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GENERAL STUDIES (TEST CODE : 1244)

Name of Candidate	MUKUND	Registration Number	49120
Medium Eng./Hindi	ENG	Date	29 Aug. 2019
Center	ORN		

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
1	10	
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16	15	
17	15	
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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. Discuss the need of an Independent Fiscal Council (IFC) in bringing about transparency and accountability in fiscal processes in India. (150 words) 10

भारत में राजकोषीय प्रक्रियाओं में पारदर्शिता और जवाबदेही का समावेश करने हेतु एक स्वतंत्र राजकोषीय परिषद (IFC) की आवश्यकता की चर्चा कीजिए।

According to 2nd ARC report, transparency and accountability in fiscal processes is much needed to end corruption in governance.

- Issues with present fiscal processes in India:

- 1) Opaqueness: with respect to fiscal distribution, allocations etc.
 - 2) Lack of accountability - as CAG alone cannot audit extensively, seeing increase in extent of fiscal outreach
 - 3) Issues of unprudent expenditure: without much attention to outcome
- Need of Independent fiscal council (IFC) arises as; it can help:
- 1) Bring transparency: by clear cut allocation, disbursement of

financial resources.

- 2) It can ensure that each ministry gets proportionate to their need.
- 3) Centre-state fiscal friction: can be smoothened as IFC can have representation from states, unlike Finance Commission (Art-280) which lacks state representation.
- 4) IFC can also check prudence, appropriety of expenditure thus promoting accountability.
- 5) Can aid parliament to decide on demand for grant and cut motion effectively.

Thus, IFC along with CAG holds potential to bring transparency in fiscal processes, and it can be constituted after adequate deliberation.

2. Recognizing the potential of exports in generating employment, a number of steps need to be taken to address India's weakening export competitiveness. Analyze. (150 words) 10

रोजगार सृजन हेतु निर्यात क्षेत्र की क्षमताओं की पहचान करते हुए, भारत की कमजोर होती निर्यात प्रतिस्पर्धा को संबोधित करने हेतु कई कदम उठाए जाने की आवश्यकता है। विश्लेषण कीजिए।

According to Economic Survey 2018-19, exports hold huge potential in employment generation as seen from success model of MSMEs growth.

- Exports generates employment in following ways:

- 1) Increased investment: for export increases productivity making goods demand higher, leading to more employment.
- 2) New sectors for export: like food processing, agro-processing etc. can boost employment.
- 3) MSMEs: contributes 45% to export, and is second largest employer at 110 mn, after agriculture.

- Steps taken recently are:

- 1) Agri export policy 2018: aims to increase export to \$60 bn by 2022 (from agriculture good processing)
- 2) Eaz of Doing business: to increase investment and related export
- 3) Make in India: to make India manufacturing hub and thus export competitive

- Steps to be taken to address India's weakening export competitiveness are:

- 1) Increasing investment: which will lead to increase in efficiency, thus increasing productivity
- 2) Interest subvention: with the help of ExIM Bank to promote export in target countries
- 3) Addressing trade friction: like with US with related to tariff on Iron & steel.
- 4) Diversifying export: to Latin America, Central Asia etc.

Hence, we need to focus on export to address job crisis in India.

3. Highlighting the main features of National Mineral Policy, 2019, discuss how it can help in ensuring sustainable and responsible mining.

(150 words) 10

राष्ट्रीय खनिज नीति, 2019 की मुख्य विशेषताओं पर प्रकाश डालते हुए, चर्चा कीजिए कि यह संधारणीय और उत्तरदायित्वपूर्ण खनन सुनिश्चित करने में कैसे सहायता कर सकती है।

National Mineral Policy-2019 was released by Ministry of mines, in order to promote India's mineral exploration (thus reducing foreign dependence) and parallelly sustainable mining.

- Main features of National Mineral Policy 2019 are:

- 1) Increasing investment: in mining sector to make mining profitable and environmentally sustainable.
- 2) Increasing export: from mineral exploration, processing and export, thus earning forex.
- 3) Making mining sustainable: by promoting use of advanced technologies in scientific manner.

4) By promoting clear/transparent allocation - of mining fields to bring transparency in process.

