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GENERAL STUDIES (TEST CODE : 1436)

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Center	OLD RAJINDER NAGAR	Date	22 AUGUST 2019

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Q. No.	Maximum Marks	Marks Obtained
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Total Marks Obtained:

Remarks:

INSTRUCTIONS

1. 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)।
2. There are **TWENTY** questions printed in **ENGLISH & HINDI** इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं।
3. **All questions are compulsory.**
सभी प्रश्न अनिवार्य हैं।
4. The number of marks carried by a question/part is indicated against it.
प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
5. 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।
6. Word limit in questions, if specified, should be adhered to.
प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
7. 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. Given the growing ecological and geopolitical significance, Arctic region offers immense opportunities for serving India's long-term interests. Discuss. (150 words) 10

बढ़ते पारिस्थितिक और भू-राजनीतिक महत्व के आलोक में, आर्कटिक क्षेत्र भारत के दीर्घकालिक हितों की पूर्ति हेतु व्यापक अवसर प्रस्तुत करता है। चर्चा कीजिए।

The Arctic region in the North Pole holds abundant opportunities for India in the following areas:-

(1) Energy security - This region is home to 30% of undiscovered crude oil and natural gas reserves.

Considering India's growing needs & dependence on West Asia, India has already signed a deal with Russian company Vankorneft to explore oil.

(2) Sea lanes of communication As ice melts in the Arctic, it will provide faster & more secure SLOCs to nations in Europe. As a result, India has already leased vessels from Norway for the same.

(3) Research - The Arctic region offers opportunities for further research. As a result, India has

established a research station - Himadri
and National Commission for Polar &
Ocean Research has been set up.

However, it is important to
keep in mind the following
challenges :-

- 1) Arctic region is not a global common.
Therefore, India does not have rights
over it.
- 2) Arctic Paradox - As global warming
increases, more ice will melt. Though
it is beneficial for SLOCs, it is
harmful for the planet.
- 3) China has already beat India in
establishing an Arctic Policy.

Therefore, India must first
establish a uniform framework
and take steps accordingly
to fulfill its needs.

2. Discuss the challenges that India may face in the eventuality of withdrawal of US troops from Afghanistan. What options does India have to safeguard its interests in the context of the changing situation? **(150 words) 10**

अफगानिस्तान से अमेरिकी सैनिकों की वापसी की स्थिति में भारत के समक्ष आ सकने वाली चुनौतियों पर चर्चा कीजिए। परिवर्तित होती परिस्थितियों के संदर्भ में भारत के पास अपने हितों की रक्षा करने के लिए कौन-से विकल्प हैं?

US President Donald Trump has announced the withdrawal of US troops from Afghanistan recently. Following are some of ^{the} challenges India may face as a result :-

- (1) Rise of Taliban :- As the Afghan Army is not strong enough & Taliban still controls significant pockets, US withdrawal will allow Taliban to rise again, creating security threats.
- (2) Pakistan :- US withdrawal may allow Pakistan to exercise its ~~its~~ ^{its} greater influence in Afghanistan and may even use it for attacks on India.
- (3) J&K - A boost to terrorism in Afghanistan may allow separatists to flourish in Kashmir & use it as a staging point for attacks on India.

(4) Threat to Indian investments such as the Parliament, Salma dam, libraries, Zaranj-Delaram highway

Options available to India:-

- India informally took part in the Moscow format dialogue that brought the Taliban & Afghan government on the same table.
- India must collaborate with China to build security in the region & ensuring development
- India must ensure that the democracy remains in Afghanistan during this period of transition.
- Any solution proposed by must be acceptable to all sections of Afghan population

Thus, India must use its soft & hard power to secure its interests in Afghanistan.

