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GENERAL STUDIES (TEST CODE : 1068)

Name of Candidate	Amitpal Kaur		
Medium Eng./Hindi	English	Registration Number	411586
Center	Online	Date	27.08.2018

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
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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**
ब्लैक और हिंदी में प्रश्न प्रस्तुत किए गए हैं।
- All questions are compulsory.**
सभी प्रश्न अनिवार्य हैं।
- The number of marks carried by a question/part is indicated against it.
प्रश्न/अंश द्वारा प्राप्त अंकों की संख्या के विरुद्ध दी गई है।
- 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 जा सकते हैं जो प्रवेश पत्र में उल्लेखित है और जो इस प्रश्न-सह-उत्तर (क्यूसीए) पुस्तिका के कवरेज पर उल्लेखित है। अन्य माध्यम में लिखे गए उत्तरों के लिए कोई अंक नहीं दिया जाएगा।
- 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.
प्रश्न-सह-उत्तर पुस्तिका में कोई भी पृष्ठ या पृष्ठ का हिस्सा खाली छोड़ा नहीं जा सकता है।

16-B, 2nd Floor, Above National Trust Building, Bada Bazar Marg, Old Rajinder Nagar, Delhi-110060

M-1/4, Plot No-A-12/13, 1st Floor, Ansal Building, Dr. Vidya Sagar Homeopathic Clinic, 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.

1. There are many challenges in sustainably scaling up renewable energy in India. Analyse. Also, discuss what can be done to address these challenges.

(150 words) 10

भारत में नवीकरणीय ऊर्जा को संधारणीय रूप से बढ़ाने में कई चुनौतियां हैं। विश्लेषण कीजिए। साथ ही, चर्चा कीजिए कि इन चुनौतियों से निपटने के लिए क्या किया जा सकता है।

India's target of 175 GW renewable energy by 2022 means massive scaling up is required. This goal faces many challenges, such as:

- 1) Capacity of distribution and transmission networks to handle renewable energy input.
- 2) threatens viability of thermal power plants due to competitive prices, exacerbating NPAs in power sector.
- 3) Lack of adequate manpower for maintenance of panels, wind mills.
- 4) energy storage systems research such as affordable batteries has to catch up.
- 5) e-waste generated from solar panels and batteries pollutes environment.
- 6) extraordinary dependence on imports for solar, wind components and lithium.

Steps which can help to overcome these challenges are :

- Skill India for manpower
- National mission on energy storage systems for domestic battery technology
- Smart Grid mission to seamlessly integrate renewable energy
- Make in India for domestic manufacturing
- Preparation of national energy policy to balance non renewable and renewable.

As India's energy needs are going to rise with economic growth, these steps can go a long way to ensure sustainability

2. The policies and indicators introduced by the government, in recent times, to finance urban development in India are key in addressing the existing challenges. Discuss with special reference to municipal bonds.

(150 words) 10

हाल ही में, भारत में शहरी विकास का वित्त पोषण करने के लिए सरकार द्वारा आरंभ की गई नीतियां और संकेतक वर्तमान चुनौतियों से निपटने हेतु महत्वपूर्ण हैं। नगरपालिका बंधपत्रों (म्युनिसिपल बॉण्ड) के विशेष संदर्भ के साथ चर्चा कीजिए।

India's urban population is going to be 600 million by 2031 according to NIRI Agee which necessitates quick and sustainable urban development.

The government has taken steps in:

Policy

- 1) encourage value capture financing
- 2) reform incentive fund to encourage governance and service delivery reforms.

- 3) aided launch of municipal bonds such as recently listed bonds on NSE from Madhya Pradesh.

Indicators

- 1) ease of doing index to foster competitive federalism
- 2) composite water management index for water use efficiency and policy effectiveness
- 3) Credit rating for municipalities to enhance access to capital markets.

These steps highlight the shortages, the areas of improvement as well as opportunities to harness funds from market. The recent loan from AIB for AIB's investment in National infrastructure and investment fund can also help.

All these can be used to fill the 40 trillion Rupee funds required for urban development as forecasted by Joshi Judge Ahluwalia Committee.

