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GENERAL STUDIES (TEST CODE : 1326)

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Medium Eng./Hindi	English	Registration Number	295520
Center	Karol Bagh	Date	17/8/19

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
1	10	
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18	15	
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20	15	

Total Marks Obtained:

Remarks:

INSTRUCTIONS

- Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न-पत्र कोड, विद्यार्थी क्रमांक आदि)।
- There are **TWENTY** questions printed in **ENGLISH & HINDI** इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं।
- All questions are compulsory.**
सभी प्रश्न अनिवार्य हैं।
- The number of marks carried by a question/part is indicated against it.
प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
- Answers must be written in the medium authorized in the Admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in medium other than the authorized one.
प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न-सह-उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
- Word limit in questions, if specified, should be adhered to.
प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
- Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.
उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।

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

Plot No. 857, 1st Floor, Banda Bahadur Marg (Opp Punjab & Sindh Bank), Dr. 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.

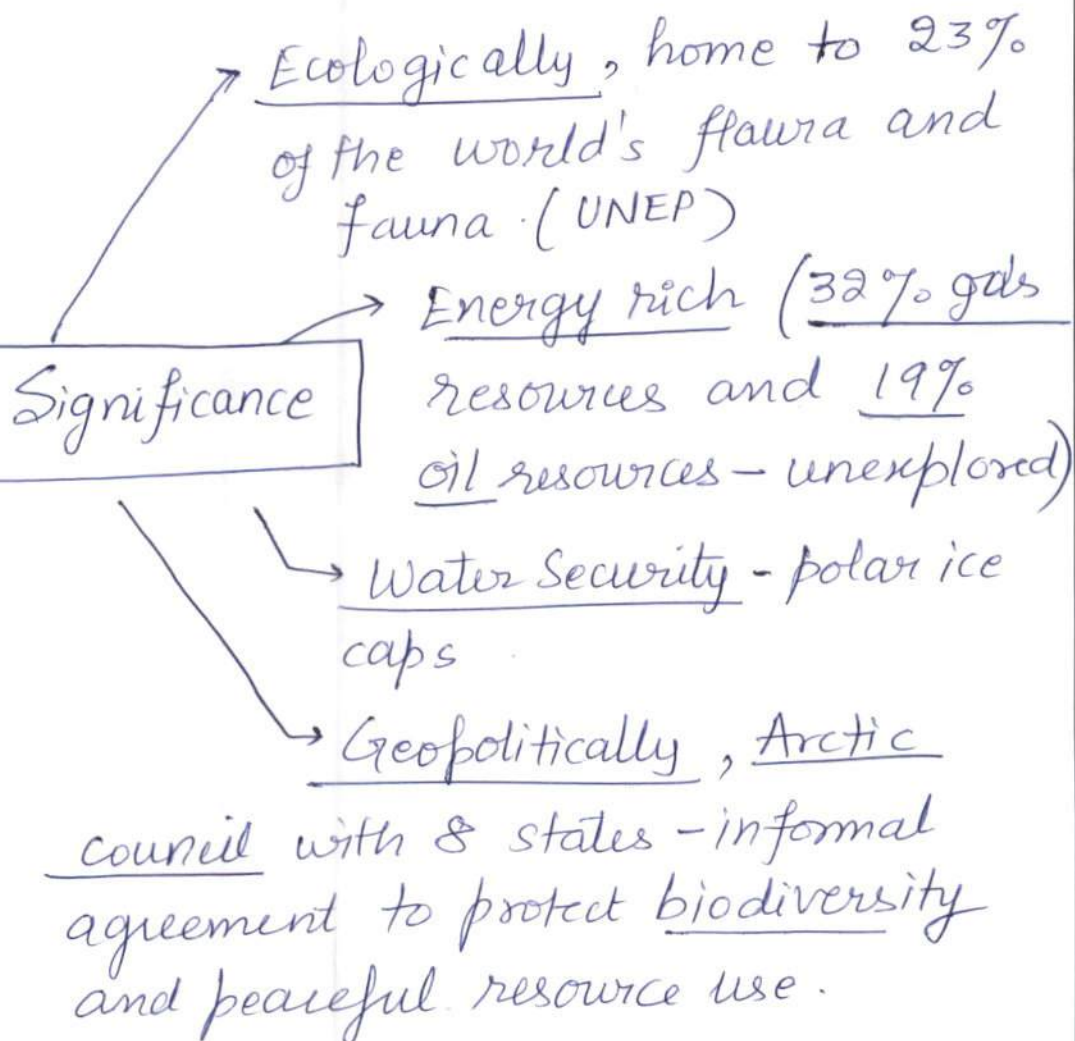
All the Best

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।

Arctic region is the least explored and pole of the rich energy resources and biodiversity.

IPCC special report mentions the rise of 1.5°C in the climate would melt the polar ice caps by 45%.