3. The BRICS as a grouping seems to have internal contradictions, which makes it difficult for it to emerge as an effective forum in a dynamic multi-polar international order. Critically discuss. (150 words) 10

एक समूह के रूप में ब्रिक्स (BRICS) में आंतरिक विरोधाभास विद्यमान प्रतीत होते हैं, जो गतिशील बहु-ध्रुवीय अंतर्राष्ट्रीय व्यवस्था में इसके एक प्रभावी मंच के रूप में उभरने को कठिन बनाता है। समालोचनात्मक चर्चा कीजिए।

BRICS includes the nations of Brazil, Russia, India, China & South Africa.

There are differences amongst the nations that have led to its ineffectiveness in a multipolar world. These include:-

(1) Animosity between India & China cuts across economic, political & territorial domains which has made collaboration between the two quite difficult.

(2) Nature of governance - The democratic credentials of Brazil, China & Russia are quite weak as compared to India & ^{South} Africa, making ideological collaboration difficult.

(3) Degrees of development - As compared to EU & ASEAN where nations are at a similar level of development, great disparities exist within and amongst BRICS nations.

However, despite this, BRICS is an important grouping as:-

- 1) It provides an alternate order to the Western world.
- 2) It focuses on South-South collaborations.
- 3) Members are either permanent members of UNSC (Russia & China) or are positioned as front-runners to become permanent (Brazil & India).

Therefore, BRICS must overcome its internal differences to establish an organisation that is able to better collaborate economically & politically.

4. Despite India having immense soft power potential, it alone will not be sufficient to achieve India's foreign policy objectives. Examine.

(150 words) 10

भारत के पास अत्यधिक मृदु शक्ति (सॉफ्ट पॉवर) क्षमता होने के बावजूद, केवल यह भारत की विदेश नीति के उद्देश्यों की प्राप्ति हेतु पर्याप्त नहीं होगी। परीक्षण कीजिए।

India has immense soft power potential i.e. cultural hegemony in relationships with other nations. This can be seen in:-

- Adoption and celebration of 21st June as World Yoga Day
- Relationships with ASEAN nations on the basis of Buddhism, stupa tourism
- Relationships with West Asian nations through the large population of Muslims.
- Popularity of Bollywood across Asia.

However, it is not enough to achieve India's foreign policy objectives.

- Development of trade - China is accorded priority in West Asia & ASEAN due to its economic prowess. Thus, India must focus on ~~dealing~~ improving our manufacturing capabilities.
- Military power - Dealing with Pakistan & China & to become a net security provider in Indian Ocean region requires improvement in our military capabilities.
- Connectivity - Our connectivity with major economic hubs is still poor. This must be improved.

Therefore, to achieve our foreign policy objectives, our soft power needs to be combined with our military, economic capabilities & our connectivity.

5. Highlighting the role of space technology in border management, enumerate the steps taken so far in this regard. (150 words) 10

सीमा प्रबंधन में अंतरिक्ष प्रौद्योगिकी की भूमिका पर प्रकाश डालते हुए, इस संबंध में अब तक उठाए गए कदमों को सूचीबद्ध कीजिए।

Space technology is of extreme significance in securing our borders. in terms of remote sensing, imaging, infiltration attempts etc.

Following steps have been taken in this regard:-

- Hyper Spectral Imaging Satellite (Hys IS) - for better image capturing & remote sensing.
- GSAT-7A - to improve the military capabilities of Air Force.
- GSAT-29 & 11 - To provide better connectivity to North East & J&K.

Thus, one sees space technology can play an important role in border management.

6. Despite allegations of human rights violations under the AFSPA, it is a functional requirement for the army in disturbed areas. Critically discuss.

(150 words) 10

AFSPA के अंतर्गत मानवाधिकारों के उल्लंघन के आरोपों के बावजूद, यह अशांत क्षेत्रों में सेना के लिए एक कार्यात्मक आवश्यकता है। समालोचनात्मक चर्चा कीजिए।

The Armed Forces Special Powers Act allows greater powers to the Army for search & seizure in areas that are declared to be disturbed by the state and/or central govt.

Benefits of AFSPA

- (1) Security: National security is maintained through greater powers to the Army.
- (2) Protection of personnel: It provides immunity to army personnel so that they can effectively fulfill their duties.
- (3) In states such as Shipurna, a reduction in terrorism was seen and consequently, AFSPA was removed as it had fulfilled its role.