3. With a number of issues continuing to be a roadblock, a large section of India's rural population is still 'financially excluded'. Discuss. Analyse how these issues can be addressed and the measures taken by the government and RBI recently in this regard.

(150 words) 10

कई मुद्दों के लगातार अवरोध बने रहने से भारत की ग्रामीण जनसंख्या का एक बड़ा हिस्सा अभी भी 'वित्तीय रूप से अपवर्जित' है। चर्चा कीजिए। इन मुद्दों से कैसे निपटा जा सकता है और हाल ही में सरकार तथा RBI द्वारा इस संबंध में उठाए गए कदमों का विवेचन कीजिए।

India's 68% population in rural areas faces certain issues that roadblock financial inclusion.

Some issues are :

- 1) digital illiteracy hampers use of digital technology.
- 2) lack of access to smartphones
- 3) small credit needs means unattractive avenues for banks
- 4) lack of awareness about insurance, mutual funds

These issues can be addressed by :

- 1) Information dissemination and awareness generation — Pradhan mantri gramin digital Saksharta Abhiyaan.

- 2) strict and uniform application of
priority sector lending norms
rather than year end disbursement of
loans to fulfil targets - RBI has
regularly monitored
- 3) PM Jan Dhan Yojana for provision
of a bank account.
- 4) Common service centres to provide
financial transactions online to
rural people.
- 5) Banking correspondents by RBI
- 6) SHG-Bank linkage programme of
NABARD to give credit to
self help groups.

The inclusive growth agenda has to
cater to rural areas and such initiatives
are welcome.

4. What do you understand by the term 'Environmental Accounting'? Discussing the rationale behind introducing environmental accounting, highlight its status in India.

(150 words) 10

'पर्यावरणीय लेखांकन' पद से आप क्या समझते हैं? पर्यावरणीय लेखांकन आरंभ करने के औचित्य की चर्चा करते हुए, भारत में इसकी स्थिति पर प्रकाश डालिए।

Environmental accounting is the process of incorporating the benefits to, impact on, damages incurred by and specific allocations for environment during the course of any project or undertaking.

For instance, an industry set up on degraded forest land would have to environmentally account for loss of tree cover, effect on dependent population, cost of handling discharge and pollution potential of industry.

environmental accounting is required because:

- 1) integrated nature of development

and environment

- 2) gross value addition ~~should~~ and capital formation should account for depletion of natural resources in the long term .
- 3) Ecology requires equal concern as human needs .
- 4) Polluter pays principle is now a standard principle .

Environmental accounting in India is done in the form of environmental impact assessment . CAMPA funds are paid by developers according to the value of forest cut . It is still to become an integral part of development narrative . The increasing awareness among people and enterprises ~~seeks to see~~ will assist institutionalization eventually.

5. While access to irrigation is important, efficiency of water use is equally, if not more, crucial. Examine. (150 words) 10

जहाँ सिंचाई तक पहुँच महत्वपूर्ण है, वहीं जल उपयोग दक्षता भी यदि अधिक नहीं तो उतनी ही महत्वपूर्ण है। परीक्षण कीजिए।

Irrigation is one of the major requirements for crops. Access to irrigation has been the focus of government's concerns as accelerated irrigation benefits programme and other shaired.

In the Pradhan Mantri Krishi Smichayi Yojana, the focus on efficiency 'per drop more crop' is seen. It is crucial because :

- 1) limited 4% fresh water resources of the world for 17% population
- 2) agriculture already takes 74% of water while according to NITI Aayog 600 million people face water stress
- 3) extra water causes soil salinity.
- 4) Bloated fields also release methane,

a green house gas.

5) extra water percolates with fertilizers to cause underground water pollution and run off causes eutrophication.

So, the government has encouraged micro irrigation and climate resilient agriculture along with providing access through:

- ↳ solar pumps
- ↳ canals
- ↳ tanks built during NRECA

It is with this combination of access and efficiency only that the agriculture can be sustainable while feeding a population of 1.3 billion.

