify IT law
solution → ②. Push for international
regulation of internet
↳ ③. Cyber police & army

→ ③. Cyber police & army

India should work to create robust DPI that can track any mis use of internet.

Q11.

भारत के अवसंरचना विकास के लिए एक निवेश मॉडल के रूप में सार्वजनिक-निजी भागीदारी (PPP) की भूमिका पर चर्चा कीजिए। PPP अवसंरचना की सभी निष्पादन संबंधी समस्याओं के लिए कारगर क्यों नहीं हैं? (उत्तर 250 शब्दों में दीजिए)

Discuss the role of Public-Private Partnerships (PPP) as an investment model for India's infrastructure development. Why are PPPs not a panacea for all infrastructure-related performance problems? (Answer in 250 words) 15

As per WB, India is a leader in PPP with more than 2000 ongoing PPP projects.

Govt	→	Design & land	] Under an MoU
+ PVT sector	→	Building & operation	

∴ PPP model for public project

Role as investment model :-

- ①. Increase private investment in economy, presently only about 1% (₹93)
- ②. Better quality infrastructure due to international experience
(a) - Swarka expressway.
- ③. Bring better human resource

management.

(ex) - Better quality of customer service
in Mumbai airport.

④. Reduce burden on government
by bringing capital from private
sector.

(ex) - Mandira Port, JNP Port
development.

⑤. Bringing latest technology to
public infrastructure.

(ex) - New technology in Mumbai
& hyderabad metro.

Concerns

- ° No uniform land acquisition law
(Eco Survey 2024)
- ° Overleveraging by companies expect-
ing government to latter change
MoU (Eco Survey 2023)
- ° low quality of infrastructure
(ex) - breaking of pillar in Delhi airport.

Despite Benefit, it's not panacea
to all problems as:-

- ①. PPP in Railways opposed by employees
- ②. failure to address quality concern
- ③. Banks not giving loan due to NPA fear.
- ④. Private sector is driven by profit but public enter for welfare.
 ④ - may increase fee.
- ⑤. Land acquisition issue not addressed.
- ⑥. Not addressed environmental concern
 → ①. Being uniform land acquisition policy.
 way ahead → ②. Prevent overleveraging through clear MoUs
 ③. focus on audit to ensure quality
 Env Impact assessment

Only a balance between PPP & govt role can help make Infra robust.

Q12.

भारत में सुभेद्य वर्गों के लिए खाद्य सुरक्षा सुनिश्चित करने में 'एक राष्ट्र-एक राशन कार्ड' योजना की भूमिका पर प्रकाश डालिए। इस योजना को सफल बनाने के लिए किन बाधाओं को दूर किया जाना अनिवार्य है? (उत्तर 250 शब्दों में दीजिए)

Bring out the role of the 'One Nation-One Ration Card' scheme in ensuring food security for vulnerable sections in India. What obstacles must be overcome to make the scheme a success? (Answer in 250 words)

15

Presently > 80cr Indians receive subsidised food grains under NASA 2013, to reduce fluctuations, government introduced one nation one ration card during covid.

Role in ensuring food security to vulnerable sections

- ①. Help migrant labourer to access PDS grains from any place of work.
- ② - due to lockdown many people couldn't move to home to get PDS ration.
- ② Ensure adequate food to women as ration cards in name of women.

③. Help to overcome hunger due
temporarily jobloss

(ex) - full gig employees.

④. food access to socially devalued
sections like Elderlies and trans-
genders.

Obstacles to overcome

①. Under inclusion

(ex) - Central govt identified
100 more people can be added.

②. Poor quality grains

(ex) - rotting in FEI godowns

③. Brand for rice & wheat
↓
no nutrition to poor

④. Denial of service due to non
linking of aadhar with rations
card.

⑤. Diversification of foodgrain to open market.

⑥. Irregular opening of distribution centres.

Solutions

①. Make aadhar linkage non mandatory

②. ~~For~~ Make scheme universal (Wadhwa Committ.)

③. Prevent diversion through GPS tracking

④. Food coupon if no grain storage facility (Eco survey)

⑤. Auditing of fair price shops.