Opportunities and challenges

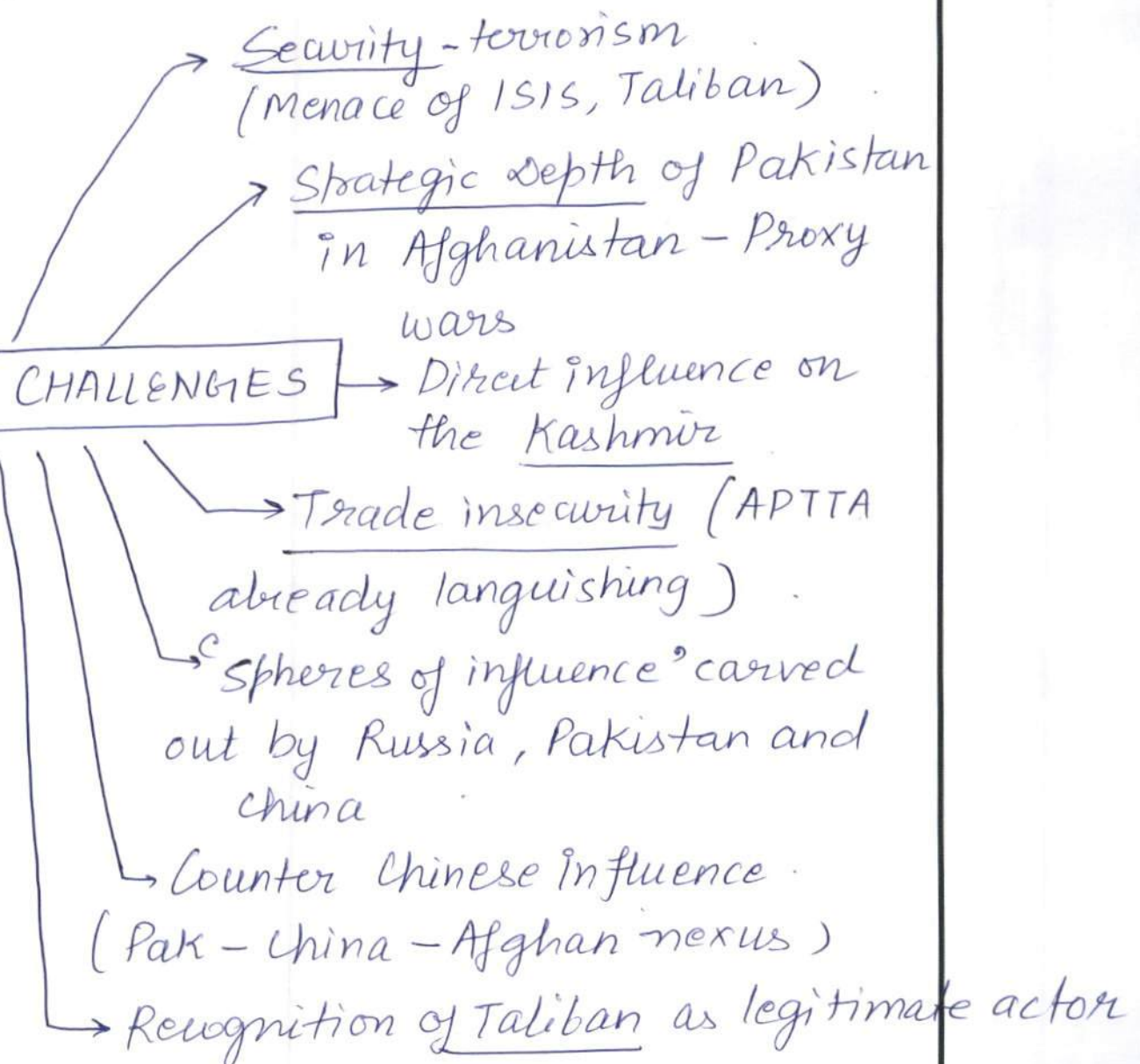
- China prospects of the POLAR SILKROAD
 - shorten the travel time
 - oil and gas exploration (Siberian and Norwegian region)
- Ottawa Declaration formed the Arctic Council. India has been elected as an observer state in 2018
- Geopolitical Disputes – territorial between (US-canada) can be resolved
- Himadri is the only research station
- Essar oil has been venturing into joint exploration at Vokeineft, Russia.

However, the challenge of the 'Arctic Paradox' which perpetuates the depletion need to be kept in mind to find a sustainable development (SDG)

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 'retrenchment and the policy of 'Afghanisation' has been the important part of Trump's America's I rhetoric.



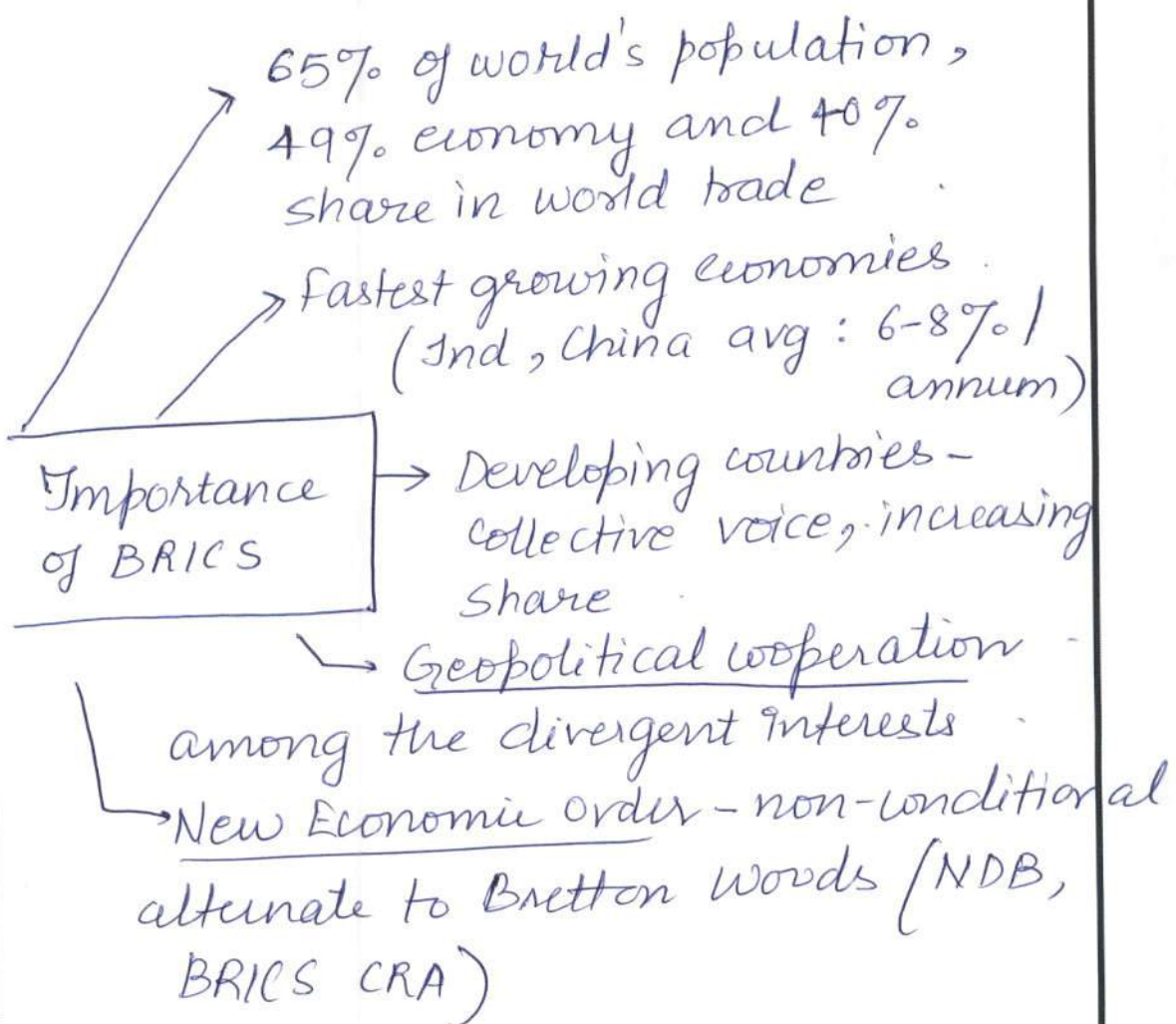
- Hold talks in peace process.
(Qatar, Moscow Format - I
time unofficial delegation)
- Recognise the Afghan led,
Afghan-owned, all inclusive
peace process with all
stakeholders -
- strategic balancing and
equidistance to all
legitimate state parties
- COOPERATE WITH LIKE
MINDED COUNTRIES THROUGH
QUAD, SCO-RATS TO ADDRESS
SECURITY CHALLENGES
- COUNTER PAKISTAN THROUGH
geopolitical pressure in multilateral
fora and FATF exactions

India is 'too big a player' to
be left out in peace process and
thus needs proactive involvement
using hard + soft (development
partnership)

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 is the collective voice of the new emerging economies of the global South with potential to create a new economic order.



