

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. There are many challenges in India. Analyse. Also, discuss.

भारत में नवीकरणीय ऊर्जा को माध्यम है, बर्बाद ब्रिजित्

Renewable
consci

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

Renewable energy in India principally consists of solar, wind and bio-gas.

Challenges are as follows -

Solar

- High import duties on solar parts to incentivise domestic manufacturing raises costs of solar power.
- Competitive bidding leads to very low tariff prices, affecting margins of solar power suppliers.
- DISCOMS are unwilling to buy rooftop solar power from houses.
- Dust storms and pollutants damage photo-voltaic cells.

Wind

- Issues around land acquisition and ~~enviro~~ for large wind farms
- Wind potential is high along western ghats, but it can affect biodiversity in the area

Bio-gas

- High costs of setting up a plant
- Low awareness among farmers
- Reduction in ~~man~~ cow-dung for agriculture.

Others

- Lack of funding for renewable energy
- Coal and oil are still cheaper alternatives.

Addressing challenges

- Introducing net-metering, Generation Based Incentives for solar power
- Increasing finance and capital through green bonds.

The government has ~~more~~ introduced many steps like National

Solar Mission to address

the challenges

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।

Existing challenge

As per the Economic Survey, Urban Local Bodies only raise less than 10% of their funds from own resources.

This severely restricts ULBs in their urban development functions and make them dependent on state govt and SFC grants.

Main challenges in urban financing

- Low tax base
- High evasion
- Absence of data-base on property values and records
- Ineffective ~~an~~ implementation of laws
- Inability to borrow from markets

Accordingly, the government has
taken steps like -

- (1) ~~It~~ Using GIS, LIS to map
the property and its uses
- (2) ~~It~~ Increasing tax base by
including more activities under
taxation
- (3) 14th FC introduced performance
indicators to decide 20% grants
- (4) SMART city, AMRUT give
flexibility to ULBs ~~to~~ and
link funds to performance
- (5) Municipal Bonds allow
the ULBs to borrow directly
from the public. Indore became
the first city to issue such bonds.
A credit rating & have been assigned
to various cities.

These steps ~~to~~ should radically
alter ULB financing

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 विश्लेषण कीजिए।

A large section of population is financially excluded due to -

- (1) Absence of bank accounts
 - (2) Use of cash in informal ~~sector~~ sector
 - (3) Lack of digital literacy.
 - (4) Dependence on money lender
- Most of the vulnerable groups like women, SC/ST continue to be financially excluded.

Addressing These issues

- Move towards formal economy
- Reduce use of cash
- ~~Use~~ Use technology, especially JAM Trinity.

- Increase financial literacy
- Increase banking presence and Micro-finance (MFI)
- Constitute Self-Help groups.

Steps by government

- Jan Dhan, Aadhaar and Mobile (JAM)
- Demonetization and GST
- PMGI DISHA — ~~for~~ digital literacy campaign.

Steps by RBI

- Promotion of MFI and priority-sector lending to rural areas
- Increasing banking presence in rural areas and NBFCs.
- Financial inclusion ~~is the~~ will ~~have~~ help in inclusive growth.

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 (EA)

takes into account the not only
the value of goods and services
~~not~~ produced and sold in
the market, but also the
ecosystem services and the
natural asset base of an
economy.

EA has become necessary as
existing accounting only
~~takes~~ ~~to~~ looks at market
goods and services, disregarding
the degradation of natural
resources and ecosystems

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।

Only about 45% of the Net Sown Area in India has access to irrigation.

Irrigation is important as it

- Provides assured water
- Reduces dependence on monsoons
- Improves farmer incomes.

That is why ~~a~~ prosperous regions of Punjab and Haryana have high irrigation density.

But water-use efficiency is gaining ~~even~~ more importance due to -

- (1) Drying up of rivers because of climate change
- (2) Excessive exploitation of groundwater

- (3) Rising demand for water
- (4) Competing uses, like irrigation, drinking etc.
- (5) Excessive irrigation has led to salinization of soils, and arsenic concentrations.

In this light, the government has introduced the PM Krishi Sinchayi Yojana (PMKSY) with a component on water-use efficiency ("Per Drop More Crop").

Systems like drip irrigation are required to achieve the objective

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। विक्षेपण कीजिए।

Disaster Risk Reduction (DRR)
involves steps and investments
to reduce the vulnerability to
disasters

Indigenous Knowledge ~~is~~ related to -

- building bamboo walls
- use of dykes and traditional irrigation methods
- water harvesting structures
- growing trees along hill slopes
- keeping cattle safe during floods and diseases

can be ~~to~~ augmented and
linked to modern technologies

like earthquake-resistant buildings,
dams, etc.