- National mineral Policy-2019 can help in ensuring sustainable and responsible mining by:

- 1) Promoting transparent allocation: of mining fields in less fragile regions
- 2) By increasing investment: by promotion of private sector investment and cooperation
- 3) By including local masses - in decision making processes

Hence, sustainable, responsible mining is need of hour.

Recent steps like Mission SHAKTI, along with allowing 100% FDI in selected mining is welcome steps.

4. Highlighting the salient features of the PM JI-VAN Yojana, analyze how it can assist in achieving the vision and goals of the National Policy on Biofuels, 2018. (150 words) 10

“प्रधानमंत्री जी-वन योजना” की मुख्य विशेषताओं पर प्रकाश डालते हुए, विश्लेषण कीजिए कि यह जैव ईंधन राष्ट्रीय नीति, 2018 की दृष्टि और लक्ष्यों को प्राप्त करने में किस प्रकार सहायक हो सकती है।

PM-JIVAN Yojana launched by Ministry of Petroleum and Natural Gas (MoP&NG) aims to promote use of biofuel, among various other objectives.

- Salient features of PM JI-VAN Yojana:

- 1) Growing of bio-fuel based crops:
like promoting use of sugarcane molasses, beats etc.
- 2) Promoting processing of bio-fuels:
to increase its share in overall energy mix

- Vision and goals of National Policy on Biofuels - 2018 are:

- 1) Increasing use of biofuel: by blending ethanol in petrol upto 20%.

- 2) Achieving 5GW of energy from biofuel by 2022.
- 3) Promoting co-generation : of both heat and energy from same source
- 4) Increasing use of Sugarcane leftovers to biofuel generation
- 5) Increasing income of farmers : by giving them option to sell left-over food crop for biofuel production.

- PM JEVAN Yojana can help achieve goals of NPBF-2018 by :

- 1) By increasing production of biofuel
- 2) By increasing income of tribal people by giving them option to sell biofuel based crop

Thus, both scheme and policy is complementary to each other promoting biofuel use as well as enhancing income of farmers, tribal people.

5. Zero Budget Natural Farming (ZBNF) provides an alternative to capital and chemical intensive agriculture currently being practiced in India. Analyze.
(150 words) 10

जीरो बजट प्राकृतिक कृषि (ZBNF), भारत में वर्तमान समय में प्रचलित पूंजी और रसायन गहन कृषि का एक विकल्प प्रदान करती है। विश्लेषण कीजिए।

ZBNF: refers to use of natural processes to increase agricultural productivity in a climate-friendly, sustainable manner. It was mooted by agriculturist Suhas Palekar in Karnataka.

- ZBNF provides alternative to capital intensive agriculture by:

- 1) Promoting natural processes: like zero tillage, vermi compost etc.
- 2) No use of ^{heavy} equipments: like tractors for ploughing, happy seeders etc.

- ZBNF provides alternative to chemical intensive agriculture by:

- 1) Curtailing use of chemical fertilizers like NPK, urea etc. and promoting

use of natural organic processes
e.g. vermicompost.

2) By curtailing use of herbicide,
pesticide: as ZBNF relies on
natural treatment of soil.

- Shortcomings of ZBNF:

- 1) Time taking: as it takes 3-4 yrs.
to reap benefits of ZBNF.
- 2) Decreased productivity: vis-à-vis
chemical (fertilizer) based farming,
as lamented by Sugarcane farmers
in Maharashtra, Karnataka.

However, seeing the
rapid degradation of agriculture
land, ZBNF along with organic
farming must be promoted,
as per Economic Survey 2018-19.

6. Marine life is facing 'irreparable damage' from the millions of tonnes of plastic waste which ends up in the oceans each year. In this context, examine the implications of plastic pollution on marine ecosystem and suggest some measures for addressing this problem. **(150 words) 10**

समुद्री जीवन, प्रति वर्ष समुद्र में पहुँचने वाले लाखों टन प्लास्टिक कचरे के कारण 'अपूरणीय क्षति' का सामना कर रहा है। इस संदर्भ में, समुद्री पारिस्थितिकी तंत्र पर प्लास्टिक प्रदूषण के प्रभाव का परीक्षण कीजिए और इस समस्या के समाधान हेतु कुछ उपाय सुझाइये।

According to reports of Green Peace NGO, around 50-60 tons of plastic waste ends up in ocean each year.