However, the internal contradictions
such as :

- ① Geopolitical divergence between
Ind and China
 - (a) Trade issues .
 - (b) BRI
 - (c) CPEC - IOR .
 - (d) collaborations - Pakistan
an ally .
- ② Russia and China - with
revisionist hegemonic aspirations.
- ③ Brazil too isolated and away
from Asian power struggle
- ④ Role of US - preponderant
Hegemon checking the revisionism
of China and Russia .

India thus needs to play its
geopolitical cards smartly with
deft balancing of interests .

As an economic platform ,
BRICS holds alot of integrating
potential.

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।

Foreign policy is a multidimensional issue in a world of geostategic turbulence.

Role of the soft power

- ① Cultural linkages. (Africa, Japan - NAM, Anti-colonialisation)
- ② Democratic principles and values of free open rules based order. (WTO and UNGA reforms)

③ Development Assistance

DPA (Development Partnership Administration) disbursed \$2Bn 2015-18 - MEA.

- ④ Capacity Building (Projects in Africa - ITEC, PANE African Network, Salma dam - Afghanistan, Indo-Bangla friendship pipeline in Bangla)

NEED : Geopolitical scenario .

- (a) Rising Protectionism
- (b) Xenophobia and inward looking sentiments -
- (c) Rising Intolerance
- (d) Terrorism and other unconventional threats

OTHER
FACTORS

→ Measures

(a) Hard book Diplomacy
against terror - 'Zero Tolerance
Policy' against Pakistan

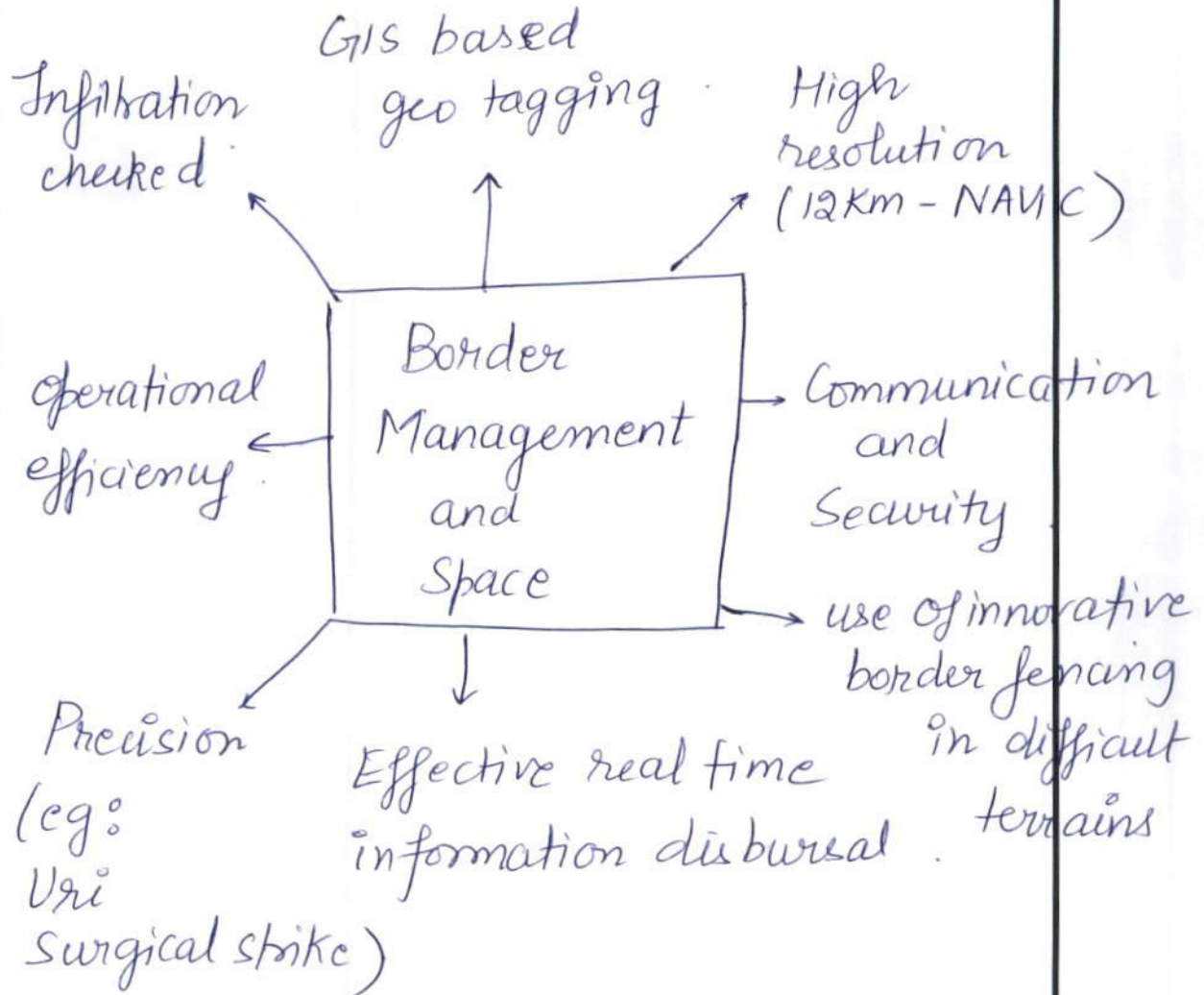
eg: Preemptive non-military
strike in Pulwama

- (b) Arms Supply and manufacturing
- (c) Completion of Nuclear Triad
- Nuclear Deterrence
- (d) Countering expansionist
military aggressiveness of
Neighbours (China)

Thus, use of Smart Power
in the age of uncertainty .