The advantages of such a link ~~are~~ are

- (1) No need to train the community
as it is already known.
- (2) Better acceptability among people
- (3) Reduced costs and investments.

Hence, the SENDAI framework
and the National Disaster
Management Plan needs to
adequately take this into
account.

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 involves the use of radioactive substances to provide radiation exposure to food products.

Uses Applications

- (1) Preserving food for a longer time
- (2) Altering its flavours and other chemical properties to achieve desirable outcomes.
- (3) Killing harmful ~~germs~~ bacteria and fungi in the food.

Relevance for India

- (1) Help farmers in longer preservation of their foods in

the absence of cold storage

(2) Improve the nutritional quality of foods and improve nutrition of the population.

(3) Such foods ~~be~~ can be exported as the quality and health standards are likely to be superior.

Given its relevance to India, Bhabha Atomic Research Centre is already running a food irradiation scheme.

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। भविष्यतः वर्णन कीजिए।

Misuse of technology leading to spread of fake news on social media like WhatsApp has had unintended harmful consequences.

- Rising lynchings in India
- Rise of right-wing movements
- Election manipulation.
eg - US elections in 2016.

But given the technology and extensive use of social media, it is very difficult to curb the spread due to -

- (1) Anonymity
- (2) Action at a distance, even from

another country.

- (3) Accessibility to a large number of people
- (4) Perpetuity and manipulability by bots.

Thus, only technology can curb its spread. Some steps -

- (1) Putting a unique ID on each message so that the source can be tracked.
- (2) Use ML techniques and fact-checkers to identify fake news.
- (3) Limiting number of message forwards.

Accordingly, Facebook, WhatsApp and Google have taken steps to curb fake news. They also need to collaborate with Government's CERT-In and Central Monitoring System (CMS)

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 Planning Committee

Salient Features

- To deal with indigenization of defence production
- Prepare defence preparation plans for next 5-10 years
- ~~Prepare~~ Deal with issues of foreign defence deals and inter-governmental agreements
- Prepare long-term strategic vision
- Consider use of emerging technologies in defence.
- ~~Consider~~ Consider steps towards increasing/decreasing manpower

How it can help India

- ~~Half~~ Increase defence production
- Increase technology transfer
- Segment our manpower.

All of this will help us face our hostile neighbours

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।

~~Maosism~~ Maoism thrives in the tribal hinterlands of Central India ~~due~~ primarily due to poor governance, alienation and deprivation of the tribals.

However, probing the funding networks of these ~~to~~ leaders is important as -

- (1) This can dry-up their weapons purchases and reduce their arms
- (2) It also exposes the double standards of these leaders who claim to stand for the poor
- (3) The money-trail can help in unearthing other terror networks and

countries, which promote them.

Accordingly, India ~~has~~ is a signatory to the Financial Action Task Force (FATF) and has enacted legislations like Prevention of Money Laundering Act, 2002 to deal with Terror financing. The NIA is also investigating ~~these~~ money-trail of Kashmir separatists.

It is only when these funds are choked and terrorism declines, can ~~an~~ an atmosphere of peace prevail for development activities to be undertaken.

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 मंवृद्धि में बहुत अधिक योगदान देती हैं, बल्कि उनका स्थानीय अर्थव्यवस्थाओं पर भी एक मशक्त 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 किमी व्यवसाय को आरंभ करने और उसके विकास को कैसे आसान बना सकती है?

Services MSMEs consist of those enterprises in the service sector like car repair, small shops, hotels and barber shops.

Benefits of ^{services} MSMEs

- (1) Contribution to GDP growth.
Over 20% of GDP growth can be attributed to them.
- (2) Inclusive → leads to employment of women, SC/STs.
- (3) Multiplier to local economies → Provides services to other sectors and MSMEs...
- (4) Source of innovation and knowledge

Transfer.

- (5) Source of ~~some~~ ancillary services to large MNCs or firms in the vicinity.
- (6) Massive employment generator → Nearly 40% of total employment in India.

Problems faced by services MSMEs

- (1) Access to funds from the formal sector, especially after banks are riddled with NPAs.
- (2) Workers in these MSMEs do not have adequate skills
- (3) Competition from larger firms
- (4) Absence of economies of scale due to small size.
- (5) ~~Abse~~ Difficulty in marketing its products, ~~so~~ cannot afford advertising.

