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GENERAL STUDIES (TEST CODE : 1515)

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Medium Eng./Hindi	English	Registration Number	718535
Center	ORN	Date	08/Dec-21

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।

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EVALUATION INDICATORS

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

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

All the Best

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

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

Off-Budget Borrowings refer to money raised by the Public Sector enterprises in order to fund deficit of the government.

- These Borrowings are raised on guarantees by the Govt.
- They are not part of fiscal deficit of the Govt;

Role of Off-Bud; Borrowings in raising funds:-

- They are raised to fund subsidy programs of Govt
- e.g Oil Marketing companies raising oil Bonds to fund fuel subsidy.
- ~~are~~ Raised to fund operational costs of the enterprise
- e.g Air India

Are they desirable?

- Such Borrowings erode the fiscal discipline of the govt;
- They are generally raised to fund populist measures of Govt at election times.
- They are used as a route to reflect lower deficit figures of govt;

How to regulate Such Borrowings:

- N.K. Singh Committee had asked Government to stop such Borrowings or include them as part of real deficit of Govt;
- Such Borrowings if at all necessary, should be used to fund Capex expenditure, not revenue expenditure.

Conclusion
Govt; needs to be transparent with regard to its "Borrowing architecture" in order to ensure effective fiscal policy implementation.

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।

In India, only Bt-Cotton has been allowed by GEC as part of GM crops in agriculture in 2002.

Case Study :- In Jalgaon district of Maharashtra; adoption of Bt-Cotton increased the yield; (↓) cost of fertilizers & pesticides & (↑) income of farmers.

As per Reading university study ;

Gini coefficient of adopters = 0.38.

Gini coefficient of non-adopters = 0.61

The above case study reflects the positive side of GM crops.

Why GM-food crops can ensure food security :-

- Adoption can (↑) yield of crops.
- (↓) in input cost of farmers [fertilizers]
- Drought resistant crops.

- Reduced Pest attack's e.g. Boll worm attacks
- Ensure remunerative & sustainable agriculture.

Concern's :-

- Can lead to development of pest-resistance.
- Can lead to erosion of diversity of traditional crops and (↑) water requirements.
- Higher price of Inputs for farmers since such seeds are produced by MNC's
e.g. Monsanto for Bt-Cotton in Maharashtra.

Way forward :-

- Better consensus among stakeholders with international assistance e.g. Bt-Brinjal has been used by Bangladesh with no side effects.
- Ensure safeguard of traditional crops' diversity.

~~Conclusion~~ we need to blend traditional knowledge with modern Biotechnology to ensure sustainable agri;

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

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

Agriculture in India employs nearly 50% of its work force & more than half of rural population is directly or indirectly dependent on it.

In order to ensure remunerative price is available to farmers; govt; under takes price-intervention policies such as:-

- a) MSP = Min; Support Prices to ensure safeguard of farmers from:-

- price volatility in market
- Better returns
- food security
- Incentive to invest in agriculture

- b) Subsidy of irrigation, seeds, fertilizers:-

- to ensure lower input costs
- ensure regional equity in prices

How it creates Broken system :-

- Practice of mono-cropping resulting in nutritional Insecurity e.g Punjab & Haryana procurement of Rice & wheat.
- No incentive to regulate water usage; thereby depleting underground water reservoirs.
- MSP only caters to 5% of farming community

Complication of international Trade Rules :-

- Violation of Agreement of Agriculture @ WTO.
- Legal case filed by Australia @ WTO for wheat subsidy.

How it should be done ?

- Direct Income support to (1) crop diversity
- Invest in agri; Infrastructure.
- Stronger case for developing countries to fight for relaxation of subsidies @ WTO.

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

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

India is one of the largest producers of rice & wheat in the world & 2nd largest producer of Horticulture crops in the world.

→ Still India's contribution to world agricultural trade is merely (2%).

What are the Impediments :-

- Poor infrastructure in post-harvest management e.g cold storages, logistics hub.
- Fragmented agri; market with dominance of APMC's.
- Subsistence & fragmented form of agriculture.
- Quality Issues w.r.t world trade.
- Dominance of Informal food processing Industries with no Business acumen.