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।



Steps such as above are taken complemented by the use of

(a) CIBMS (Comprehensive Integrated Border Management System) - pilot at Assam border

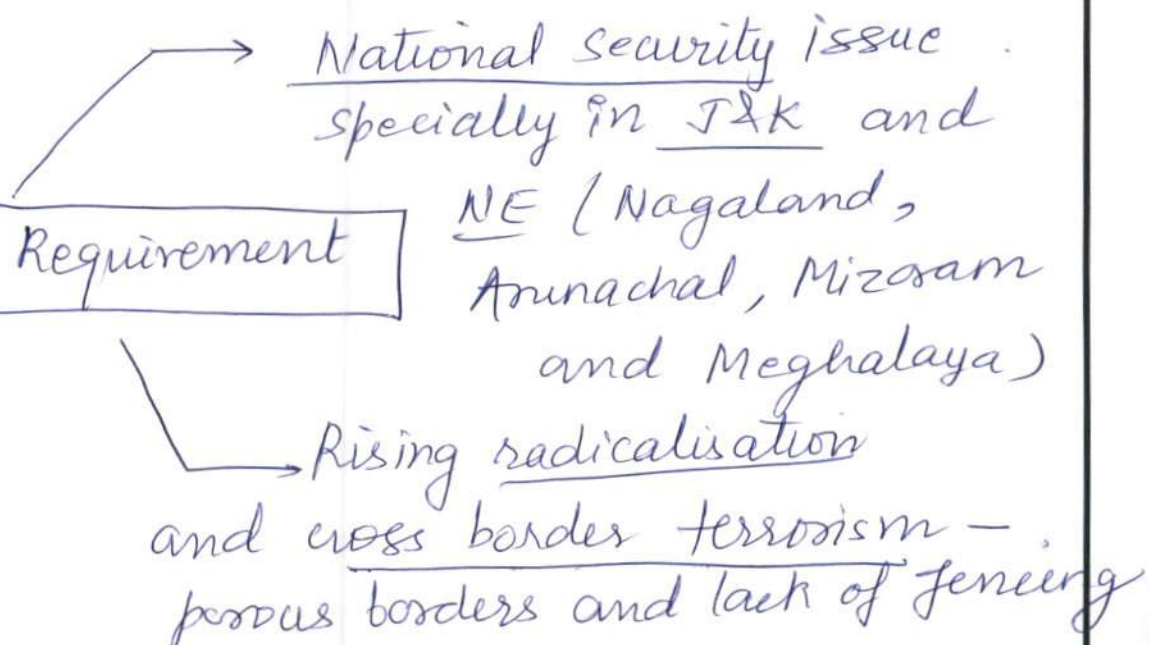
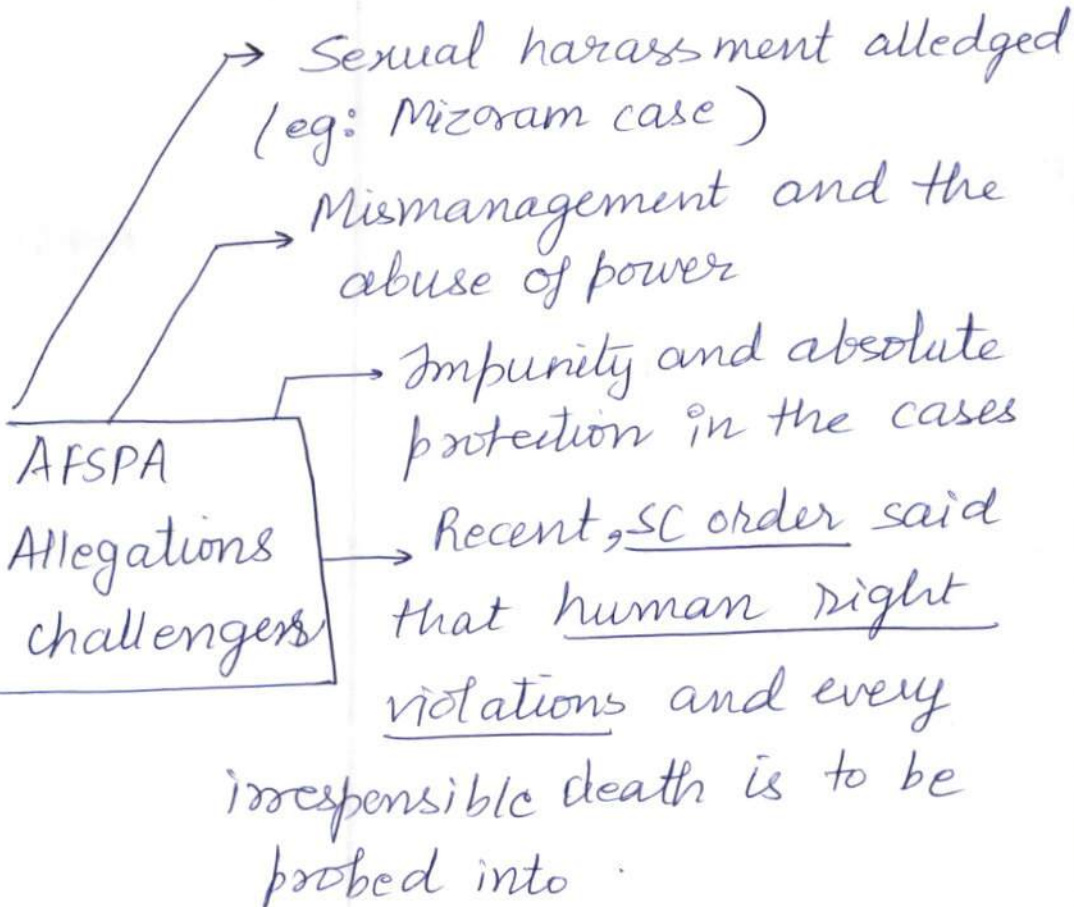
- (b) GSAT 7 for the army based inputs .
- (c) GSAT 7A dedicated to the Indian navy for real time information dissemination .
- (d) EMISAT satellite for the strategic value points .

Space thus is a vast arena full of opportunities to be used at its maximum .