6. For a holistic approach to disaster risk reduction, there is a need to mainstream indigenous traditional knowledge and link it with modern technologies. Analyse.

(150 words) 10

आपदा जोखिम न्यूनीकरण के एक समग्र दृष्टिकोण के लिए, देशज पारंपरिक ज्ञान को मुख्यधारा में लाने और उसे आधुनिक तकनीकों से जोड़ने की आवश्यकता है। विश्लेषण कीजिए।

The Sendai Framework of disaster risk reduction emphasizes the role of communities in disaster risk reduction (D.R.R.). These communities hold indigenous traditional knowledge which can be mainstreamed such as;

- 1) ecologically friendly living root bridges in Meghalaya

↳ if strengthened with material engineering will reduce vegetation destruction, landslides due to deforestation

- 2) Kunds, Kuhl and other natural rainwater harvesting

↳ mainstreamed with

geological knowledge of the area can aid groundwater recharge, preventing floods and droughts.

This shows that hidden knowledge combined with supplementary technology such as weather forecasts, satellite monitoring, early warning and effective communication via mobile phones can: firstly, reduce disaster risk;

secondly, minimize damage from the risk.

7. What do you understand by food irradiation? Highlighting some of its unique applications, examine its relevance for India. (150 words) 10

खाद्य विकिरण (food irradiation) से आप क्या समझते हैं? इसके कुछ विशिष्ट अनुप्रयोगों पर प्रकाश डालते हुए, भारत के लिए इसकी प्रासंगिकता का परीक्षण कीजिए।

Food irradiation, a positive use of nuclear technology uses radioactive materials' radiation to irradiate food items - processed or raw.

Some of its unique applications are :

- can be done after packaging
- does not alter the taste or flavour of food.
- cold radiation, therefore no problem of heating of food
- conserves nutritional value
- ~~per~~ removes all kinds of microbes

Since, 40% of food in India is wasted (as per UNDP) due to

- shortage of storage, transport and disposal infrastructure
- tropical climate with high humidity and temperature aids microbial growth

→ record production of food and horticultural products which is too much to handle immediately

food irradiation can alter all these by improving shelf life of food.

It is also important because India has 15.4% undernourished in population as per global hunger index.

BARE had recently set up a centre in Lebagaon. These are steps in the right direction.

8. Whereas misuse of technology has abetted the spread of fake news, it is with the aid of technology that this menace can be curbed. Elaborate.

(150 words) 10

जहां प्रौद्योगिकी के दुरुपयोग ने फेक न्यूज़ (झूठे समाचारों) के प्रसार को बढ़ावा दिया है, वहीं प्रौद्योगिकी की सहायता से ही इस खतरे पर अंकुश भी लगाया जा सकता है। सविस्तार वर्णन कीजिए।

Technology is a double edged sword.
Its misuse has abetted the spread
of fake news as :

- 1) social media aids anonymity,
people act as there is less probability
to be found out.
- 2) digital illiteracy has blindsided
people who trust everything they
read on their WhatsApp, Facebook.
- 3) technology is fast and has
reached remote areas so fake news
spread fast and thick.
- 4) it is tough for law maintenance
agencies to monitor technological
use due to lack of manpower as
well as expertise.

lynchings caused due to rumours of child lifting or cow smuggling is an instance of evil side of technological use. But it can also aid curbing these problems:

- 1) Artificial intelligence to scout and track instances of fake news spread by monitoring traffic
- 2) Fast and responsive police aided by satellite phones and intelligence networks on phone.
- 3) Automation of verifying of information by tech companies before upload.

Thus, the positive edge of the double edged sword can tackle the negative edge too.

9. Explain the salient features of the recently established Defence Planning Committee. How can it help in credible defence preparedness?

(150 words) 10

हाल ही में गठित रक्षा नियोजन समिति (डिफेंस प्लानिंग कमेटी) की प्रमुख विशेषताओं की व्याख्या कीजिए। यह विश्वसनीय रक्षा तैयारी में कैसे सहायता कर सकता है?