- Implication of plastic pollution on marine ecosystem:

- 1) Micro-plastics: in nm size, are consumed by marine organisms which disrupts their metabolic cycle.
- 2) Disruption in food chain: due to decrease in number of zooplanktons, which dies after consuming plastic.
- 3) Coral bleaching: due to plastics accumulation on surface, leading to stress and further expel of zooxanthellae.

• Measures for addressing plastic pollution are:

- 1) Promoting zero-plastic use on surface as pledged by India and other countries on Environment day-2018
- 2) Ensuring zero-tolerance : towards industrial plastic discharge to ocean
- 3) Global collaboration : by FAO along with UNFCCC to combat plastic pollution
- 4) Funding NGOs, companies : to clean plastic from ocean and reduce its use.

Thus, recent steps by NGO Ocean clean-up to clean ~~plastic~~ plastic pile-up is need of hour and appreciating. Further such steps be promoted.

7. Write a short note on the evolution of Bharat Stage norms in India. Also discuss the significance and challenges posed by the planned introduction of BS-VI norms in India from the year 2020. (150 words) 10

भारत में भारत स्टेज मानकों के विकास पर एक संक्षिप्त टिप्पणी लिखिए। साथ ही, वर्ष 2020 से भारत में BS-VI मानकों को योजनाबद्ध रूप से लागू किए जाने के महत्व और उसमें आने वाली चुनौतियों की भी चर्चा कीजिए।

Bharat Stage (BS) norms were introduced in India in face of rising air pollution due to harmful increasing vehicular emission (SO_x, NO_x etc.)

Bharat stage norms in modelled on European standard norms, who were the first to introduce standards for vehicular emissions of this kind. BS norms aims to prescribe necessary engine model to reduce emission. India after following BS-IV is going to implement BS VI from 1 April 2020. Already cities like Delhi-NCR has BS-VI norms from 1 April 2019.

- Significance of BS-VI norms are:

- 1) Reducing emission: as Sulphur content will decrease by further 20-30% and so will NO₂.
- 2) Help achieve goals of NCAP: National Clean Air Programme, which aims to reduce PM_{2.5/10} concentration by 20-30% from 2017 level by 2022 in 102 cities.
- 3) Decreasing adverse health impact: like pulmonary diseases, heart diseases.

- Challenges of BS-VI norms:

- 1) Car manufacturers not ready: to configure engine as per prescribed norms
- 2) Increased cost: of retrofitting or new cars may impact automobile sector.
- 3) Conflict between implementation of electric & hybrid car and BS-VI norms adoption.
Hence, India along with BS-VI should focus on electric cars and other public transportation facilities.

8. What are black holes? Highlight the challenges in imaging a black hole? How were these challenges overcome by the Event Horizon Telescope project? (150 words) 10

ब्लैक होल क्या हैं? ब्लैक होल के चित्रण (इमेजिंग) में आने वाली चुनौतियों पर प्रकाश डालिए।
इवेंट होराइजन टेलीस्कोप प्रोजेक्ट द्वारा इन चुनौतियों को कैसे दूर किया गया?

Black Holes: Refers to the region in space which has so high gravity that even light cannot escape it. It was proposed under theory of Relativity of Einstein.

- Challenges in imaging a black hole were various, like:

- 1) Very far off: Location of black holes made it hard for telescopes to capture image.
- 2) No clear cut feature: of black hole made it hard to accept one image among scientific community.
- 3) Very high gravity: around black hole made it impossible for any earth-based satellites to get near.

black holes.

However, these challenges were overcome by the Event Horizon Telescope scope, which created history by capturing first clear image of Blackhole.

Event Horizon Telescope were collaboration among many countries like US, UK, EU etc. and there were multiple telescope placed around the world, which collectively captured images of each part which was further ~~cast~~ assimilated to form a complete image of Blackhole.

Thus, event horizon telescope created history to show mankind first image of blackhole.