How correction's can be made :-

- Improve Agri; Infrastructure to
(↓) wastage & (↑) shelf life i.e.
Agri; Infra fund of 1 lakh crore.
- Bring in Private Players in Agri; market
& promote contract farming e.g NITI Aayog
model Contract Law.
- Mega food Park scheme e.g PM-SAMPADHA
- Regulate Quality of food crops by using
Irradiation technologies @ WTO standards.
- Promotion of FPO's for economies of scale.

Way forward :- If India has to realize
its goal of reaching BoB\$ agri export
trade (Nat; Agri Export Policy 2018); we
need to make interventions at the
earliest in order to ensure greater
share in global agri; 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" as a concept has evolved where govt identifies "land parcels" across different regions and purchases them along with required statutory clearances to ensure min. land acquisition time for industrial setup.

e.g. Andhra Pradesh Land-Bank Scheme

Why land-Bank concept is better :-

- Excessive land acquisitions delay's hamper ind. growth e.g. POSCO Steel withdrawal from Odisha.
- Nearly $\frac{1}{3}$ of litigations in courts are land related only.
- Ensure equitable regional distribution

of Industries to ensure min; regional disparity.

- Min; time required of Environmental & Clearances.

- Last resort diversion of agri; land for industrial development.

- Govt; acts a guarantor & sovereign authority to ensure min; litigations.

Concerns associated with Land Banks :-

⇒ Majority of Land Banks available with govt; are lying idle with enormous monetary potential.

⇒ Govt; could ~~co~~ play coercive role in Social Impact Assessment process due to major exceptions available to government.

⇒ Diversion of public land acquisition for private industry doesn't reflect fair practices

way-forward:- Land Banks as a concept has enormous potential but we need to ensure fair/equitable land acquisition.

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।

Acc; to UNCCD; nearly 30% of India's landmass is degraded and by 2030; this percentage could go upto ~~30~~ 35-40% if proper Interventions aren't carried about

Why deserted land is a challenge :-

- Reduced productivity of land.
- Greater rate of sheet erosion.
- loss of Bio diversity.
- Distress for agri; Sector with Increase occurrence of droughts.
- Extension of desertification to productive areas e.g Western Deserts are extending beyond Aravalli Ranges.

How climate change is intensifying desertification

- (↑) Incidence of droughts & excessive rainfall in shorter duration i.e. -
- Reduced window of Monsoon's in India.
- Heating up of earth's landmasses reduces its productivity.
- Rising sea-levels; resulting in intrusion of salt water into coastal areas.

Measures to stop desertification :-

- Sustainable Agri; Practices e.g. Agro-forestry.
- (↑) green cover (forest area e.g. "Great Green Wall" initiative across Aravalli)

Way-forward :- India has committed to reverse land deg; under "Bonn Challenge" ~~and~~ by ~~increasing~~ restoring nearly 8 million hectares of land by 2030 and ensure safe & secure environment for all.

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" is the 'value' associated with mind, ideas or creations of an individual; to ensure process of Innovation in "mankind".

Such "Property" of an individual needs to be safeguarded to promote future Innovations & Initiatives; &

In this regards; WTO's TRIPS agreement and each nation's IPR law's ensure monetary benefits to the firm or individual for certain period of time. e.g. In India; Music copyright is valid for 50 yrs after death of artist.

Open-source license :- when a particular ~~created~~ ^{developed} software or product is ~~created~~ by a firm;

its available in public domain to change or innovate as per the needs of ind; with no restrictions.

e.g COVID-19 "CO-WIN" app was made open-source for other nations to change or modify as per their requirements.

Advantages :-

- Act as a "Public good" for humanitarian Cause e.g COVID-Pandemic.
- Can lead to future Innovations in lesser time e.g LINUX applications.
- Incentivize poorer countries to develop new products as per citizen's needs.

Disadvantages :-

- Can hamper cycle of Innovation.
- Can be used for developing products which are security challenge to nation's e.g Blue whale game.

Way forward :- We need to balance between "Innovation" and "Public good" for greater good of humanity.

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।

Indian space organisation (ISRO) is among top space agencies in world with "Innovations" & "Pro-active" initiatives life and bread of the agency. Space in India is dominated by one agency with various successful missions under its name such as: Mangalyan, NAVIC, Chandrayaan-1.