However, AFSPA has led to the following consequences:-

- Human rights violations - Use of excessive forces, rapes by the army. Eg- Kunan Poshpora.
- Threat to democratic processes as instead of resolving people's grievances, it is treated like a law & order problem & suppressed.
- AFSPA has not produced ^{favourable} results in states such as J&K where militancy has only increased.

Way ahead

AFSPA needs to be watered down keeping in mind the needs of the security personnel & the ground reality of the state.

7. The use of Internet creates both challenges and opportunities in the fight against terrorism. Discuss. (150 words) 10

आतंकवाद के विरुद्ध लड़ाई में इंटरनेट का उपयोग चुनौतियां और अवसर दोनों सृजित करता है। चर्चा कीजिए।

Internet is being used by both terrorists & law enforcement agencies to further their goals.

Use of internet by terrorists

→ Spread of propaganda has been made easier through social media sites such as facebook, Twitter etc

→ Lone wolf attacks have increased as instructions can be easily provided through the internet.

→ Allows terrorists to access funds easily & even commit fraud to take money from unaware people.

Despite these challenges posed by internet in tackling terrorists, it has also benefitted law enforcement agencies —

- IP Addresses have allowed them to easily track down terrorists.
- This has allowed agencies to access the entire network of terrorists and even pre-empt their attacks.
- Greater encryption offered by websites and availability of records of each financial transaction online allows agencies to tackle terrorism.

Thus, it is both a boon & bane to terrorism. With more sophistication, hopefully law enforcement will be better able to deal with terrorism.

8. Explain the concept of Chandrasekhar Limit and highlight its significance in the field of astronomy. **(150 words) 10**

चंद्रशेखर सीमा की अवधारणा की व्याख्या कीजिए और खगोल विज्ञान के क्षेत्र में इसके महत्व पर प्रकाश डालिए।

9. Examining the risk posed by space debris, suggest some measures which can be taken for its mitigation and removal. (150 words) 10

अंतरिक्ष में मलबे द्वारा उत्पन्न जोखिम का परीक्षण करते हुए, इनके शमन एवं हटाने हेतु कुछ उपायों का सुझाव दीजिए।

Space debris refers to the objects that remain in space as waste as result of destruction of satellites or when satellites fall out of use.

Challenges :-

- In space, these debris move at an extremely fast speed turning them into shrapnel capable of harming satellites.
- They often occupy orbits, as a result of which satellites cannot use those orbits.
- Increased cost of mission as satellites have to avoid them while being launched.

Measures for removal & mitigation

- Missions such as Remove Debris of UK use Capture Technology to catch hold of debris & destroy them.
- Japan has focussed on designing specific paths to avoid them.
- Nations must take responsibility for their debris & keep a watch on their debris till they are destroyed.
Eg - DRDO & ISRO kept an eye on Mission Shakti's debris
- Satish Dhawan Research Centre has built a technology to keep an eye on multiple debris.
This must be effectively used.

Thus, this menace must be effectively tackled so that the benefits of space research are available to all.

10. Discuss the challenges confronting higher self-reliance and indigenisation of defence industry in India. What steps can be taken to accelerate its pace? (150 words) 10

भारत में रक्षा उद्योग के समक्ष उच्च आत्म-निर्भरता और स्वदेशीकरण से संबद्ध चुनौतियों की विवेचना कीजिए। इसकी गति को तीव्र करने हेतु क्या कदम उठाए जा सकते हैं?

India is one of largest importers of defence equipment and more than 80% of its defence products are imported.

Following are the challenges facing self reliance & indigenisation of defence:—

- Lack of investment - Both private & public sector ~~find it~~ do not invest in ~~in~~ defence industry. as it has high investment & no assured returns.
- Pre-existing defence equipment of India is aligned with foreign technology, therefore, it is difficult for indigenous weaponry to align with the same.