9. While mentioning the objectives of the Arms Trade Treaty (ATT), discuss the challenges which are hindering the utilization of the ATT to its full potential. (150 words) 10

शस्त्र व्यापार संधि (ATT) के उद्देश्यों का उल्लेख करते हुए, उन चुनौतियों की चर्चा कीजिए जो ATT को इसकी पूर्ण क्षमता से उपयोगित किये जाने में बाधक हैं।

- Arms Trade Treaty (ATT) was signed between India and USA in early 2008, to increase trade in arms between two nations.
- Objectives of the ATT:
- 1) Increased trade: in arms and ammunition, in post cold-war era.
 - 2) Increasing co-operation: in the field of defence & security between India and USA.
 - 3) Enhancing internal security: between two nation in base of rising China in Indo-Pacific
- Challenges which are hindering the full utilization of ATT are:

- 1) India - Russia relation: acts against USA's intention to isolate Russia, as Russia continues to be largest arms supplier to India.
- 2) USA - Pak nexus: due to countering Taliban in Afghanistan, impact India's interest.
- 3) Unrealibility of USA: as it puts various conditionalities on arms imported from it.

Hence, there is a need to address the challenges to ensure full utilization of potential of Arms Trade Treaty.

10. Threats to internal security of India may be posed both through the communication networks and also to the networks. Discuss. Also, highlight the steps taken by the government in making the networks more secure.

(150 words) 10

भारत की आंतरिक सुरक्षा को खतरा संचार नेटवर्कों के माध्यम से एवं स्वयं संचार नेटवर्कों को खतरा होने, दोनों ही प्रकार से हो सकता है। चर्चा कीजिए। साथ ही, नेटवर्कों को अधिक सुरक्षित बनाने हेतु सरकार द्वारा उठाए गए कदमों पर प्रकाश डालिए।

The new age of war, relies heavily on Cyber warfare, where enemy nation or non-state actors aims to dysfunction satellite and thus communication network and internet.

- Threats to internal security posed by communication networks:

- 1) Radicalisation of youth: from minorities through social media platforms.
- 2) Fake message: of communal based persecution, targeting to disturb communal harmony. e.g. ^{mob} lynching on fake news
- 3) Rumour-mongering: of secession, separatism etc. poses perennial threat

- Internal security threat to network can be done by :
 - 1) Online hacking/phishing : by steps like Ransomware, malware eg ^{Pettya} attack
 - 2) disruption of internet : by destruction of satellites in space.
- Steps taken by government in making networks more secure are:
 - 1) ASAT: Anti-Satellite Test under Mission Shakti to promote deterrence.
 - 2) Strengthening provisions of Information Technology Act, 2002; and Telegraph Act, 1885 to intercept potential message related to threat.
 - 3) Operation Chakravarty : by Intelligence Bureau for counter-radicalization

Hence, India keeping in view changing scenario has keep itself abreast with cyber nuances.

11. Highlight the importance and challenges related to integration of Variable Renewable Energy (VRE) in India. Mention some steps that can be taken for its smooth integration with the synchronized Indian grid. (250 words) 15

भारत में परिवर्तनीय नवीकरणीय ऊर्जा (VRE) के एकीकरण के महत्व और इससे संबंधित चुनौतियों पर प्रकाश डालिए। ऐसे कुछ कदमों का उल्लेख कीजिए जो समक्रमिक (सिंक्रनाइज्ड) भारतीय ग्रिड के साथ इसके सहज एकीकरण के लिए उठाए जा सकते हैं।

Variable Renewable Energy (VRE)

refers to the variability in production of renewable energy due to its dependence on other factors like sun for solar energy, wind for wind energy, which is not a constant phenomenon.

- Importance of integration of VRE with synchronized Energy grid are:

- 1) will increase share of overall renewable energy in energy mix.
- 2) will help achieve India target of generating 175 Gw renewable by 2022
- 3) Achieve INDC : under Paris Agreement, where India has promised

to have 40% renewable in
overall energy basket.

4) Integration will make renewable
more favourable, as dependence
on thermal will decrease gradually

- Challenges related to integration
of VRE with synchronized Indian
grid:

- 1) Very nature of variability: makes
renewable integration a major
challenge
- 2) The scattered nature of renewable
acts as dis-incentive to integrate
- 3) Small quantity of renewable:
produced doesn't necessitate
integration with synchronized grid,
as it is used locally itself

- Steps that can be taken for
smooth integration of VRE:

- 1) Increasing secure production
of renewable: like hydro-power,
wind-power on large scale to
reap 'economies of scale'.
- 2) Incentivising private investment:
in renewable sector to promote
integration.