⑥. No service to states not done computerization. (Santaram comm)

⑦. Include millets

All these will help to achieve SDG 2 & SDG 1.

Q13.

उत्पादन में जुड़ी प्रोत्साहन (PLI) योजना की केंद्रीय भूमिका को देखते हुए, आकलन कीजिए कि क्या एक नई औद्योगिक नीति की आवश्यकता है। (उत्तर 250 शब्दों में दीजिए)

Assess whether a new industrial policy is required given the central role of the Production Linked Incentive (PLI) scheme. (Answer in 250 words)

15

Present Industrial policy
of India was adopted in 1991
with certain changes & hereafter.

①. Liberalization - no license except
for explosives, drugs etc

Existing
Industrial
policy

→ ②. Privatization - redu-
cing government's role
in industrial sector

Make
in
India

③. Globalization - promot-
ion of export-

④. Reserved sectors

In recent years production linked
incentive scheme have occupied
central role in industrial policy as:

①. Promotion of critical sectors

- Solar panel
- Semiconductor
- Pharma sector
- Batteries

②. Incentives for increasing production

Like — low excise rate
— favourable policies.

③. Ensuring access to capital

(ex) — under PLI government provides long term funding in subsidised rates.

④. Promote employment — via PLI in labour intensive sector

(ex) — Textile, food processing

⑤. Promoting exports by attracting

FDI :-

(ex) — foxconn came India for semiconductor, Iphone production by apple in India.

Need of new industrial policy

- ①. To clarify rules on new sector like Batteries, semiconductor - for

- ②. for ease of business
- ③. To reduce hurdles in land acquisition
- ④. Tesla not came to India because high tariff.
- ④. To promote easy entry & exit.

①. Clear norms on licensing & regulation of new sector.

hence
required

- ②. Better land acquisition policy
- ③. Single point entry and exit
- ④. Reduce number of clearances & regulation

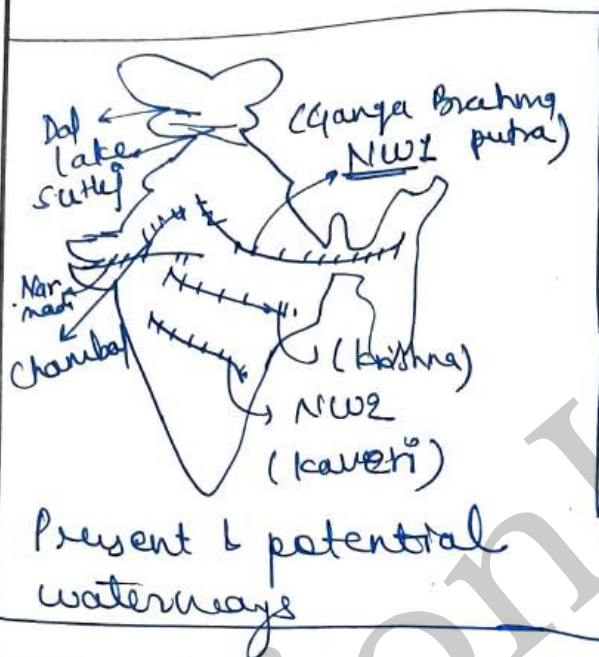
Rather than a complete overhaul

Industrial policy can be modified to address concerns of manufacturing sector under PII.

Q14.

भारत में परिवहन के वैकल्पिक साधन के रूप में अंतर्देशीय जलमार्ग से जुड़ी संभावनाओं और चुनौतियों पर चर्चा कीजिए। (उत्तर 250 शब्दों में दीजिए)

Discuss the prospects and challenges associated with inland waterways as an alternative mode of transportation in India. (Answer in 250 words) 15



India has > 10360 large rivers thus huge potential for inland waterway.

Prospects

- Reduce cost - Presently the cost of travel via NW is less than by airways.
- Connect remote location.
 - ① - Better connection between North east & west
- Ensure connectivity all weather
 - ② - Roads in Himalayan region

cut off during snow fall (winter)

④. Promote interregional trade

(ex) - Better trade between regions due to more cargo carrying capacity

⑤. Ensure supplies to armed forces

- as infrastructure not well developed till border areas, river can be used.