Steps taken to accelerate its pace:-

- Mission Raksha Gyan Shakti has been launched.
- ~~As~~ The govt must focus on assuring manufacturers of buying their products so that they ~~necessarily~~ ~~buy~~ do not worry about selling these goods.
- The government must focus on technology transfer when partnering with foreign defence firms.
- Domestic Content Requirements can be used to manufacture at least part of the equipment.

The govt. has taken steps such as Buy Indian Designed Developed & Manufactured being given priority and promoting defence production amongst MSME. This must be further boosted.

11. Comment on the role played by the diaspora in India's development process. Also, discuss the challenges in terms of engaging the Indian diaspora and suggest ways to translate these partnerships into benefits.

(250 words) 15

भारत की विकास प्रक्रिया में प्रवासी समुदाय (डायस्पोरा) द्वारा निभाई गई भूमिका पर टिप्पणी कीजिए। साथ ही, भारतीय प्रवासी समुदाय को आकर्षित करने में आने वाली चुनौतियों पर चर्चा कीजिए तथा इन साझेदारियों को लाभों में बदलने हेतु तरीके सुझाइए।

Role played by Indian diaspora in India's growth:—

→ Remittances from abroad.
India is the highest
recipient of remittances
from abroad

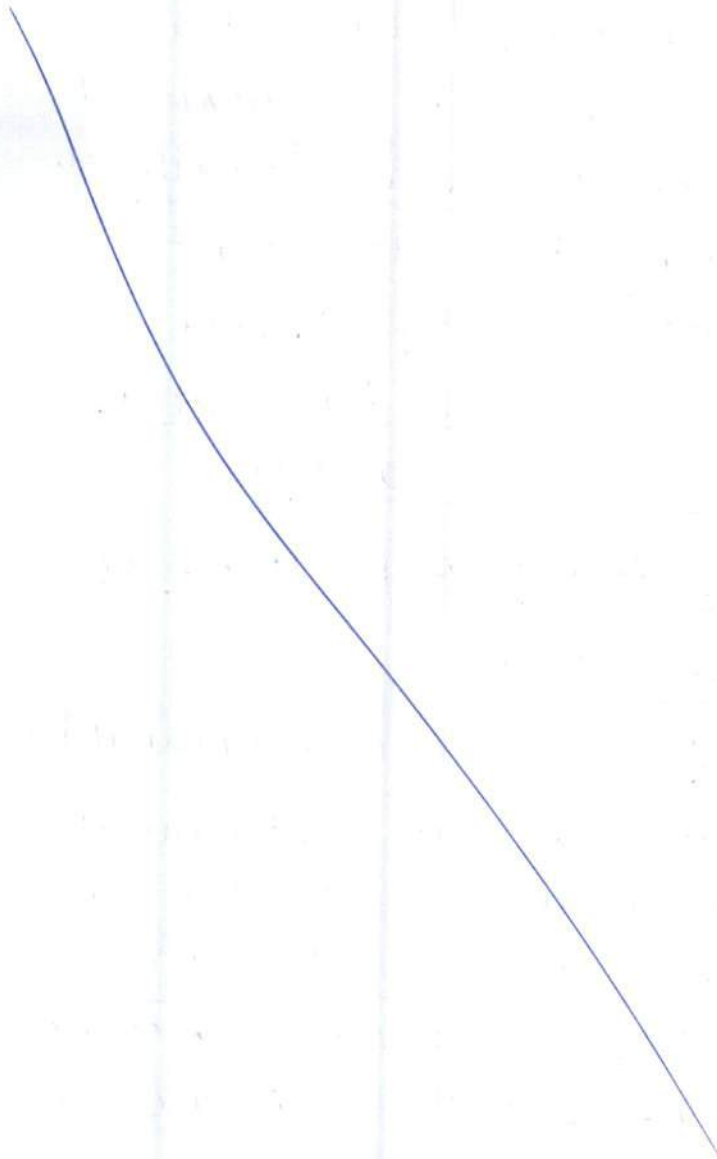
→ FDI gains - NRIs & PIOs.
especially from Mauritius.
have played an important
role in investments in India

Challenges

- They see themselves as citizens of the foreign country & have no linkage with India.

ways to translate his partnership to benefits

- Pravasi Bhartiya Divas
every year on 9th Jan.
- know India tours for children of NRIs & PIOs
- Pilgrimage tours.