Even though ISRO has been successful to carry space innovations forward since its inception; still certain areas of concern remain: -

- Low Private sector Participation.
- Govt; monopoly of space sector.
- Min; Business with private sector.

How ISA can be a game changer:-

Indian Space Association has been setup by Govt; to increase:

- Private Sector Participation in space sector.
- equal & equitable space of Govt; & private in space assets.
- (↑) Revenue of Govt; (↑) Soft Power of country.
- use of space tech; by private sector for its functioning and better decision making.

Case study :- Recently; 124 satellites of other nations had been carried by ISRO; contract signed by ISA.

Way-forward :- "space" as a ^{new} domain is going to be crucial for future humanity & we need to make sure that its development is sustainable for ^{peaceful} existence of humanity.

Army
Terrorist

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Don't write
anything this
margin
(इस भाग में
कुछ ना लिखें)

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।

"Internal Security" of a nation refers to its peaceful and severe existence of

- Political Security.
- Economic Security.
- Internal Security.
- Environmental "

Dawn of 21st Century is making humanity to reach new levels of Innovation's where in technology is playing a crucial role in existence of mankind; thereby changing the ~~very~~ very Paradigm of Internal Security."

How Technology is changing Int. Security Challenges:-

- online radicalization and recruitment of urban Youth e.g. ISIS in Kerala.
- Spread of fake news via social media resulting in communal clashes e.g.

Muzaffarnagar violence

- use of "Drones" to deliver fake currency & Am's and carry terrorist attacks e.g Drone attack of Jammu Air force Station

How Technology can be used to deal with such challenges :-

- Deployment of "National cyber coordination Centre" to scan Internet meta data.
- Establishment of (I 4C) Centre to deal with cyber attacks.
- Deployment of UAV's along sensitive borders with radar detection technologies.
- Upgradation and modernization of arm's & equipments.

Way-forward :- Rapidly develop^{ing} urban centres have higher tech; penetration which makes them vulnerable to new tech; warfare & we need to make sure that such areas are kept safe by deploying latest technologies.

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।

(NSG) as a security agency can into existence after assassination of Indira Gandhi in 1982; in order to protect the heads of the state.

Mandate of NSG :-

- to deal with security of High profile political targets
- to intervene in terrorist operations when called upon to do so.
- to protect & carry out counter insurgency operations when called upon to do so.

Achievements :-

- Successful in flushing out

terrorists from Taj in 26/11 attacks-

- Successful in dealing with Parliament attacks of 2001.

- Successful in protecting high profile dignitaries from rogue attacks.

Way-forward :- Mandate of this force needs to be broadened in order to:-

- Greater deployment in critical places of national importance.

^{Help}
- Modernization of forces on par with other agencies of the globe.

- Better coordination with other forces for greater training exchanges & unified action at times of need.

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

Asset monetisation ~~also~~ refers to a process where in infrastructure assets of public are monetized for:-

- Greater revenue realization for the Govt; via upfront payment
- Better operations and maintenance by the private player.
- No loss of national assets to private player; to be returned after concession period.

Why is it needed?

- To unlock the real value of dormant assets; ~~being~~ lying with government.

- Generation of Revenue for further investment in infrastructure.
- Better management practices along with corporate culture in operations of the monetized asset.

→ In this context; National monetisation Pipeline has been announced by the Govt; with targets of :-

- Core; Infrastructure e.g. operation of DFC's.
- Brownfield Projects
- Longer concession agreement.

Issues which need to be addressed :-

- Preference of same player for design & maintenance of Project.
- Greater concession periods to incentive the operator which could result

in development of niche Industry of
"Operations & Maintenance".

- Review of Concession agreement's periodically to ensure viability to the Operator.
- Proper regulatory framework to address quality issues by the "Service Operator" e.g NHAI for Highways.
- Payment of amount preferably in "up-front mechanism" in realistic payment schedules for the operator.
e.g 25% upfront Preferable.

Way-forward :- NMP can be a game changer in realising true potential of nat; Infra; thereby improving quality of service to the public & at large & ensuring enough monetary resources with govt; for future Infra; Investments.