Defence preparedness is primary for a country like India with land, marine, cyber, non-state, state threats. Defence Planning Committee (DPC) has been set up to ~~set~~ holistically and swiftly plan and expedite:

- 1) acquisition of arms and weapons
- 2) co-ordination between defence bureaucracy, military, intelligence and finance.

DPC is headed by the National Security Adviser (NSA) and includes the defence secretary, finance secretary and three military chiefs.

It can help in credible defence preparedness by :

- 1) ensuring replenishment of stocks without procedural ~~and~~ bottlenecks at various levels as all decision makers sit together
- 2) holistic planning of defence needs and how they are best fulfilled
- 3) matching expectations with finances available and pursuing further according to collective decisions

DPC can overcome the current loopholes in defence preparedness framework.

10. Recent reports of Maoist leaders having amassed huge assets in property and cash underlines the significance of probing the funding network as part of counter-terrorism efforts. Discuss.

(150 words) 10

संपत्ति और नकदी के रूप में विशाल परिसंपत्तियां एकत्रित करने वाले माओवादी नेताओं की हालिया रिपोर्टों ने आतंकवाद-रोधी प्रयासों के भाग के रूप में वित्त पोषण नेटवर्क की जांच करने का महत्व रेखांकित किया है। चर्चा कीजिए।

Maoist leaders leading the secessionist movements against the state are a major threat to internal as well as external security :

- 1) collaboration with foreign states such as China to sabotage Indian interests
- 2) destruction of infrastructure such as roads, ~~foreign~~ phone towers
- 3) killing of people and security forces
- 4) challenge to territorial integrity and unity of India.

That they have amassed property and cash, shows :

- 1) loopholes in financial setup
- 2) channelling of black money to these

in return of weapons, ransom

3) failure of security agencies,
intelligence networks and finance
sector regulators

4) possible role of NGOs as recent
ED's report shows.

This necessitates that a
well coordinated approach is
required wherein counter
anti terrorism
activities expose the financial
dealings too. - the Kashmiri insurgents
and maoist leaders' financial
dealings are a case in example
where each serves the cause of
the other.

Technology and inter-agency
cooperation and information such
as NATGRID, CCTNS and NCTS
can help.

11. Not only do services MSMEs contribute mightily to the overall GDP growth, they have a powerful, multiplier impact on the local economies as well. Elaborating on the statement, highlight the problems faced by service sector MSMEs. How can the government make it easier for MSMEs to start and grow a business?

(250 words) 15

MSMEs से संबद्ध सेवा उद्यम न केवल समग्र GDP संवृद्धि में बहुत अधिक योगदान देती हैं, बल्कि उनका स्थानीय अर्थव्यवस्थाओं पर भी एक सशक्त और गुणक प्रभाव है। इस कथन का सविस्तार वर्णन करते हुए, MSMEs सेवा क्षेत्रक द्वारा सामना की जा रही समस्याओं पर प्रकाश डालिए। सरकार MSMEs के लिए किसी व्यवसाय को आरंभ करने और उसके विकास को कैसे आसान बना सकती है?

MSMEs employ around 11.5 crore people and contribute 37.5% to the GDP. Their share in exports is also big considerable. Services MSMEs contribute mightily as :

- 1) they skill local residents in profitable skill such as mechanics.
- 2) serve as markets for local manufacturing units - eg. mobile phone service
- 3) create demand for electricity, commercial space and other services such as tiffins, cleaness.

4) generate employment

The service MSMEs face problems such as :

- credit is tough due to lack of collateral
- do not have professional management skills or accounting practices.
- difficult to upgrade skills of employees as it is either costly or inaccessible
- ~~tough~~ to hesitation to expand as regulatory burden increases

the government can help MSMEs in following manner :

- 1) quality upskilling avenues for people such as Skill India mission
- 2) monitoring of MSME sentiment to activate remedial measures accordingly eg. CRISIDEX was launched.
- 3) cluster based approach to provide facilities eg. SFURTI
- 4) incubation centres for willing individuals eg. ASPIRE scheme, Startup India hub
- 5) easing regulatory processes and compliance burden eg. Shram Suvidha portal

Given the positive spillovers from MSMEs and need to employ 12 million newly entering workforce every year, ~~in the~~ these steps can help MSMEs.