⑥. To promote tourism

(ex) - major hubs - Varanasi, Ghazipur,

Chennai etc on bank of rivers.

⑦. Better transport

(ex) - Rivers better connected to ports

Challenges

①. Under developed river banks

(ex) - low number of jetties

②. Seasonal flooding

(ex) - Brahmaputra

③. siltation of rivers

(ex) - In Kaveri reduces speed of vessels.

④. Concern on marine ecosystem.

(ex) - dolphins are blind and can be hit by vehicles

⑤. Increase marine pollution

(ex) - Oil spill (Enrica), plastic waste etc.

⑥. Some rivers are seasonal

(ex) - Keri

- way ahead
- ①. Promote development of jetties
 - ②. Set threshold on use (to reduce burden)
 - ③. Polluter pay principle
 - ④. Dredging to prevent siltation
 - ⑤. River linking

Rivers as mode of transport can improve our ranking in logistics index.

Q15.

भारत में किसानों की आय बढ़ाने, कृषि निर्यात को बढ़ावा देने तथा ग्रामीण अर्थव्यवस्था को मजबूत करने में कृषि सहकारी समितियों की भूमिका पर चर्चा कीजिए। (उत्तर 250 शब्दों में दीजिए)

Discuss the role played by agricultural cooperatives in enhancing farmers' income, promoting agricultural exports, and strengthening the rural economy in India. (Answer in 250 words)

15

Cooperatives in agriculture sector are group of farmers who pool resources like money and land for joint production, or for taking loan from common pool.

(ex) - Amul cooperative.

Role

①. Enhancing farmers income

①. Boost production

(ex) - access to better quality seed from seed cooperatives

②. Reduce dependence for loans

(ex) - common machines can be shared by many small farmers.

③. Reducing in comeloss due to
wastage
(ex) - can use storage facility
of cooperative.

④. Adoption of better farming
techniques
(ex) in silkkin farm cooperative
have helped in adoption of organic
farming.

⑤. Better market access
(ex) - farmers selling via FPO.

Agriculture exports

①. Improve production
(ex) - using common land $\Rightarrow$ more
production

②. Export competitiveness by
reducing cost of farming
(ex) - use of common storage facility

③. Better marketing
(ex) - cooperative can help pool

money to use marketing facility.

③. Strengthened rural economy as -

- Reduction in poverty
- Reduction in unemployment
- Better income realization for people
- Greater access to market.

Challenges

- Dominance of rich farmers in cooperatives.
- Low quality seed by cooperatives to small farmers.
- Irregular contribution
- Dependence of cooperatives on state govt

- Soln
- ①. Promote training for capacity building
 - ②. Promote democratic working of cooperative

Cooperative can help in both
doubling farm income and promoti-
ng net agri exports.

Q16.

देश के राष्ट्रीय पशु के संरक्षण में 'प्रोजेक्ट टाइगर' की सफलता पर टिप्पणी कीजिए। परियोजना के तहत बाघों के समग्र संरक्षण के लिए और क्या कदम उठाए जाने की आवश्यकता है? (उत्तर 250 शब्दों में दीजिए)

Comment on the success of 'Project Tiger' in protecting the national animal of the country. What further steps are needed for holistic conservation of tigers under the project? (Answer in 250 words) 15

Project tiger was initiated in 1970s to stop population decline and promote habitation development of tigers.



SUCCESS OF PROJECT TIGER

- ① Stabilized Habitat by preventing habitat destruction
(ex) - declaring areas as Tiger reserves.