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" has been introduced in Budget 2021 as a concept where in

An ~~ex~~ platform would be created for "non-governmental organisations" where in investors could invest in these organisations to contribute ~~the~~ to social sector development of the country.

- Such a exchange is to be regulated by SEBI

Why this concept or why need for such an exchange :-

- NGOs generally fill gaps where governance ^{structure} doesn't reach; But lack of funding hampers their operations.

- Acts as an initiative for companies for invest in diverse sectors based on NGO's profile e.g education; health.
- Doesn't concentrate funds in single sector e.g CSR funds of companies in education only.
- Motivates the NGO to work for greater public cause with pro-active engage-
ment of different sectors.
- Allow's Philanthropist activities to reach proper areas; since NGO's have greater social capital.

Key challenges in effective Implementation :-

- Difficult to differentiate between genuine NGO & non-genuine one.

- ⇒ Can act as a route for illicit money laundering activity.
- ⇒ Can pose a threat to nat; security for Black money re-routing.
- ⇒ "Quid - Pro Quo" between NGO & Corporate can direct investment only in certain sectors; being beneficial only to corporate sector.

Way-forward :-

- SEBI & RBI need to collaborate to check & monitor source of funds.
- Stricter Implementation of FEMA & PMRA Act.
- Regular Audit of each NGO's.
- Regular info; sharing with Finan; Intell; and
- Social Audit of works carried by NGO's

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 services provided to agri; sector for :-

- Better crop information.
- Better mandi; Info;
- Training in agri; Practices.
- On-field demonstration of new applications.
- Regular feedback and assistance in decision making.

Importance of agri; extension :-

- Avoids Info; asymmetry to farmer.
- Better agri; productivity by improving practices.

- Faster adoption of new methods & technologies.
- Avoids distress sale and improves Agri; diversity.

Challenges faced in providing of Agri; Extension services :-

- Poor Rural Infrastructure.
- Digital Divide.
- High Illiteracy among rural.
- Resistance in Tech; adoption by farmer community.
- Role of middlemen in marketing of agri; produce e.g. Achatyas.
- Subsistence practices of agri; have little incentive to adopt to new tech;

How NMAET is changing this scenario :-

- Extension services are provided via Common Service centres.
- Tie up with Private Sector e.g e-Coupal model in Bihar (Initiative of ITC) to train farmer's.
- Greater focus of National Broadband Mission & connection with social Infrastructure e.g Schools / Panchayats.
- Involvement of Panchayats in behavioural changes.
- Greater on-field demonstrations by tying up with Agri; Research Institute.

Conclusion :- Agri extension services play an important role in ~~providing~~ providing right info; at right time to ensure increased produc; of agri sector.

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।

"Employment" as a social problem has been in existence in Indian society ^{since time immemorial} with little changing since Independence.

Reality :-

- 50% of labour is still employed in agri; resulting in disguise labour.
- Recently, unemployment rate ~~touch~~ touched 6.1% → 45% are High.
- Informal unemployment captures 85-90% of labour sector.
- (LFPR) in India is (48%) with female participation @ 21%; resulting in gender discrimination.

What are the reasons :-

- Over dependence on Agriculture.
- Deployment of Mahalanobis model of Industrialization in 2nd 5 year Plan.
ie Capital Intensive Industries.
- Low skill set among individuals.
- Poor social indicators ie; Health & Education.
- Rigid labour (laws).
- plethora of clearances to start an industry.
- lower investment in infrastructure
e.g In Budget 2020; 18% → Revenue
6% → Capital.

"Employment" problem has to be eradicated by certain measures:-

- Improve FODB [Rank-63].
- New Labour codes recently announced-
- Promote labour-intensive industries (MITRA scheme in Budget for textiles)
- Provide Social Insurance to employees.
- Promote formalization of industries
- Improve skill of individual e.g. PMKVY.

Way forward :- As a nation ; we need reforms across different avenues of economy in order to ensure our demographic dividend doesn't turn into demographic disaster & ensure inclusive development of nation.

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।

Acc; to WB report; logistics in India cost around 14% of GDP as compared to 8% in United States.

Reasons for High logistics in maritime trade :-

- ~~Slow~~; lower mechanisation of Ports resulting in mechanical Handling of cargo e.g. Kochi Port.
- Greater turn around time for cargo ships.
- plethora of clearances @ custom centres.
- No integration of different modes of transport i.e. Concept of multi-

model transportation is missing.