12. Contract Farming has many advantages, however it suffers from market failures. Elaborate. What can the government do to correct problems that lead to contract failures? Also, discuss whether the Model Contract Farming Act, 2018 is a step in the right direction. (250 words) 15

संविदा कृषि (कॉन्ट्रैक्ट फार्मिंग) के कई लाभ हैं, हालांकि यह बाजार की विफलताओं से ग्रस्त है। सविस्तार वर्णन कीजिए। सरकार, संविदा विफलताओं का कारण बनने वाली समस्याओं को ठीक करने हेतु क्या कर सकती है? साथ ही, चर्चा कीजिए कि क्या मॉडल संविदा कृषि अधिनियम, 2018 सही दिशा में उठाया गया एक कदम है।

Contract Farming has many advantages for farmers, contractors as well as consumers. These are:

- 1) assured returns for farmers
- 2) assured supply for contractors of raw material
- 3) stable prices of commodities for consumers

It suffers from market failures such as:

- 1) inadequate legal framework
- 2) ineffective linkages of production centres with farms due to poor logistics, dilapidated transport and inadequate connectivity

The government can take several augmenting steps such as :

- 1) lay down a clear, mutually beneficial, transparent, unambiguous contract farming framework to enhance confidence of players
- 2) provide connectivity and logistics facilities eg. Pradhan Mantri Gram Sadak Yojana, multimodal logistics parks
- 3) develop mega food parks with hub and spoke model.
- 4) ensure irrigation and power supply for farming and industry respectively
- 5) provide legal aid to farmers in case of contract violations and encourage alternate dispute resolution

mechanisms

The model contract farming act released by NITI is a step in the right direction as it protects the farmer's land by mandating a legally backed, transparent contract. The contractor cannot build a permanent structure on the farm.

It provides a facilitating authority at state level and officer at district level to oversee contract. The farmer's interest is thus protected and the contractor has to provide insurance too. Contractor's claims for the produce is also protected for the contract period. It is a good beginning step.

13. Suggest the measures needed to improve the employability of labour force as well as increasing number of employment opportunities in light of structural changes being brought by disruptive technologies.

(250 words) 15

विघटनकारी प्रौद्योगिकियों (डिस्रप्टिव टेक्नोलॉजी) द्वारा लाए जा रहे संरचनात्मक परिवर्तनों के प्रकाश में श्रम बल की नियोजनीयता में सुधार लाने के साथ-साथ रोजगार अवसरों की संख्या बढ़ाने के लिए आवश्यक उपायों का सुझाव दीजिए।

Technological disruptions such as automation, artificial intelligence (AI), blockchain, digitalization and big data are bringing structural changes.

① → deployment of robots in manufacturing ~~reducing~~

→ reduces import needs of developed countries as they use cheaper automation than costlier manual labour.

→ reduces hiring by companies in general

② → greater reliance on data to

design products as per consumer choices and buying behavior

③ → AI in banking and finance to detect frauds, automation of bank end processes.

④ → more investment in digital infrastructure rather than physical infrastructure (eg. investing in chatbots rather than office space for customer care)

⑤ → e-governance and electronic delivery of service.

⑥ → blockchain for land records, bond issues (World Bank's Bondi Bonds)

following are the
In this situation, measures to
improve :

Employability

- 1) Skilling of
labour force
Skill India can have
such components
- 2) Upskilling of current
workforce for
adaptability
- 3) Vocational
education as
per industry needs
eg- Germany model
- 4) Enhancing interest
in science and
innovation
eg- Rashtriya
Aamishkaar
Abhiyan

No. of opportunities

- 1) Develop
industry in
these areas
through
policy
eg. SEZs
for technology
intensive
sectors
- 2) Services
sector for
these technologies
has a huge
potential
eg. repairing
sewers
robots

14. India's trade policy in agriculture, marred by ad-hocism and pro-consumer bias, has constrained realization of export potential, and prevented the farmers from reaping the benefits. Examine the statement and discuss ways, including government initiatives, to improve agricultural exports.