- ② Increasing Tiger

population

→ increasing to double in last decade

- ③ Helped in wild mobility of tigers
(ex) - Tiger corridor

- ④. Reduction in cons of illegal poaching of tigers.
(ex) - significant reducing in Uttarakhand
- ⑤. Public awareness on protection of tiger
- ⑥. Safeguarding Biodiversity - a tiger is a keystone species.
- ⑦. Increasing range through relocation

Challenges

- ①. Declining forest area in North east & gangetic plains (forest survey)
- ②. Pressure of tourism
- ③. Violation FRA as tribals are displaced.
- ④. low genetic diversity
(ex) - In Bhitarkanika & Sundarban

Steps for holistic conservation

- ①. Reduce Tourism pressure on tiger reserves.
(ex) - Littering of waterbodies
- ②. focus on improving genetic diversity
(ex) - By relocation & inter regional breeding.
- ③. Involve local tribal population with traditional experience in efforts.
- ④. Reduce man-animal conflict by creating more tiger corridors.
- ⑤. focus on halting depletion of mangroves.
- ⑥. use of AI & other technology for tracking.
- ⑦. Disease prevention through active testing

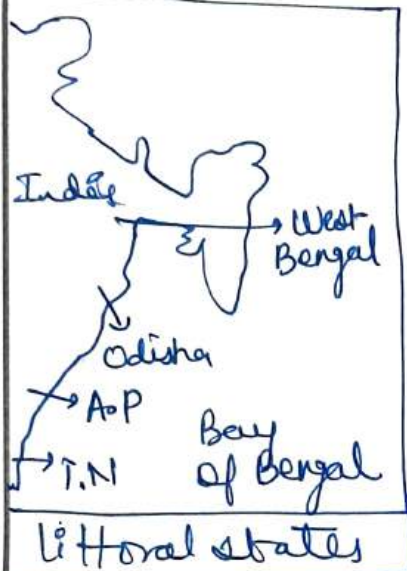
Tiger project's success should inspire the conservation of other species like elephant, Burkard etc to uphold Art 48.

Q17.

यद्यपि बंगाल की खाड़ी में मटे तटवर्ती राज्यों ने आपदा तैयारी के संबंध में महत्वपूर्ण प्रगति की है, फिर भी उनकी प्रभावशीलता सीमित रही है। विवेचना कीजिए। (उत्तर 250 शब्दों में दीजिए)

While the littoral states of the Bay of Bengal have made significant strides in their disaster preparedness, their efficacy has been limited. Discuss. (Answer in 250 words)

15



Bay of Bengal due to its higher average sea surface temperature is more vulnerable to cyclones than arabian sea impacting littoral states.

Significant strides of littoral state in disaster preparedness

- ①. Promotion of mangrove cultivation along coast.
(ex) - T.N., AP etc
- ②. Setting up of seehabitation camps.
(ex) - In Odisha
- ③. Shifting of population before cyclone hits.
(ex) - In West Bengal

- ④. Coordination of NDRF and local police in rescue missions.
- ⑤. Better forecasting of upcoming cyclones with help of IMD.
- ⑥. State level plans for cyclone mitigation.
- ⑦. Local volunteers and mock drills.

Limitations though remain

- ①. Lack of disaster resilient infra-structure in costal areas.
- ②. Heavy tourism promotes over stress in costal areas.
- ③. Clean up to mangroves due to tourist infrastructure & for aqua culture.

④. lack of coordination with central government.

④ - politicization of floods in T&N last year.

⑤. Delay in post cyclone reconstruction & handholding.

⑥. Coastal development destabilizing sand

⑦

①. Bottom top Disaster management planning

Solutions

EIA ⑥

for any project in coastal area

② - Prevent destabilization of sandunes

③. Promote mangrove growth

④. Create susitvent infrastructure - chore

⑤. Establish better communication channel with central govt

Hence, cyclone impact

mitigation is major concern for development of the region

Q18.

संयुक्त राष्ट्र ने वर्ष 2025 को क्वांटम विज्ञान और प्रौद्योगिकी का अंतर्राष्ट्रीय वर्ष घोषित किया है। वर्तमान में, सामान्य तौर पर उपयोग की जाने वाली कौन-सी प्रौद्योगिकियाँ क्वांटम मैकेनिक्स की समझ पर आधारित हैं? क्वांटम विज्ञान और प्रौद्योगिकी के क्षेत्र में भारत द्वारा क्या कदम उठाए जा रहे हैं? (उत्तर 250 शब्दों में दीजिए)

The United Nations proclaimed 2025 as the International Year of Quantum Science and Technology. Which technologies in common use today are based on the understanding of quantum mechanics? What are the steps being taken by India in the field of quantum science and technology? (Answer in 250 words) 15

Quantum science first proposed by Einstein sees energy as packets and not just wave as was earlier understood.