- older ages of ships; major Indian ships still use single hull container.
- lower infra; development with regard to logistic parks.

What has been done so far?

- Greater depth of sea ports as required by international standards of 18m
e.g. Vadnvan Port (13 Major Port)
- Port led development model
"Sagar Mala".
- Upgradation of Port facilities using RF ID clearance mechanism with documents down from 150 to 50.

What can be done ?

We need to stop looking at transportation on point basis; need to re-look in an integrated manner.

i.e. Multi-modal Concept

- Increase no. of logistic Parks @ intersection of 2 modes.
- Smooth Transition from 1 mode to another.
- Better Infrastructure of rail / road around maritime areas.
- ↓ Interven around time for ships.
- Quality & safety checks integrated in customs clearance.

Way forward ⇒ We need to rapidly develop our maritime infra; since 90% of trade by volume & 70% by value is dependent on it.

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 :- Resources available in the ecosystem which have monetary value of the mankind.

e.g. timber in forests.
Water in Rivers.

"Ecosystem Services" are "services" provided by the environment around us with little contribution from the individual at ~~at~~ no extra cost.

e.g. Fresh Air

- Reduction in pollution after Rainfall.

Why Both are crucial :-

- Accounting for nature's services ensures sustainable use by the

Humanity.

- Accounting for these services can lead to ~~the~~ concept of sustainable development i.e.; UN-SDG goals of 2030
- Accounting is necessary; since we don't have any alternative available for such services.
- Avoids exploitation of resources by the Industries
- We need to ensure availability of such resources for our future generations.

Initiatives in this regard :-

- Concept of 'Polluter Pays Principle'

- Concept of "Carbon Tax" to pay for environmental pollution.
 - India's INDC in Paris Pact reflect the sustainability of growth.
 - Concept of recollection of S-W & 'elect; waste' reflects this principle.
 - Concept of "wise-use" of wetland reflects accounting principle in services.
- Way-forward:- we need to make sure that our growth story is sustainable in nature to reflect Gandhi's Mantra":-

"There is enough for everyone's need
not for anyone's greed".

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।

⇒ In India; 30% of its population lives in urban centre and is expected to grow by 40-45% by 2035.

⇒ In 2045; India would be the most populous nation in the world

Both these facts represent the dichotomy - my India is going to face in "Urbanisation progress".

How urbanisation is going in India :-

- unplanned in nature.
- Urban Heat Island.

- Concentration of city centres.
- Rapid development of slum areas.

How it exaggerates natural disasters :-

- (1) Population without any investment in drainage system.
- Concretized Roads having minimum porosity.
- Urban Heat Island (1) Heat waves.
- ~~Removal~~ Encroachment of Flood Plains by High Rise Buildings.
- Leveling of natural lakes and ponds by infra; development.

Impacts :-

Loss of lives and livelihood.

- Collapse of Structures of social and economic importance.
- Shutdown of cities.

Adequate measures :-

- Concept of "sponge cities".
- Concept of smart cities with data driven planning.
- Strict regulatory framework.
- Development of city fringes to (↓) pressure on city centre.
- Transit oriented developmental model of cities.