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। संविदा कृषि को बढ़ावा देने के लिए 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 (CF) involves a farmer entering into a contract with a trader/buyer for the purchase of agricultural produce at a specified future date at a pre-agreed price.

The NITI Aayog has advocated Contract CF as a means for doubling farmers' income by 2022.

Advantages

- (1) Provides income certainty to farmers, and shields them from market fluctuations.

(2) Usually the large buyers provide working capital at the beginning. This reduces dependence of farmers on money-lenders.

(3) Provides access to large markets and enables the farmers to by-pass APMC restrictions.

(4) Farmers usually diversify their crops to produce more high-value commercial crops like tomato, onion, potato (TOP).

Problems

(1) Market failures → This arises due to the asymmetry between the farmer and buyer. Buyers are usually large corporate firms that can exploit the farmer, as he does not have much information.

(2) Long-term contracts can trap the

farmer in ~~the~~ low-price of crops.
If market prices increase, he will not be able to sell at the market price.

(3) Too much focus on commercial crops that affect food security.

Government steps to correct the problem

→ The govt. has introduced The Model Contract Farming Act, 2018 to provide a better environment and remove restrictions to ~~Contract~~ CF

→ States need to adopt this Act and amend their APMC Act, as Agriculture is a State ~~to~~ subject.



Conclusion

→ There is a need for all Stakeholders to come together ~~to~~ to make CF a success.

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 (डिजिटल 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।

According to the CMIE-BSE survey, nearly 3.3 million jobs were lost in 2016-17, one of the highest for a country waiting to reap its demographic dividend.

These job losses point to structural changes brought about by disruptive technologies, like Artificial Intelligence (AI)

Measures to improve employability of workforce

→ Improve ~~skill~~ schooling system with greater focus on cognitive skills and STEM

→ Industry-academia interface in higher education

Steps to increase
Focus on
like a
also
hid

- Greater investments in research and development
- Increasing foreign collaboration and knowledge transfer by foreign faculty.
- ~~①~~ Upskilling and re-skilling of the existing workforce.
- Encouraging vocational education, as according to ASER survey, only 5% of school students doing vocational training.
- ~~②~~ Providing skills to employees going for overseas employment.

~~③~~ Some government schemes →

National Skill Mission, RUSA,
Padhe Bharat Badhe Bharat,
Institutions of Eminence (IoE),
Recognition of Prior Learning (RPL),
Pravasi Kausal Vikas Yojana, etc.

Steps to increase employment opportunities

- Focus on labour-intensive exports like textiles.
Also, remove embedded taxes, as highlighted by the Economic Survey
- Enter into Human-Resource Mobility Agreements with other countries.
- Focus on frontier tech areas, like cyber-physical systems (CPS), IoT, AI, genomics, etc.
- ~~Make~~ Make it easier to open start-ups and mentor/finance them.
- Providing funds to MSMEs and marketing exposure.

Some govt. schemes → NITI Aayog's AI policy, Mission on Cyber Physical Systems, Start-up India, MUDRA, Rebate on State Levies (ROSL).

These schemes should boost employment

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 includes the following components-

- Price controls, eg- Min- Export Price
- Stock limits under Essential Commodities Act
- Import duties / ~~Govt~~ safeguard duties
- Incentives under MEIS
- International agreements, including Agreement on Agriculture (AoA), Free Trade Agreements, etc.

Problems with the policy

- (1) Ad-hocism → MEPS, etc are imposed in one year and removed the next. Happens with sugar.

(2) Pro-consumer bias →

(a) Stock limits under ECA prevent suppliers from realizing scale economies.

(b) Whenever prices rise, imports are allowed, leading to a surge.

eg- Pulses and oilseeds imports in 2016-17 led to a crash in prices.

(c) High MSPs make exports uncompetitive

This prevents farmers from realizing export potential, even after India continues to be one of the biggest exporters of agricultural products.

Steps to improve the situation

- Bringing a stable export policy
- Repealing ECA
- Improving marketing infrastructure

- Entering into Free Trade Agreements with other countries
- Improving quality, hygiene and standards of the food products
- Encouraging value addition and food processing.
- Diversification of crops and including animal husbandry.
- Improving trade infrastructure and logistics.