Common technology that rely today on quantum mechanics are:-

① Supercomputers - that process large amount of data and have huge storage capacity.

② - aircraft.

③ Semiconductors - they use q-bits basis of quantum technology

④ microchips & processors.

- ③ Blockchain - use quantum technology to hold integrity of system.
④ - crypto currencies etc.

- ④ - Quantum computer - they use qbits instead of standard 0 & 1.

Steps taken by India :-

- ① Nation Quantum Mission :-

- Centre of excellence for Quantum technology ~~research~~ research in Allahabad.
- funding of IITs & IISc to build more super computers.
- Creating infrastructure that can enable use of quantum computer.
- Training of youth in quantum technology.

- ②. International collaboration on Quantum research.

Challenges

- low expenditure on R&D
(only 0.67% of GDP)
- less number of graduates to take role of quantum engineers.
- Lack of capital investment from private sector.
- Huge cost of establishing a quantum technology run supercom-puter.
- Import dependence for critical chips

→ ①. Encourage private investment
Soln

- ↳ ②. Training in school & colleges
③. Diversify import sources.

Hence Quantum technology can lead us ahead in run for
(Vishwa Guru)

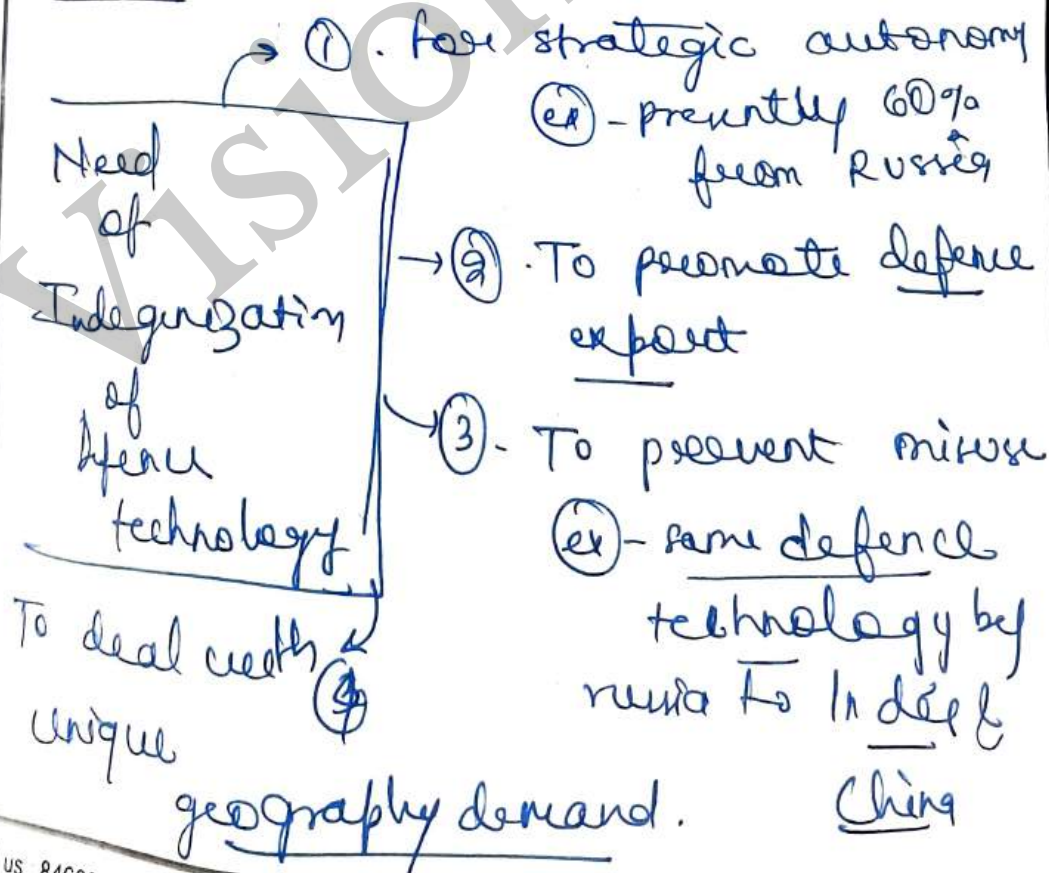
Q19.