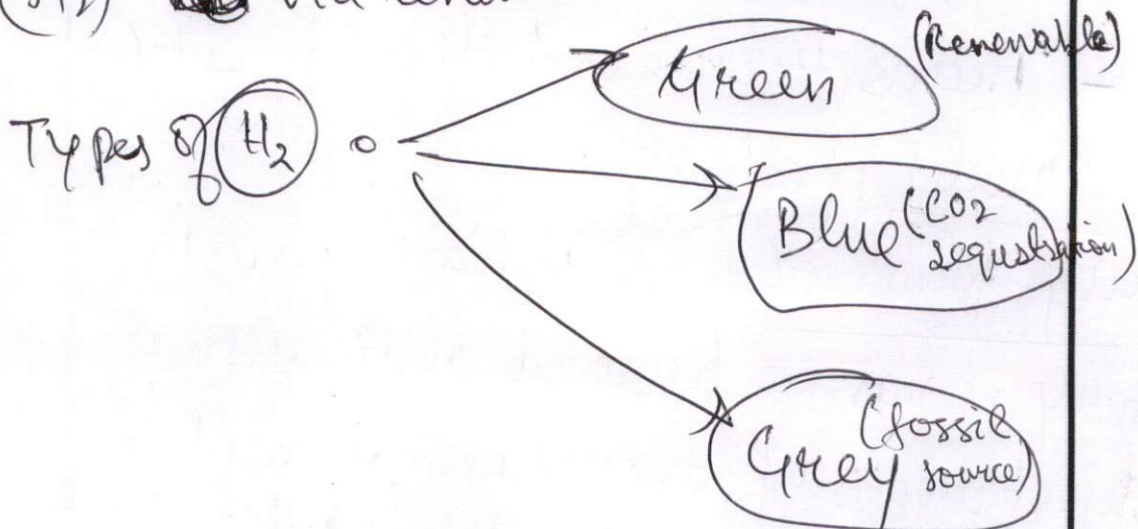
Way-forward :- India's growth story is moving forward with rising expectations of its citizens & we need to make sure that ~~the~~ urban centres don't restrict the growth story of nation.

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

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

Hydrogen gas is the lightest of all gases present on earth and this can be used as a fuel with min; emission's as exhaust.

National Hydrogen Mission :- Launched by GOI in 2020 to increase share of Hydrogen in energy mix of the nation and increase extraction of (H_2) ~~via~~ via renewable sources.



How can it be a game changer:-

- Reduce dependence of oil Imports.
- Contribute to India NDC targets.
- Cleanear fuel.
- Increased (R & D) Investment.
- (H_2O) as output.
- ($\uparrow$) employment.
- Can be an ~~net~~ exporter in future.

Long way to go:-

- Higher capital Investment for R & D.
- Replacement of fuel cell is frequent & low fuel cell tech;

in India.

- Variations of solar power reduce extraction of Green Hydrogen.
- Low Density of (H_2) gas needs high pressurized gas tankers; tech; not available in India.

Conclusion :- H_2 can be a game changer in India's energy basket but sufficient (R & D) needs to be carried out in order to ensure sus; supply of fuel with min; disruption in India's energy security.

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।

In WEF Cyber Threat Report; India is the 5th most vulnerable country in terms of cyber-threat attacks.

Reasons :-

- Fast changing technology.
- Low Digital literacy.
- Poor Quality devices (Huawei)
- NO updation policy of devices
- Nascent electronic Industry.

Why despite policies; we face threats:

- lack of coordination between different agencies.
- low literacy of digital domain among population.
- low workforce to train on cyber threats.
- low adoption of new technologies.

Various Threats faced by India in cyber domain are:

- Snooping
- Phishing
- Economic frauds.
- Malware, Virus attack, Ransomware.

How it should evolve :-

Step taken:-

- Integrated cyber crime coordination Centre as one stop point of integration.
- Train 5 lakh workforce in Cyber Technologies.
- National Centre of Protection of Critical Infra;
- National cyber coordination Policy.
- National Dig; Comm; Policy 2010

All these policies reflect the true intent of ~~cyber~~ govt in cyber domain; what is reqd; is governance reform with greater coordination among different security agencies.

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 with
protracted nature.

- Naxalism
- A-E Insurgency
- J&K militancy

All these conflicts require a
multi pronged approach

↙
Develop
mental

↘
Security
Intervention

Interventions in various geographies:-

Naxalim :-

- S - Smart Policing
- A - Actionable Intelligence
- M - Motivated force
- A - Awareness
- D - Dashboard via KFI
- H - Harms Tech;
- A - Action.
- N - No to finance

N.E. Region :-

- operation 'All Clear' with Bhutan for ULFA
- 'Operation Sunrise' with Myanmar for NSCN.

For J & K :-

- Surgical strikes & Hel

Pursuit

- Proactive engagement with cross-Border Terrorism.

In 21st Century; changing tech; is further shifting the Paradigm in new dirⁿ:-

- ⇒ Deployment of VAV's to protect from Drone attacks
- ⇒ High tech radars for detection of Intrusion

National security in 21st century requires multiple interventions & develop; along with proactive counter-measures via forces can ensure long lasting peace of nation