12. Highlight the reasons behind proliferation of multilateral preferential trade agreements. Do they violate WTO's MFN principle? Do you think that such trade groupings present an existential threat to WTO? (250 words) 15

बहुपक्षीय अधिमान्य व्यापार समझौतों के तीव्र वृद्धि के पीछे निहित कारणों पर प्रकाश डालिए। क्या वे WTO के MFN सिद्धांत का उल्लंघन करते हैं? क्या आपको ऐसा प्रतीत होता है कि इस प्रकार के व्यापार समूह, WTO के समक्ष अस्तित्वपरक खतरा प्रस्तुत करते हैं?

Multilateral Preferential trade agreements refer to arrangements that decrease or ~~lower~~^{remove} tariffs on select commodities amongst a group of nations. Eg - North America Free Trade Agreement, FTA between ASEAN nations.

Reasons behind proliferation of such agreements:-

- (1) Failure of World Trade Organisation -

Though WTO has been instrumental in reducing tariffs, it still has not been able to establish an equitable order. Therefore, to overcome the challenges of WTO, PTAs are becoming popular.

- (2) Mutual benefits - as countries remove tariffs in reciprocity. In a world guided by specialisation, it is beneficial to developed nations.

which are known for producing particular products & cost of production to other nations also reduces.

- (3) Dispute settlement in PTAs/FTAs is much easier due to less number of countries and less bureaucratic mechanism.

Preferential Trade Agreements are exempted from WTO's Most Favoured Nation principle under which reduction in tariffs to one nation have to be provided to all other nations. Therefore, they do not violate the MFN principle.

Such trade groupings are based on the ideals of WTO i.e. creating a more interconnected world by reducing tariffs on goods.

However, WTO has tried to create a world where all have access to lower tariffs.

Multilateral PTAs violate this ideal as they seek to give preferential treatment to certain nations by reducing tariffs for them as compared to other nations.

Thus, Multilateral PTAs are both a boon & bane to WTO and may soon pose a threat to it.

13. India needs to balance its growing water needs and larger security concerns with effective hydro-diplomacy. Highlighting the challenges faced with regard to transboundary rivers, analyze this statement in the context of India's riparian relations with its neighbours. (250 words) 15

भारत को अपनी बढ़ती जल आवश्यकताओं और व्यापक सुरक्षा चिंताओं को प्रभावी जल-कूटनीति के माध्यम से संतुलित करने की आवश्यकता है। सीमा पारीय नदियों से संबंधित सामना की जाने वाली चुनौतियों पर प्रकाश डालते हुए, अपने पड़ोसियों के साथ भारत के नदी-जल संबंधों के संदर्भ में इस कथन का विश्लेषण कीजिए।

India witnesses growing water needs due to its growing population yet this puts it often in conflict with its neighbours.

Relations with neighbours

1) China - China does not adequately control the flow of Brahmaputra & often refuses to provide information regarding its flow to India, causing significant damage to Indian lives & property. However, at the Wuhan summit, China agreed to share bathymetry information with India.

2) Bangladesh - India has numerous rivers with Bangladesh.

The most significant is Teesta, Over which the conflict has not been resolved for decades.

There are nearly 50 more such rivers which may cause a problem.

3) Bhutan - India has cordial relations with Bhutan & even provides aid for hydro electric projects such as Kuricchu & Mangdechhu.

4) Pakistan - Despite numerous wars, the Indus Waters Treaty has served India & Pakistan well providing India control over Eastern rivers - Ravi, Beas, Sutlej & remaining to Pakistan.

However, Pakistan has raised complaints regarding India's hydroelectric projects such as Kishenganga, Neelum etc; which were resolved in India's favour.