Hence, integration
of VRE with synchronized grid
is need of hour, to reap
large potential of renewable,
especially solar and wind in India.

12. There have been arguments that India could fall into a 'middle income trap'. Explaining the phenomenon, highlight the reasons behind such arguments. How can India avoid it? (250 words) 15

ऐसे तर्क दिए गए हैं कि भारत 'मध्यम आय पाश' में फंस सकता है। इस परिघटना की व्याख्या करते हुए, ऐसे तर्कों के लिए उत्तरदायी कारणों पर प्रकाश डालिए। भारत इससे किस प्रकार बच सकता है?

Middle Income Trap : refers to the economic phenomenon, where a developing countries despite unstained high economic growth for many years, doesn't cross over to upper income category.
e.g. Brazil, South Africa etc.

- Reasons why India could fall into MIT are:

- 1) Jobless growth: while overall growth rate is above 7%, job creation is dismal (as unemployment hovers around 7-8%.)
- 2) No investment: as country faces investment crunch which may

impart productivity, hence
export competitiveness may decline.

3) Income inequality - as per Oxfam
report, top 1% has 73% of country's
wealth, thus poor lacking any
substantial purchasing power.

4) Decreased investment in health
& education - as mere 1.2% of GDP
on health & 3% on education, results
in poor social capital.

5) Low skill, vocational training.
results in huge skill-mismatch,
rendering mass unemployed.

- India can avoid falling in
MIT in following ways:

- 1) Increasing purchasing power:
of middle, lower class to boost
demand and growth.
- 2) Focusing on job creation: by promoting

Capital intensive sectors

like footwear, leather, apparel etc

- 3) Promoting service-sector led growth:
to absorb masses from agriculture
sector which is overly stressed
- 4) Investment-led growth model: as
seen in China, South Korea etc.
- 5) Increasing expenditure on health,
education to increase efficiency
of population
- 6) Vocational : skill training - to make
workforce ready for employment
in changing times.

Hence, India
has potential to avoid MIP
and reach upper-income category
provided proper action is taken
soon.

13. Highlighting its importance, discuss the major issues that plague effective monetary policy transmission in India. Also, mention the steps taken by RBI to improve it. (250 words) 15

भारत में मौद्रिक नीति संचरण के महत्व पर प्रकाश डालते हुए, उन प्रमुख मुद्दों पर चर्चा कीजिए जो इसकी प्रभाविता को बाधित करते हैं। साथ ही, इसमें सुधार के लिए RBI द्वारा उठाए गए कदमों का उल्लेख कीजिए।

Monetary policy transmission:

refers to the transmission of policy rate change benefits to consumers at the ground level.

Importance of monetary policy transmission:

- 1) To boost demand: of credit when RBI cuts repo rate, as credit becomes cheap
- 2) To increase businesses: dependent on loan (credit) like real estate, MSMEs etc.
- 3) To regulate economy: as increase or decrease of rates (repo), directly impact inflation, cash circulation etc.

- Major issues that plague monetary policy transmission are:

- 1) Reluctance on bank: to pass on benefits to consumer quickly
- 2) Profit maximisation: approach of banks, ~~as~~ deprives consumer from cheap credit and hence robust economic growth.
- 3) Lack of oversight mechanism: to check where rate cut has been transmitted to lower level.
- 4) Lack of penal provision - in case of failure to pass off benefits.

- Steps taken by RBI to improve effective monetary policy transmission are:

- 1) MCLR-based rate: thus ensuring

rates to be according to cost charged for raising marginal cost of lending (shift from bank rate).

2) Guidelines to banks: has been issued by RBI to efficiently transfer monetary policy benefit

- Further steps that can be taken:

1) oversight mechanism by Banking ombudsman

2) monetary fine - in case of failure to transfer benefit, without substantial cause.

Hence, effective monetary policy along with capital market policy is needed to keep economy on track. Any deviation be curtailed and consumer interest be kept at central.