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।

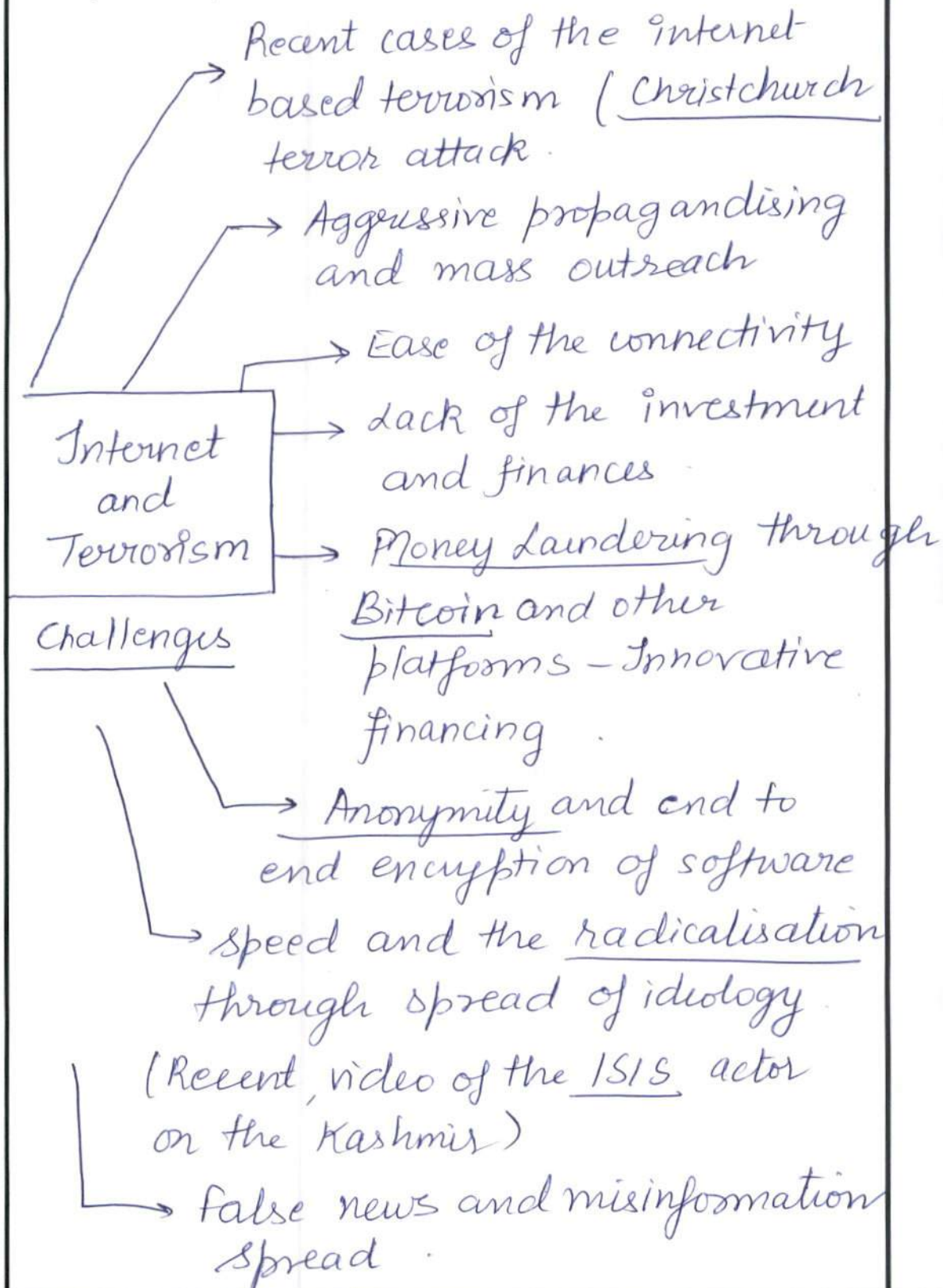


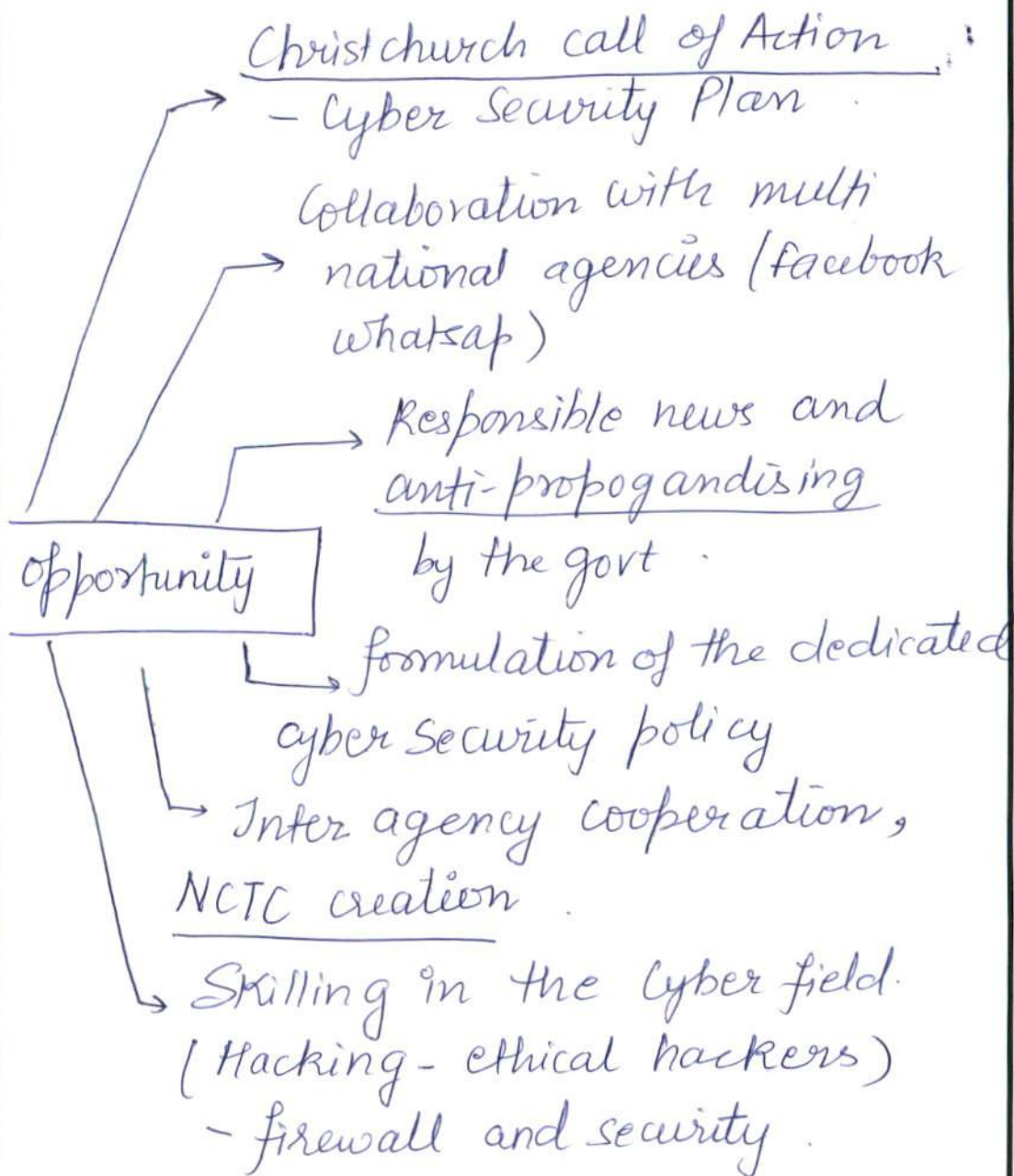
→ Inability of the state
forces to address the
situation - capacity
augmentation