Considering climate change, IWT may create some problems in the future.

Thus, India must focus on resolving its conflicts with its neighbours so that a secure supply is available to future generations.

14. Commenting on the importance of Central Asia for India, highlight the progress made in the relationship in recent past along with the issues that still remain to further cement the ties. (250 words) 15

भारत के लिए मध्य एशिया के महत्व पर टिप्पणी करते हुए, हाल के दिनों में संबंधों में हुई प्रगति पर प्रकाश डालिए, साथ ही साथ ऐसे मुद्दों का उल्लेख कीजिए जिन पर संबंधों को और अधिक सुदृढ़ करने हेतु ध्यान दिया जाना अभी भी शेष है।

The Central Asian Region (CAR)
consisting of Turkmenistan,
Tajikistan, Kazakhstan, Kyrgyzstan
and Uzbekistan holds great
potential for India.

Following are some of the
areas of importance :-

- (1) Strategic importance - CAR lies
at the cross roads to Europe,
is close to Pok, ^{Afghanistan} as well as
China, thereby holding great
strategic importance.

India has established its only
foreign air base at Farkhor, Tajikistan
to make use of this opportunity.

- (2) Energy security - The CAR is a
great source of Uranium, Natural
gas and oil.

- India has signed an agreement with Kazakhstan to access its Uranium.
- The Turkmenistan-Afghanistan-Pakistan-India ^{pipeline} provides access to the Galkynsh oilfield to India.
- India has also signed an agreement with Uzbekistan to supply Uranium.

(3) Trade & Connectivity - CAR provides access to the Eastern European Region. Therefore, India is a part of International North South Transport Corridor, the Ashgabat Agreement and has invited CAR to take part in the Chabahar Project.

Other steps taken by India include -

- Connect Central Asia Policy.
- Holding bilateral talks with CAR at the sidelines of Shanghai Cooperation Organisation.

Challenges that remain :-

- (1) The China factor - China is extremely close to Central Asian countries & has greater amount of bilateral trade, making it a more powerful partner for CAR.
- (2) Terrorism - This region is quite unstable & prone to extremism & fundamentalism.
- (3) Autocratic rulers - India's democratic credentials are extremely high compared to the autocrats that exist in CAR.
- (4) Presence of other players & regional organisations - Both U.S. & Russia have interests in CAR. & besides SCO, there are numerous regional organisations such as EEU (Eastern European Union), CIS (Commonwealth of independent states) which divert CAR's attention.

Thus, India & CAR can overcome the above challenges by focusing on trade, energy & connectivity to establish good relations.

15. Discuss the significance of India's island territories in its quest to become a net security provider in the Indian Ocean region. (250 words) 15

हिंद महासागर क्षेत्र में वास्तविक सुरक्षा प्रदाता बनने की भारत की आकांक्षा के आलोक में, इसके द्वीपीय प्रदेशों के महत्व की चर्चा कीजिए।

India has 2 strategic possessions in the Bay of Bengal and Arabian Sea — Andaman & Nicobar & Lakshadweep.

Following is their significance in India's bid to become a net security provider —

→ Access to important SLOCs —

From the Arabian Sea, India receives about 68% of its imports

while Andaman islands are located close to Malacca straits, which is one of the busiest SLOCs.

→ Close to other nations — Lakshadweep is extremely close to Maldives, providing India an opportunity

to be its security provider

→ Access to foreign ports - The 2 island groups are close to Sabang (Indonesia), Dugm (Oman), Assumption islands (Mauritius) - all of where India has a base or is building one.

→ Home to our Tri services Command - Andaman islands house the Tri Service Command, making it a strategic location in the Indian Ocean.

Therefore, one sees that India's island territories are key to becoming a net security provider in Indian Ocean.