(250 words) 15

तदर्थता और उपभोक्ता समर्थक पक्षपात से प्रभावित, कृषि में भारत की व्यापार नीति ने निर्यात सामर्थ्य की प्राप्ति को बाधित किया है तथा किसानों को लाभ उठाने से रोका है। इस कथन का परीक्षण कीजिए और सरकारी पहलों सहित कृषि निर्यात में सुधार लाने के तरीकों पर चर्चा कीजिए।

India's trade policy in agriculture has been said to be marred by ad-hocism because :

- 1) there is no trade policy in agriculture or provisions in foreign trade policy
- 2) imports are done based on domestic food prices on a case by case basis eg. import of pulses
- 3) there is lack of focus on promotion of cultivation of globally demanded produce eg. herbs, medicinal plants

The proconsumer bias is visible in:

- 1) ban on exports, eg. of pulses, even in record produce years to prevent rise in prices for consumers.
- 2) release of buffer stocks into market as soon as prices rise, preventing any profit for farmers.

These policies have constrained the export potential as well as prevented meaningful profits for farmers which is often called the subsidization of urban rich by rural farmers.

The government's steps can include:

- 1) liberalization of agricultural trade on lines with LPG reforms eg. a promise was made in this

year's budget.

- 2) Provisioning storage, logistics, marketing and branding facilities to agriculture produce
- 3) Legally prescribed limits on buffer stocks and the rest to be unloaded in international markets at prevailing prices
- 4) Easing the administrative processes
- 5) Port and connectivity development to link hinterlands and ports e.g. Sagarmala.

The government can balance the food security and farmer's interest through prudent policy to keep agriculture remunerative for the 50% of our workforce that it employs.

15. Is currency exchange rate a suitable measure of relative economic performance of countries? Despite improving macro-economic fundamentals, trade deficit in India continues to widen. Bring out the factors responsible for this situation. (250 words) 15

क्या मुद्रा विनिमय दर देशों के सापेक्ष आर्थिक प्रदर्शन की एक उपयुक्त माप है? मैक्रो इकनॉमिक फंडामेंटल्स (समष्टि-आर्थिक आधारों) में सुधार के बावजूद, भारत में व्यापार घाटा निरंतर बढ़ा है। इस स्थिति के लिए उत्तरदायी कारकों को प्रस्तुत कीजिए।

The relative economic performance of countries is measured through GDP growth rate, unemployment, inflation, credit uptake and currency exchange rate (CER) among others.

CER is not a suitable measure

because :

- 1) manipulations are done by countries such as China
- 2) ~~higher exports imply competitiveness of local industry too~~ but
- 2) lowering of lending rates can boost economic growth but weakens the domestic currency which is not.

a true reflection of the domestic economy which will grow due to credit uptake and investments.

India's macroeconomic fundamentals are improving :

- GDP growth poised to be more than 7.5%. (according to IMF)
- Fiscal deficit to be lower than last year

The trade deficit continues to widen due to :

- 1) exports growth lower than growth in imports.
- 2) global demand is suppressed.
- 3) India's currency is at a record

low with respect to the dollar.

- 4) Domestic demand of foreign goods such as electronics raises imports.
- 5) Rude oil price is rising and India imports 82% of its requirement.
- 6) India's exports sector has suffered due to protectionist measures of countries such as USA.
- 7) Exports are generally high as India's domestic manufacturing industry is not competitive in sectors such as plastics, APIs, consumer goods.

The solution as per the economic survey is to boost exports through policy and infrastructural boosts.

16. It will take much more than relief packages to address the problems being faced by the sugar industry in India. Discuss. (250 words) 15

भारत में चीनी उद्योग द्वारा सामना की जा रही समस्याओं को दूर करने के लिए राहत पैकेज से आगे और कुछ करने की आवश्यकता है। चर्चा कीजिए।

The sugar industry in India is facing problems for a few years now. This has persisted despite the relief packages by government because :

- 1) the market price of sugar is lower than the procurement price of cane.
- 2) the production of cane is much more than the mills can efficiently handle and process.
- 3) the glut in the market does not let remunerative price recovery by the industry.