Some government steps

- e-NAM, SAMPADA
- Mission for Integrated Development of Horticulture
- Trade Infrastructure for Export Scheme, Sagarmala.
- Technology Missions in agriculture, including National Mission on Agricultural Extension and Technology

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 इकॉनॉमिक 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 exchange rate^(ER) measures the price of ~~one~~ currency (say, Dollar) in terms of another currency (say, ~~Rupee~~ Rupee)

~~ER~~ ER is not a suitable measure of relative economic performance as -

- (1) It is a measure of the relative demand of ~~one~~ currency over the other.
- (2) ~~Even high~~ It is affected both by trade and capital flows.
- (3) High interest rates in India due to monetary tightening by RBI can lead to appreciation ~~by~~ of Rupee ~~due~~ due to capital inflows. But this might ~~be the~~ not lead to improved growth rates.
- (4) ~~A~~ A high growth economy also

leads to higher imports, depreciating the rupee.

Hence, there is no causal link between ER and macro-economic performance.

Trade deficit in India continues to widen due to the following reasons -

- (1) Rising crude oil prices in world markets.
- (2) Growing demand for gold leading to rising imports.
- (3) Agricultural prices have crashed, ^{World} ↑ especially in dairy sector, leading to fall ~~in~~ agricultural exports.
- (4) Pharmaceutical exports have fallen due to ~~disrupt~~ regulatory hurdles in USA and China

(5) ~~Manufacture~~ Service sector exports especially IT-BPM have taken a hit due to H1-B Visa issue and disruptive technology.

(6) Steel exports subdued to crash in Chinese demand.

(7) Dumping of goods by China

Given these numerous issues, the government has taken ~~the~~ steps to improve our trade deficit, such as -

- Merchandise Export from India Scheme (MEIS)
- Service Export from India Scheme (SEIS)
- Counter-vailing and safeguard duties on imports.
- Trade Infrastructure for Export Schemes.

Proper implementation of these schemes will yield the desired results.

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।

India one of the largest producers of sugar in the world.

~~Given~~ But it has been facing many problems recently

- Falling sugar prices
- Payment of arrears of about ₹ 22,000 crore to the farmers by mill owners
- Increasing Non-Performing Assets (NPAs)
- Frequent droughts, especially in Maharashtra, affecting sugarcane production.

The government recently announced a ₹ 7000 crore package to deal with the crisis.

But ~~the~~ it is not adequate as

- Most benefits will go to traders
- ~~As~~ Mills cannot increase their stocks due to limits placed under Essential Commodities Act, 1955.

Hence, more steps are required
like -

- Research and extension on increasing productivity of sugarcane
- Reducing water-intensity
- Increasing compulsory ethanol blending from 10% to 20%
- Encouraging value addition on raw sugar.

→ Providing cheaper loans to
the sector .

The government needs to
seriously consider the above
steps in order to revive the
sugar industry .

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।

~~NAPCC~~ National Action Plan on Climate Change (NAPCC) was India's answer to the issue of climate change.

Objectives

- (1) ~~To shift~~ Shift towards renewable energy, like solar and wind
- (2) Increase green cover
- (3) Improve efficiency and management of water resources
- (4) Move towards sustainable agriculture
- (5) Protect Himalayan ecosystem from climate change
- (6) Increase research and understanding on climate change.
- (7) Increasing energy efficiency of appliances

It is felt that NAPCC has failed
to ~~reach~~ achieve its objectives

→ We are far below target of
~~175~~ 175 GW of renewable
energy by 2022.

→ Our water resources are
drying. According to NITI Aayog
demand will exceed supply by
2030.

→ The Himalayan ecosystem is
facing problems from glacier
melt, deforestation, etc.

→ Agricultural productivity is
still low and susceptible to
climate vagaries, as seen by
rising farmer suicides.

→ ~~At~~ Research on climate
change is limited.

However, there have been some achievements →

- (1) According to State of Forest Report 2017, forest cover up by 1%
- (2) ~~LED~~ LED lighting and ~~National~~ Perform, Achieve, Trade (PAT) scheme under BEE is working very well.
- (3) ~~Our~~ Our solar and wind energy contribution to total energy mix is rising rapidly.

Conclusion

While many objectives remain to be reached, NAPCC has provided the right impetus for India to be a climate leader, as seen by its INDC commitments in Paris Agreement 2015.