16. A fine balance between security and developmental measures needs to be attained for tackling the menace of Left Wing Extremism (LWE) in India. Analyse. (250 words) 15

भारत में वामपंथी उग्रवाद (LWE) के खतरे से निपटने हेतु सुरक्षा और विकासात्मक उपायों के मध्य एक उत्कृष्ट संतुलन स्थापित करने की आवश्यकता है। विश्लेषण कीजिए।

Left Wing Extremism (LWE) in India is influenced by the ideas of left scholars such as Marx, Lenin, Mao et al. It aims to create a revolution of the proletariat and change the social & economic order.

The government has realized that LWE is a two fold problem. It is a result of a governance deficit and a law & order problem.

As a result, it has taken steps to alleviate the 2 problems:-
Tackling

(1) Governance deficit through development

→ Better implementation of acts such as Panchayati Raj (Extension to Scheduled Areas) Act, 1996 & ~~Forest Rights Act~~ and constitutional safeguards ~~to~~ 5th & 6th Schedule areas

→ Establishment of Eklavya Model

Residential Schools to educate tribals and allow them to access the benefits of reservation.

→ Universal Service Obligation Fund is being used to set up mobile towers so that LWE affected areas are better connected.

→ Greater sensitisation to the administrative officers posted in these areas.

→ Rehabilitation schemes for those who have given up the path of violence.

(2) Tackling law & order problem through security

→ Special force called Greyhounds in Andhra Pradesh & Telangana to tackle LWE.

→ Bastarinya Battalion set up in Chattisgarh recruiting tribal youth to deal with this threat

- C-60 in Gadchiroli, Maharashtra for the same purpose.
- Central Industrial Security Force to protect infrastructure in red corridor.
- Increased allocation for security schemes in these areas.

Thus, one sees that the government has adopted a 2 pronged strategy to tackle the menace of LWE to strike a balance between the security & development measures.

17. Illustrate the linkages between drug trafficking, organised crime and terrorism. In this regard, mention the steps that have been taken to arrest the availability of drugs in India. (250 words) 15

मादक पदार्थों की तस्करी, संगठित अपराध और आतंकवाद के मध्य संबंधों को उदाहरण प्रस्तुत करते हुए समझाइए। इस संबंध में, भारत में मादक पदार्थों की उपलब्धता पर अंकुश लगाने हेतु उठाए गए कदमों का उल्लेख कीजिए।

Drug trafficking, organised crime and terrorism are three interlinked challenges facing the world today.

Following are the linkages between the three:-

- 1) Source of income to terrorism -

Drug trafficking allows terrorists to raise funds for purchasing arms, ammunition, spreading propaganda etc. Eg - Golden Crescent is the hub of terrorist activity.

- 2) Organised crime - The income earned from trafficking is usually black money, outside legal purview. It can be used for criminal purposes.

3) Many youth are lured into terrorism by getting them addicted to narcotic substances, which increases their compliance to illegal activities.

In this regard, India has taken the following steps to curb this menace:-

- 1) National Action Plan: India has formulated a NAP to reduce drug use and rehabilitating drug addicts.
- 2) Legislative measures - Prohibition of Narcotic & Psychotropic Substances Act prescribes strict punishment for those peddling drugs.
- 3) Narcotic Control Bureau has been established and given powers to seize and search premises for drugs.

- 4) India is a signatory to UN Convention on Transnational Organised Crime
- 5) Prevention of Money Laundering Act since a lot of black money laundered comes from drug trafficking

Therefore, one sees that India has recognized the the threat of drug use and its impact on our security & has accordingly taken steps to reduce the same.

18. Identify the key threats to national security in the wake of climate change. Also, highlight India's stand and rationale on UN's decision to declare climate change as an international security issue. (250 words) 15

जलवायु परिवर्तन के आलोक में राष्ट्रीय सुरक्षा के सम्मुख प्रमुख खतरों की पहचान कीजिए। साथ ही, जलवायु परिवर्तन को एक अंतर्राष्ट्रीय सुरक्षा मुद्दा घोषित करने के संयुक्त राष्ट्र के निर्णय पर भारत के दृष्टिकोण और औचित्य पर भी प्रकाश डालिए।

Climate change poses a number of threats to India's national security by affecting our political, social and economic capabilities to protect our citizens.