The relief packages temporarily put off the problem into the future by aiding industry to pay off cane growers even as the industry itself continues to pile losses.

This requires a comprehensive package of reforms for a long term solution :

- 1) long term support to the industry to expand processing capacity.
- 2) credit subsidy for infrastructural investments
- 3) States and centre should coordinate when it comes to fixing the fair and remunerative prices and state administrative prices.
- 4) institutionalized price fixation mechanism to curb populism

state governments.

5) Supporting diversification of crops by farmers through technological support such as better seeds, weather forecasts, sowing advisories ~~and~~

6) Economic survey also roots for abolition of untargeted subsidies such as power which encourage water ~~at~~ intensive crops such as sugarcane.

A holistic process involving cultivators and industry along with states can solve the crisis through strong political will.

17. NAPCC, almost 10 years old and formulated with lofty objectives, has not served as the best answer to cope with the impacts of climate change. Critically discuss. (250 words) 15

लगभग 10 वर्ष पुराने और उत्कृष्ट लक्ष्यों के साथ सूत्रबद्ध, NAPCC ने जलवायु परिवर्तन के प्रभावों का सामना करने संबंधी सर्वोत्तम अनुक्रिया के रूप में कार्य नहीं किया है। आलोचनात्मक चर्चा कीजिए।

The national action plan on climate change (NAPCC) has 8 components:

- National solar mission to add 100 GW of solar power capacity
- National water mission to enhance water use efficiency by 20%.
- National mission on enhanced energy efficiency (NMEEE)
- National mission of green India (GIM) to enhance cover on 5 million hectares
- National mission on sustainable agriculture (NMSA)
- National mission on sustainable habitat (NMSH)
- National mission of financial sustainability. (NMHS)
- National mission on strategic knowledge (NMSK)

The objectives of these missions are lofty and have achieved significant outcomes:

- Solar power generation has increased rapidly
- Compensatory afforestation enhances cover on degraded lands and green highway policy launched
- Domestic and street lighting with efficient LEDs as well as UJALA scheme for household
- ^{LEDs} PM Kisan Sinchayi Yojana
- BIOTECH Kisan, mera Gaon, mera
gunjan, ~~HA Kisan~~ aid locally
relevant agriculture practices
mediated by technological
intervention
- Secure Himalayas initiative to sustainably develop the region

Despite these initiatives certain bottlenecks remain :

- 1) overexploitation of water can cause loss of 6% of GDP (NITI Aayog)
- 2) 50,000 crore funds of CAMPA lying idle
- 3) India is the largest user of underground water for agriculture "
- 4) Extreme rainfall and temperature events continue Kerala floods, sandstorms in North India.
- 5) As per IMD, temperature has risen by 0.6°C .

This implies that problems remain despite action. The way forward is to intensify actions in terms of funds (use global finance), technology (to monitor impact and modify accordingly), and community participation.

18. Proliferation of nuclear weapons and the threat of their use are key concerns for global security nonetheless existing international arrangements seem to be ineffective. Comment. Also, identify the salient features of India's policy in this context and discuss whether India should join the NPT in the current form. (250 words) 15

परमाणु हथियारों का प्रसार और उनके उपयोग का खतरा वैश्विक सुरक्षा की प्रमुख चिंताएं हैं, इसके बिना वर्तमान अंतर्राष्ट्रीय व्यवस्था अप्रभावी प्रतीत होती है। टिप्पणी कीजिए। साथ ही, इस संदर्भ में भारत की नीति की प्रमुख विशेषताओं को चिन्हित कीजिए तथा चर्चा कीजिए कि क्या भारत को वर्तमान प्रारूप वाले NPT में सम्मिलित होना चाहिए।

Nuclear weapons ^(NWS) have the potential to kill entire humanity. The proliferation of NWS as seen in case of North Korea's tests and Iran's suspended programme under JCPOA is a cause of concern.

The international arrangements such as NSG (Nuclear Suppliers Group) and NPT (nuclear non proliferation Treaty) have been ineffective. Pakistan helped North Korea under the radar of current regimes.