However, the case of Irom Sharmila
of the Manipur for the removal
of AFSPA and alleged human
right violations isn't to be
forgotten and there should be
a fine balance between the
national security and the
human rights - suggested by
the 2nd ARC → Venkatachaliah
commission.

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।





Norway's EXIT and UK's PREVENT programme can be the guided models.

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।

Chandrasekhar Limit is the upper limit of the mass upto which a dwarf star exists.

The mass i.e. Chandrasekhar limit mass beyond which a white dwarf star would collapse into itself forming a neutron star or a black hole.

Thus, it is the maximum mass upto which a star exists before collapsing into its own gravitational pull.

Significance

- ① Study of the Neutron Stars, Black Holes.
- ② Properties of the Dwarf Planets

Existing in the Universe specially
beyond the Kupier Belt

- ① Traces of the formation and
origin of the universe
- ② Studies about the Gravitational
force and the relationship with
the Black Hole.
- ③ Ground Base for the exploration
of the extra-terrestrial existence
of the habitable life.

The recent breakthrough by
the Event Horizon Telescope
reiterating the presence of the
Black Hole through the illuminated
circular ring is only been possible
with due considerations of the
Chandrasekharan Limit knowledge.

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 is the collection of pieces of the devices of varying sizes which are prone to the collision and destruction of space satellite infrastructure.

Risk posed by Space Debris

- Destruction of the satellite communication system
- Kessler's Syndrome which perpetuates the number of the junk pieces exponentially
- Threat to National Security
(Military Satellites eg: GSAT-7A India)
- No responsibility and lack of global legal framework.
- Disruption of the services on ground affecting lives.

Mitigation Measures

Scientific projects and global collaborations

REMOVE DEBRIS mission of the UK based agency

SPACE JUNK project of the NASA

ESA project on the

Space Debris Removal

Techniques such as Harpoon Capture (R4D)

Comprehensive multilateral agreement on the Responsible Use of the Space

Monitoring and Implementation under UN-CPUOS and APSCO

India recently held ASAT (LEO)

Test which produced only 240 pieces of debris - a responsible act which can lead an example.

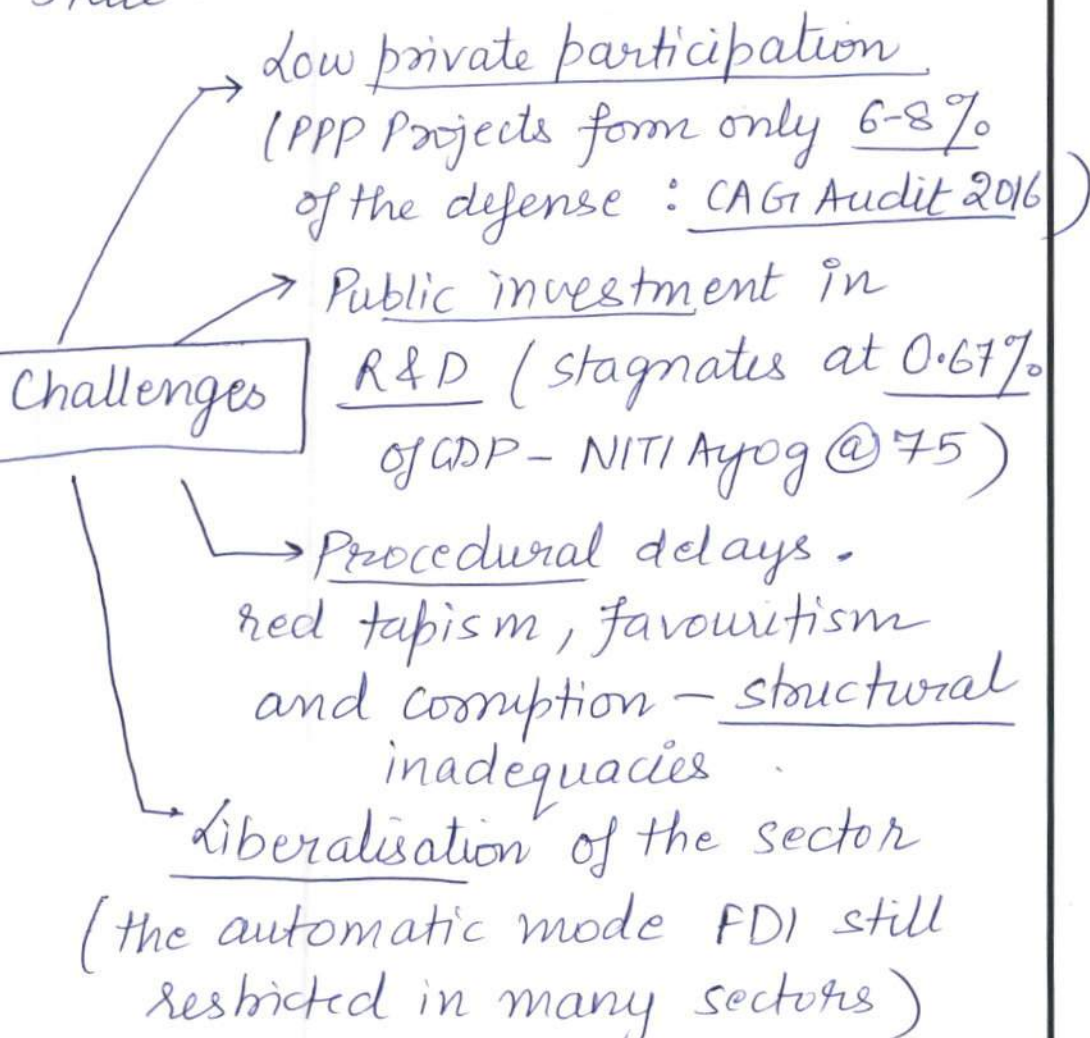
10. Discuss the challenges confronting higher self-reliance and indigenisation of defence industry in India. What steps can be taken to accelerate its pace? (150 words) 10