Some of the key threats are:-

- 1) Migrations - Countries such as Bangladesh will witness erosion of land leading creation of climate refugees. They are likely to move to India, putting a strain on our resources & create discontent in society.
- 2) Agriculture - Climate change will affect agriculture productivity leading to threats to our food security.
- 3) Water security & challenges - Glaciers are melting at a faster rate, meaning supply of freshwater is

decreasing. This, too, can lead to social problems where the rich who are able to afford water will have access to it & poor may not.

4) Physical barriers - The mountain ranges such as Hindu Kush & Himalayas pose barriers to infiltrations from China & Pakistan. With climate change, they may disappear affecting our security.

Thus, one sees that climate change poses a great threat to our national security.

Recently, there was a resolution in the United Nations to declare climate change a security threat.

It was opposed by India because of the following reasons:-

- 1) It allows UN Security Council to take control of the situation. Considering the Security Council is an unequal body, it may be biased against certain nations.

- 2) Military action - If climate change is declared a security threat, it will allow military action against those who are not taking steps to mitigate the same. This may just lead to greater conflict in an already conflict ridden world.
- 3) Different nations are taking different steps to mitigate climate change. UNSC may not recognize some nations steps as equally effective and may impinge on state sovereignty.
- 4) Such a decision will overshadow organisations such as UNFCCC which have spent decades working towards decreasing impact of climate change.

Thus, on the basis of the above arguments, India has declined to support this resolution.

19. Explaining the concept of data exclusivity, bring out the arguments for and against incorporating data exclusivity norms in India's IPR regime.

(250 words) 15

डेटा एक्सक्लूसिविटी (डेटा विशिष्टता) की अवधारणा की व्याख्या करते हुए, भारत की IPR व्यवस्था में डेटा एक्सक्लूसिविटी संबंधी मानदंडों को सम्मिलित करने के पक्ष और विपक्ष में तर्क प्रस्तुत कीजिए।

20. Compare and contrast fifth generation (5G) of wireless telecom technology with 4G technology. What challenges need to be overcome for 5G's pan-India rollout? (250 words) 15

4G प्रौद्योगिकी के साथ पांचवी पीढ़ी (5G) की वायरलेस दूरसंचार तकनीक की तुलना कीजिए और उनके मध्य अंतर बताइए। 5G के अखिल भारतीय क्रियान्वयन हेतु किन चुनौतियों से निपटने की आवश्यकता है?

5G Technology is an innovation in the field of wireless telecom technology that seeks to improve upon the existing 4G technology in the following ways:-

- 1) Faster data transmission - Data can be downloaded at a faster rate in 5G at the rate of about 100Gbps as compared to 10Gbps in 4G technology.
- 2) Lower latency rate - refers to the ^{a packet of} ability & the rate at which data is sent from user to another. 5G has lower latency as compared to 4G.
- 3) Telemedicine - Due to faster data transmission, 5G scores over 4G in telemedicine where faster information dissemination is required. It will also enable tele-robotic surgery.

- 4) Agriculture - 5G allows use of precision technology in agriculture allowing greater resource productivity.
- 5) Cyber Physical Systems and IoT - 5G will allow faster connections meaning Internet of Things will be better connected & function smoothly.

Challenges

- 1) Lack of adequate infrastructure - for setting up 5G technology in terms of spectrum, transmission lines, fibre optic cables etc.
- 2) 5G Trials - India is in a tough spot as China wants it to include Huawei in its trials but USA has pressurised India against it.
- 3) No uniform policy regarding 5G technology in India which means states are pursuing transition at their own pace.
- 4) Spectrum - The cost of spectrum in India is higher than the global

average and the allocation of 5G technology is also below par.

5) Yet to transition to 4G - India is already far behind in moving to 4G putting it on the backfoot for 5G as well.

Therefore, all these challenges need to be overcome before we are able to move to 5G technology.

Proper utilisation & success of 5G is thus dependent on overcoming these barriers.