प्रमुख संस्थागत और नीतिगत परिवर्तनों ने भारत में रक्षा के स्वदेशीकरण, घरेलू पूंजी खरीद (Domestic Capital Procurement) और रक्षा संबंधी निर्यात को बढ़ावा दिया है। इस संबंध में सरकार द्वारा अपनाए गए उपायों और अभी भी विद्यमान मुद्दों पर चर्चा कीजिए। (उत्तर 250 शब्दों में दीजिए।)

Key institutional and policy changes have spurred defence indigenisation, domestic capital procurement and defence exports in India. Discuss the measures adopted by the Government in this respect and the issues that still persist. (Answer in 250 words)

15

India has security challenges from neighbours like Pakistan and China as well as internal threat from UFF & NEI making India largest procurer of defence import as per Stockholm report.



⑤. To ensure rapid updation of spare parts.

(ex) - amid Russia war, Russia unable to supply spare parts.

Steps by government for defence indigenization, capital procurement & exports :-

①. Indigenization

③ Collaboration with domestic partners for spare parts

⑤ Promotion of R&D by at DRDO
(ex) Akash missiles

①. Release of list of defence tech that can't be imported

⑦. IDEX promoting indigenous R&D through competition

④. Signing deal with international partners for production in India

- ②. Capital → ①. Govt - Govt deal
procurement (ex) - with Russia
- Tech transfer (3) → ②. Increasing budget-
agreement -ary ap allocation

- ③. for → ①. Defence exhibition
Export (ex) - In Gujarat, air
show -
Tejas
- ④. production in India → ②. Govt to Govt MoU
(ex) - export of Brahmos
to Philippines
- ③. Gifting small defence equipment
to show quality

- ①. Reduce reliance (ex) → Vietnam
on China for critical mineral
- Further → ②. find new markets like
in Africa
- ③. focus on faster produc-
tion

Defence export & indigenisation
should be used in role as 'Vishva
Bandhu'.

Q20.

गैरकानूनी गतिविधियों के प्रति भारत के तटों की सुभेद्यता राष्ट्रीय सुरक्षा के लिए गंभीर खतरा उत्पन्न करती है। तटीय सुरक्षा के लिए मौजूदा सुरक्षा प्रणाली पर चर्चा कीजिए। (उत्तर 250 शब्दों में दीजिए)

The vulnerability of India's coasts to unlawful activities poses significant threats to national security. Discuss the current security system in place for coastal security. (Answer in 250 words)

15

India has 7500 km long coast line along Indian ocean with densely populated coastal areas



security threat in coastal area?

- Infiltration of terrorist
 - (ex) - during 26/11 attack
- Trafficking of illegal arms
- Human trafficking via coast
- Trafficking of drugs
- piracy in arabian sea by somalian pirates.