Other countries such as Japan and Germany can build a weapon if they wish given that there has been no progress on disarmament and US and Russia are strengthening their nuclear warheads. In such a circumstances, NSG and NPT failed.

India's nuclear policy is :

- no first use
- no use on non nuclear power
- assured retaliation of nuclear attack
- use in case of biological or chemical attack on forces or territory.

In the current form, India

Should not join NPT because it would require India to give up its nuclear capabilities. With China and Pakistan, principle adversaries having nuclear warheads, this will weaken India's security infrastructure.

It is a discriminatory treaty in design. India already has an NSG waiver that de facto recognizes its nuclear credentials. So, NPT is at present a perfunctory treaty as far as India is concerned.

19. The maritime security domain requires collective multilateral and regional cooperation to combat non traditional threats. Discuss in the context of threats in the Western Indian Ocean and the recent amendments in the Djibouti Code of Conduct.

(250 words) 15

समुद्री सुरक्षा प्रक्षेत्र (डोमेन) गैर-परंपरागत खतरों का सामना करने हेतु सामूहिक बहुपक्षीय और क्षेत्रीय सहयोग की मांग करता है। पश्चिमी हिंद महासागर में खतरों और जिबूती आचरण संहिता में हालिया संशोधन के संदर्भ में चर्चा कीजिए।

~~The maritime security domain~~
requires multilateral

India's 7500 km long coasts require security and surveillance provisions which are difficult to suffice due to resource constraints as well as the vastness of territorial expanse.

This necessitates collective multilateral and regional cooperation

- Indian ocean naval symposium
- Indian ocean regional association
- white shipping agreements
- Time domain awareness

agreements.

with Indian ocean littoral countries. India has provided seamless aircrafts to Seychelles and ~~is also~~ set up radar in Mauritius.

This is because nontraditional threats exist such as :

- 1) piracy
- 2) terrorist attacks (Mumbai attack)
- 3) safety of fishermen, commercial ships during storms and cyclones.
- 4) maritime pollution, oil spills

The threats 1), 2) and 4) are especially relevant in western Indian ocean which is less prone to cyclones.

In such cases, countries can help by sharing shipping information, exchanging data on vessels and movement and jointly undertake counter-terrorist and anti piracy operations.

20. India's space programme was initiated with the vision of utilising outer space for peaceful purposes, however with changing times it has the potential to play a significant role in strengthening security capabilities of India. Discuss with adequate examples. **(250 words) 15**

भारत का अंतरिक्ष कार्यक्रम, शांतिपूर्ण उद्देश्यों हेतु बाह्य अंतरिक्ष का उपयोग करने के दृष्टिकोण के साथ आरंभ किया गया था, हालांकि बदलते समय के साथ इसमें भारत की सुरक्षा क्षमताओं को मजबूत बनाने में महत्वपूर्ण भूमिका निभाने की क्षमता है। यथोचित उदाहरणों के साथ चर्चा कीजिए।

India's space programme has
succeeded in the missions for
peaceful purposes. Some instances
are:

- 1) Atsatsat discovering far off
stars
- 2) Mars Orbiter Mission sending
crucial information on Mars'
atmosphere
- 3) Chandrayaan-1 aiding discovery
of water and ice on Moon
- 4) PSLVs and GSLV Mk III
capable of launching geostationary
and sun synchronous satellites
- 5) Commercialization of launch for
other countries, forex earnings.

Our space competence can play a significant role in strengthening security capabilities too!

- GSAT 7 aids the navy to navigate and operate - securing our maritime borders.
- IRNSS or NavIC gives us own system to do precise navigation through restricted services
- GAGAN reduces dependence of our commercial aviation on foreign navigation
- India is capable to launch an indigenously developed surveillance satellite for military intelligence, surveillance of enemy territory and movement in inaccessible tough terrain (eg. Aksai Chin)

- communication satellites for secret information transfer
- satellite phones for ~~cont~~ continuous connectivity between security forces.

These examples show how space domain can aid and supplement security capabilities. This can be further institutionalized with a space-use strategy developed in collaboration between all agencies involved.