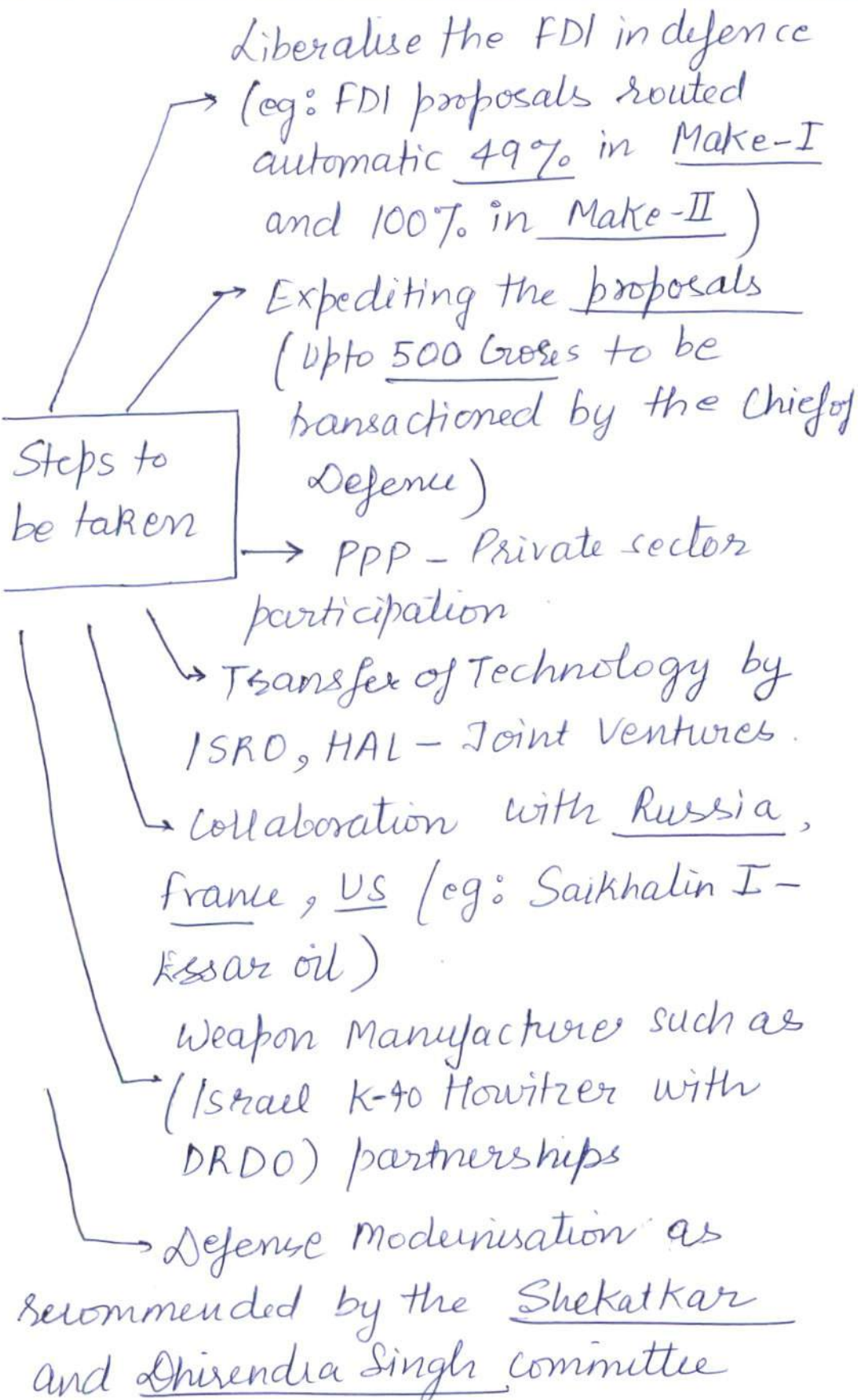
भारत में रक्षा उद्योग के समक्ष उच्च आत्म-निर्भरता और स्वदेशीकरण से संबद्ध चुनौतियों की विवेचना कीजिए। इसकी गति को तीव्र करने हेतु क्या कदम उठाए जा सकते हैं?

Make in India -II under the Defence

Procurement Procedure 2017

highlights the thrust of the Govt in making India a responsible, self-reliant and indigenised state.





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।

Indian Diaspora is one of the largest in the world with more than 18 Million people. (ECOSOC)

Role Played by Diaspora

① Remittances :

Min of External Affairs in report in 2018 highlighted more than \$11 million remittances sent annually)

① Forex Reserves :

Valuable forex reserves contribution to 416 \$ Bn currently (2% contribution)

① Policy Articulation and Interest formation in the inhabited areas. (Indo-US nuclear agreement)

① Enhancing India's credibility and soft power stature.

- ① Lobbying for the Govt interest
- ② Capital investment in the country. (Ex: Pravasi Bhartiya Divas occasion)

Challenges faced

- Multifaceted challenges based on country specific demands.
- Africa : The immigration laws and the Labour reforms and conditions
- USA : The H1B visa issues
- Europe : "Data Security Status"
Mode + Liberalisation of movement of the natural persons
- Canada - Stringent visa and restrictive regime without skill requirements
- Skill mismatch : Lack of the training and the soft skills orientation.

Ways to Leverage the partnerships

(a) Skilling Programmes :

Pravasi Bhartiya Vikas Kaushal Yojna - skill of Job oriented, outcome base

(b) Bilateral agreements :

BIPA, DTAA and Emigration agreements.

(c) Labour conditions : Overseas workers Resource Center, Helpline

(d) Emigration Bill 2019 to be implemented - Blue collared workers

- Registration of agencies and workers

- Documentation formal training

(e) Conducive investment and taxation proposals in the "sweet spot" of the Indian economy.

Saudi's labour Reforms under Kafala System is also a boost for our bilateral reforms to

leverage our human resources optimally and save "Brain drain"

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?

The current world order is said to be in flux.