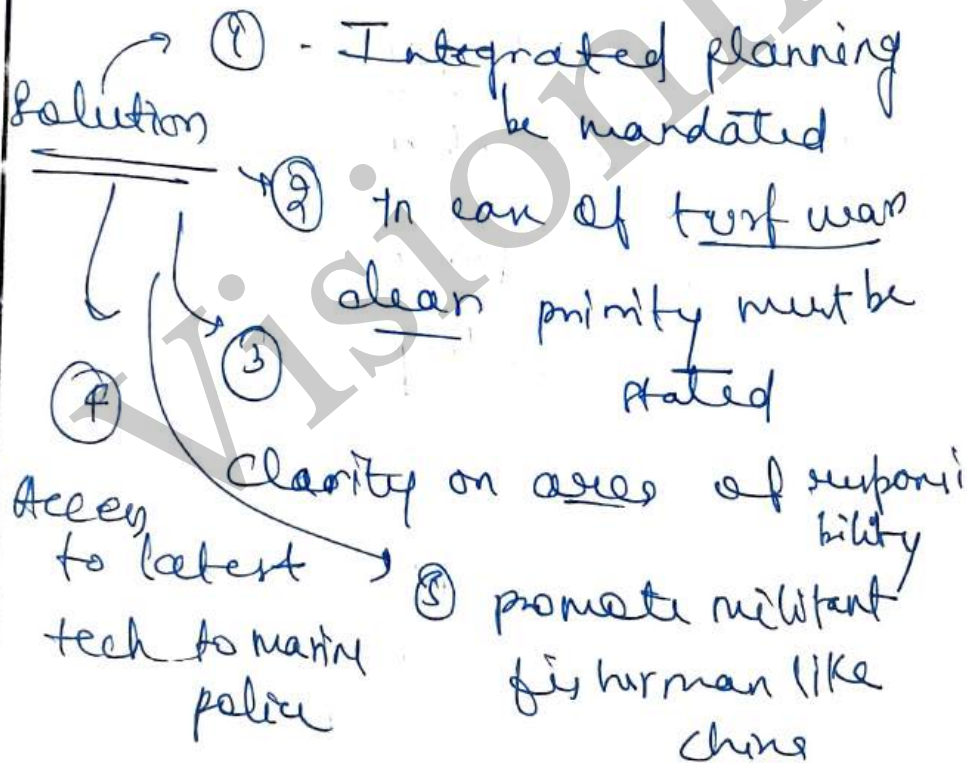
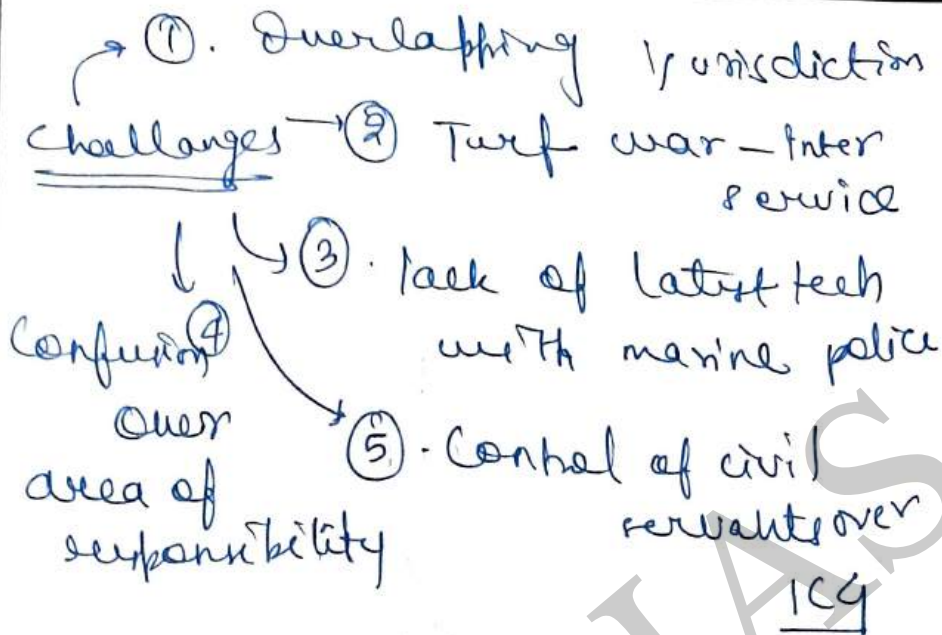
Current security system :-



- The guarding of coastal areas & patrolling is responsibility of coast guard under ministry of defence

Present system

- The marine police under state governments aid ICG in patrolling inner coastal areas.
- The Navy is responsible for patrolling & security beyond coastal areas in sea.
- Navy exercises supervisory control over ICG & marine police.
- Joint action plan by ICG & Navy
- Promotion of fisherman as eye & ear



Idea! even setup must be robust to act as net security provider under SAGAR.