14. Highlight the constraints faced by rainfed agriculture in India. Discuss some agronomic practices that can be adopted for stabilizing agricultural production in rainfed areas. (250 words) 15

भारत में वर्षा सिंचित कृषि में आने वाली बाधाओं पर प्रकाश डालिए। वर्षा सिंचित क्षेत्रों में कृषि उत्पादन को स्थायित्व प्रदान करने हेतु अपनाई जा सकने वाली कुछ कृषि-वैज्ञानिक पद्धतियों की चर्चा कीजिए।

According to journal Lancet report,
around two-third (or 66%) agricultural land in India are rainfall dependent.

Constraints faced by rainfed agriculture are:

- 1) Errant monsoon: where deficit and excess has become norm, make agriculture productivity vulnerable.
- 2) Climate change: has altered traditional rainfall pattern thus disrupting crop cycle.
- 3) Lack of irrigation facilities: by canals makes ground water extraction

Compulsion resulting in 80% of ground water extraction for agricultural purposes.

- 4) Causing drought: thus impacting overall food security of country
 - 5) Reduced productivity limits farmers' capability to repay loans thus burgeoning agricultural NPA's.
 - 6) Farmers' suicide: as almost 20,000 commit suicide every year, is outcome of unreliable rainfed agriculture.
- Some agronomic practices to stabilize agricultural production in rainfed areas are:
- 1) Promoting processes like ZBNF, organic farming
 - 2) Using sprinkle irrigation, drip irrigation etc.

- 3) Promoting rainwater harvesting in these regions.
- 4) Growing less-water-intensive crops and not mugane, paddy etc.
- 5) Constructing micro-irrigation facilities by utilising funds under NABARD.
- 6) Constructing dams, Check-dams to conserve & regulate water.

Along with these,
rationalising MSP and use of
fertilizers is needed in short-
term and climate stabilization
in long-term.

15. Despite the steps taken by the government in recent years, a number of problems continue to persist in the urea sector in India. Discuss. What reforms should be taken to address the persisting problems?

(250 words) 15

हाल के वर्षों में सरकार द्वारा उठाए गए कदमों के बावजूद, भारत में यूरिया क्षेत्र में कई समस्याएं निरंतर बनी हुई हैं। चर्चा कीजिए। मौजूदा समस्याओं के समाधान हेतु क्या सुधार किए जाने चाहिए?

Urea constitute a major chunk of agricultural fertilizers in India. Its irrational use in agri-field has done uncomprehensible damage to soil productivity.

- Steps taken by government in recent years to rationalise urea sector:

- 1) Use of neem-coated urea: to slow down dissolution of nitrogen in soil
- 2) Urea specific policy: to rationalise its production, unbridled distribution etc.

- Problems that continue to persists in urea sector are:

- 1) Excessive use: in agricultural field has led to decline of soil productivity as well as agri-productivity.
- 2) Soil pollution - due to layering of urea on surface which makes water impregnable.
- 3) Water pollution - due to urea percolating to ground water and further resulting to eutrophication, which impact marine life.

- Reforms to be taken to counter problems in urea sector:

- 1) Promoting rapid use of neem-coated urea: in place of normal urea, to decrease rate of dissolution.

- 2) promoting organic farming - using vermi compost, no tillage, ZBNF etc.
- 3) Rationalising its production - by policy formulation, issuing directives
- 4) Evergreen revolution - based on zero chemical fertilizer be promoted as opined by M. S. Swaminathan.

Thus, rationalising and curbing use of urea is need of hour, to reduce its adverse affects. Recent steps like Neem-Coated urea is promising start.

16. What is Access and Benefit Sharing? Explain how it aids in sustainable use of biodiversity. Also, mention the different global and national level mechanisms for ensuring Access and Benefit Sharing. (250 words) 15

पहुंच और लाभ साझाकरण (एक्सेस एंड बेनिफिट शेयरिंग) क्या है? यह जैव विविधता के संधारणीय उपयोग में किस प्रकार सहायक है, स्पष्ट कीजिए। साथ ही, पहुंच और लाभ साझाकरण सुनिश्चित करने हेतु वैश्विक और राष्ट्रीय स्तर की विभिन्न प्रणालियों का उल्लेख कीजिए।

Access and Benefit Sharing (ABS):

refers to the process where any access to biodiversity by experts, scientist etc. for research or other purposes; mandates that its eventual benefit be shared with local community.

It is a foundational core pillar of Nagoya Protocol (2010).

- ABS aids in sustainable use of biodiversity by:

1) Promoting Conservation: of local resources by integrating local

population in the process of
research, innovation etc.