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 proliferation is a key international concern. Some ~~intern~~ arrangements to deal with this include—

- (1) Non-Proliferation Treaty, NPT, 1974
- (2) Geneva Conference on Disarmament
- (3) Comprehensive Test Ban Treaty
- (4) Nuclear Suppliers Group (NSG)
- (5) ~~Conf~~ International Atomic Energy Agency (IAEA)

However, existing arrangements have been largely unsuccessful as can be seen below—

- (1) North Korean nuclear tests.

(2) Pakistan's growing ~~the~~ nuclear arsenal

(3) ~~The~~ US, China and Russia continue to hold the largest stockpile of nuclear weapons.

(4) Concerns over proliferation to Iran, which led to the JCPOA.

(5) India, Israel, Sudan and Pakistan refuse to sign the NPT even though they ~~are~~ possess ~~the~~ nuclear weapons.

(6) Most nuclear states boycotted the UN Treaty on Abolition of Nuclear Weapons.

India's nuclear weapons policy
is based on the following principles

- No first use, but India reserves the right to strike if its forces are attacked by chemical, Biological and Nuclear Weapons.
- The strike is designed to effect maximum damage on the enemy.
- Non-use of N-weapons against non-nuclear weapons states.
- The final authority to decide on use of N-weapons rests on the Political ~~Com~~ Executive of the Nuclear Command Authority (NCA) headed by the PM.

India should not join NPT in its current form as -

- (1) NPT recognizes only the P-5 states as nuclear powers, which is discriminatory.
- (2) It will have to dismantle its nuclear weapons, making us vulnerable to China and Pakistan.

Instead, India should pursue its membership to the NSG.

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 जिवृती आचरण संहिता में हालिया संशोधन के संदर्भ में चर्चा कीजिए।

Traditional threats in maritime security come from ~~to~~ navies of countries operating along the sea routes.

Non-traditional threats have emerged from piracy, human trafficking and border disputes between countries (eg- South China Sea) affecting freedom of navigation.

~~These~~ These threats thrive because of the following reasons -

- (1) Geography → Maritime choke points like Gulf of Aden are busy shipping lanes

(2) Economics → Trade in luxury products and human trafficking is big money. Pirates can make a fortune by looting ships or demand ransom.

(3) Political instability in Western IOR like Somalia, Eritrea, etc provide shelter to the ~~to~~ pirates.

Given the nature of the causes, no single country can unilaterally deal with the issue. This requires regional cooperation.

Accordingly, some ~~st~~ measures have been taken —

→ Deploying Navy warships in the Gulf of Aden. Indian Navy ships deployed since 2008.

→ Agreements like ReSCAAP have been negotiated for the IOR

→ IMO provides for attacking and impounding pirate-controlled ships ~~to deal with~~ by host country.

→ EU leaders signed a convention to prevent human trafficking from Horn of Africa

→ Similar provisions in UNCLOS.

The recent amendments to Djibouti Code of Conduct will -

(1) Improve maritime patrolling ~~(at sea)~~ in the Western IOR

(2) Increase cooperation across littoral states.

~~It~~ There is an urgent need to address these maritime issues.

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 was initiated in the 1960s under Sarabhai and Bhabha. Over the years, it has ~~not~~ been used for peaceful purposes like -

- (1) Launch of communication and remote-sensing satellites
- (2) ~~to~~ Development of space rockets and launch vehicles
- (3) Commercializing launch facilities using ANTRIX
- (4) Studying of outer space
- (5) Launch of outer-space explorations like Mangalyan and Chandrayaan

The ISRO and Department of Space (DOS) ~~can~~ have played an

Don't write anything this margin (दायाँ किनारे कुछ न लिखें)

Don't write anything this margin (दायाँ किनारे कुछ न लिखें)

• important role.

But with changing times, it can play a role in strengthening security capabilities of India like

- Satellites can be used for reconnaissance and spying on enemy territory
- Rocket launch vehicles like PSLV, GSLV can also be used as ballistic or cruise missiles.
- ~~Sat~~ Satellites can provide crucial communication technology in remote / border areas.
- It may be possible to deploy weapons, especially nuclear, in outer space.
- Launching missiles through space can help to evade radar

- Developing anti-satellite systems, like china has
- Possible to conduct nuclear tests on the dark side of the ~~moon~~
- Conducting cyber espionage from space

Thus, outer space provides a fertile ground for strengthening our defence capabilities.

The government's Draft Space Bill, ~~can~~ can provide the right ~~sp~~ start. Most of the actions have to be done covertly as India is a signatory to the Outer Space Treaty which bans such developments.