2) Ensuring equitable benefit: of
outcome to both parties

3) Promoting active-participation:
of local government, in securing
environmental interest along
with need of biodiversity processes

- National level mechanism for
ensuring ABS are:

1) National Biodiversity Authority:
established under NBA Act, 2002.
Permission from NBA for any
research at biodiversity level
is essential.

2) Adhering to international conventions:
like Nagoya Protocol on Access and
Benefit sharing, under which
'active consent' or prior permission

Local government is much for
research in local biodiversity.

- Global mechanism for ensuring
ABS are:

- 1) Cartagena Protocol (2010): mandates
prior consent among both parties.
- 2) Aichi Targets: also promotes
ABS in some way.

Thus, ABS is most
necessary to maintain
balance between need of
research, local community as
well as environment
conservation.

17. Stating the significance, discuss the challenges in achieving disaster resilience of infrastructure. Suggest some ways for mainstreaming it in the development paradigm. (250 words) 15

अवसंरचनाओं का आपदाओं के प्रति सुनम्य (रेजिलिएंट) होने के महत्व को स्पष्ट करते हुए, इससे संबंधित चुनौतियों की चर्चा कीजिए। इसे विकास प्रतिमान की मुख्यधारा में लाने हेतु कुछ उपाय सुझाइये।

According to Sendai Framework
for Disaster Risk Reduction
(SFDRR)-2015; infrastructural
disaster resilience is one of
the four foundational pillars
of effective disaster mitigation.

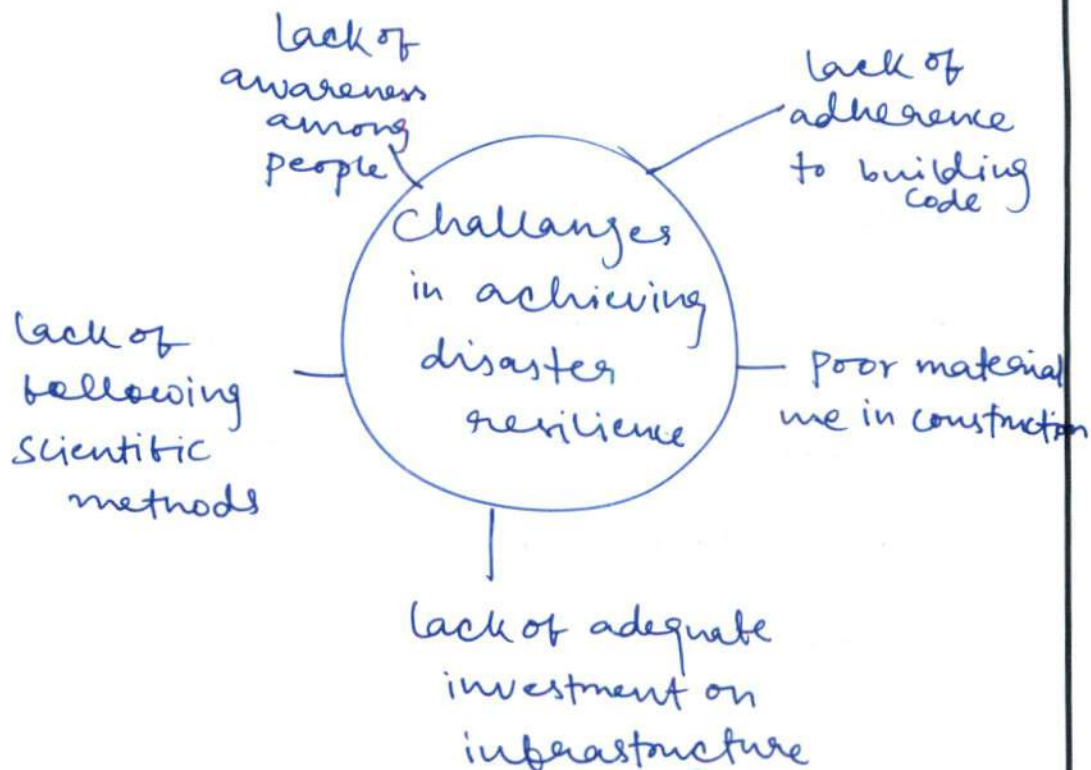
- Significance of disaster resilience
of infrastructure:

1) Saving loss of lives & property:

as efficient infrastructure
can withstand disaster to
some extent.

2) Saving unnecessary expenditure:

post-disaster as there will be no
need to build roads, houses,
bridges again.

3) Saving

— ways for mainstreaming infrastructure resilience:

- 1) Adopting & enforcing it under building code while planning
- 2) Bringing awareness: of infrastructure resilience among people of different benefits.

- 3) Cost-benefit analysis model:
can incentivise people as benefits
of resilience outweigh cost
multiple-times.
- 4) Adequate inspection mechanism
along with penal provision
for builders in case of
non-adherence.

Hence, recent
steps like Building Code
along with enforcing disaster
resilience building can save
India upto 2.5% of GDP cost,
as per World Bank. There
is need to promote it holistically.

18. Highlighting the significance of data localization for India, discuss various challenges associated with data localization. (250 words) 15

भारत के लिए डेटा के स्थानीयकरण के महत्व पर प्रकाश डालते हुए, डेटा के स्थानीयकरण से जुड़ी विभिन्न चुनौतियों की चर्चा कीजिए।

Data Localisation: refers to a process wherein a copy or whole data has to be kept within the boundary of a country where it is collected.

Recently, RBI mandated data localisation for foreign companies.

— Significance of data localization:

a) Data privacy: held as fundamental right in Puttaswamy Case (2017), has to be protected.

b) To reap benefit out of data processing — as target public

delivery can be adopted.

- c) Data being new oil : makes it important component for localization
- d) Data being misused by foreign country : through influencing consumer choice, predatory pricing etc. needs to be curtailed.
Hence, localization.

- Challenges associated with data localisation:

- a) Hampers EoDB - as foreign companies find it costly to follow localization norms.
- b) Increased cost of business: makes product less competitive thus impact revenue of foreign companies.

c) Absence of any dedicated law: makes localization hard to enforce on legal ground.

- Suggestions:

a) Data mirroring: where a copy of data can be left locally.

b) enacting law: by parliament post adequate deliberation with all stakeholders.

c) Promoting privacy: based on enacting law on B.N. Srikrishna recommendations.

19. Money Laundering as a socio economic offence is a menace especially for developing countries like India. Comment. What measures have been taken at the domestic and international levels to deal with this menace?

(250 words) 15

एक सामाजिक आर्थिक अपराध के रूप में धन शोधन विशेषकर भारत जैसे विकासशील देशों के लिए एक खतरा है। टिप्पणी कीजिए। इस खतरे से निपटने हेतु घरेलू और अंतरराष्ट्रीय स्तर पर क्या उपाय किए गए हैं?

Money Laundering: refers to
conversion of black money to
white money using different
channels.



- Domestic measure :

- 1) PMLA, 2002: Prevention of Money Laundering Act, 2002 makes it criminal offence.
- 2) RBI guidelines under IT Act, 1961 makes laundering penal offence.

- International measures :

- 1) FATF under G-20 guidelines:
Counters money laundering by enforcing
G20 guidelines and bringing
sanctions in case of failure
to adhere (by bringing under blacklist)
- 2) 9-point guidelines given by
India at G20 Summit last year.

20. The primary motive of terrorism differs from that of organised crime but there exists a symbiotic relationship between the two. Discuss.

(250 words) 15

आतंकवाद का प्राथमिक उद्देश्य संगठित अपराध के उद्देश्य से भिन्न होता है, किन्तु दोनों के मध्य एक सहजीवी संबंध पाया जाता है। चर्चा कीजिए।

Terrorism and organised crime
has symbiotic relationship in
the sense that both feed
each other, despite different
motives.

- Motive of terrorism: to instil
terror among people, to destabilise
harmony, peace in the society

- Motive of organised crime:
to earn profit through
illegal means by drug,
arms, human trafficking.

- Symbiotic relationship between two exists in the sense that, both weakens peace structure and harms country from within.

Both are complementary to each other, as money from organised crime is used to fuel terrorism.

- Suggestion to counter these:

- 1) Strengthen internal security mechanism
- 2) Border management: to curtail any intrusion, smuggling
- 3) De-radicalization of youth
- 4) Awareness among people etc.