Reasons of the preferential trade Agreements proliferation :-

- Weakening of the global institutions (WTO)
- Democratic deficit in the institutions of the global governance
- Green Room Diplomacy under the closed doors of WTO.
- Ineffectiveness of the rules-based liberal world order.
(USA coming out of the Paris Agreement, TPP, NAFTA)
- Long pending reforms in the WTO
- Non-conclusion of the DOHA

development agenda .

- The N-S divide over developmental issues
 - (a) AOA
 - (b) MSP and subsidies
 - (c) Compulsory Licensing .
 - (d) IPR issues
 - (e) Domestic Content Requirements
(Solar Panel case at DSB of Ind-US)
- Lack of comprehensive e-commerce agreement .
- Spill over of the Singapore issues of developed world
- Trade war between USA-China .
- Structural slowdown of the global economy (WEF - 2.3% growth)
- Rising spate of the protectionism
- Blocking of appointments at the DSB of the WTO. by US, threat of Leaving .

However, they serve as an exception under the MFN clause of the WTO.

As discussed above, various seasons pose a threat to WTO but WTO has been the bulwark of the -

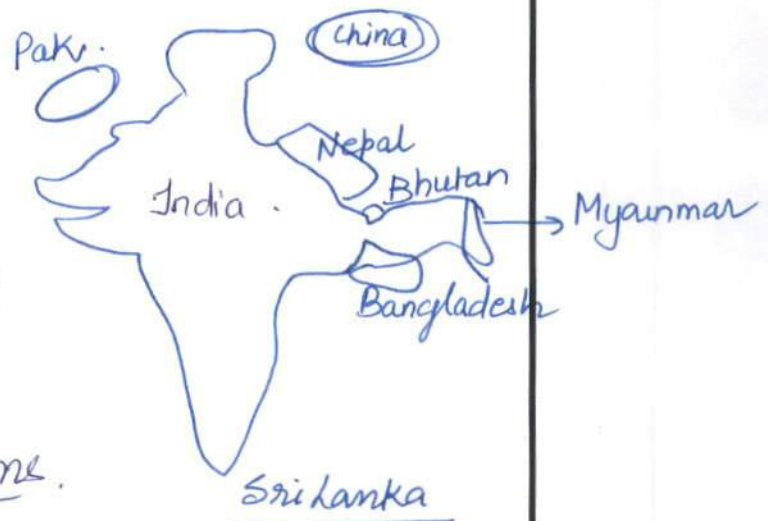
- (a) Consensus based multilateral global order.
- (b) International trade openness increased from 42% (2001) to 87% (2017).
- (c) Voice of the developed and developing world - a platform for deliberations and negotiations
- (d) Inclusiveness and development.

Thus, reforms at the dispute settlement body (4 Judges vacancy) along with PTAs such as RCEP, USMCA, Brexit, CEPA, AfCTA, etc can go hand in hand to address local as well as global issues of trans national terrorism, trade protectionism and climate change.

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 पारिय 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।

Hydro Diplomacy
is the art of using
water relations
and apportionment
to conduct the
foreign policy relations.



India is
water stressed

• India and its
riparian neighbours

country ($1500 \text{ m}^3/\text{capita}$ availability -
average - $1700 \text{ m}^3/\text{capita}$ - [WB])
lying in the 'Asian Hotspot'.

Need of Hydrodiplomacy

- ⊙ Leverage the large number
of trans boundary rivers.
(eg: 54 with Bangladesh)

- ① Increases its soft power
- ② Establishes India as the responsible upper riparian state.
- ③ Counter the Chinese coercive water diplomacy with respect to sharing of the water data of Brahmaputra, dam building in the Tibet and upper course rivers (Teesta)
- ④ Domestic development : Eg : Assam Floods largely attributed to mismanagement of the river system.

CHALLENGES

- (A) Lack of concrete Agreements
- ↳ Indus Treaty 1960 highly disadvantageous with the Kashmir being water stressed.
 - ↳ Teesta River Treaty : 2007 establishes only 39% of the

water to India and 36% to Bangladesh, rest unallocated.

(B) Para-diplomacy - role of the state Govt in the foreign policy.
eg: West Bengal govt in concluding the treaty.

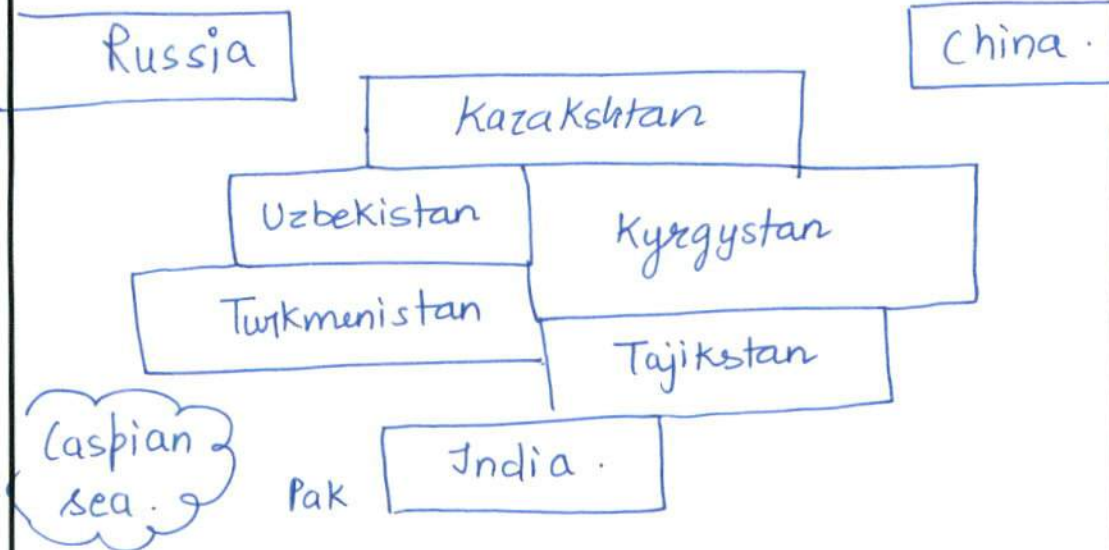
(C) Chinese Revisionism :

- ↳ Development of Central and West China - water deficit
- ↳ Plans to make 16 Big dams on Dihang river.
- ↳ Opaque water sharing arrangements.
- ↳ Water coercive diplomacy.
- ↳ Geoengineering and Gold Rush experiments in Tibet - our TIP pole and glacier rich region.

Thus, using the Law of the Prior Appropriationment and responsible water sharing agreements, India stands to gain alot using its hydrodiplomacy potential coupled with National Development.

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

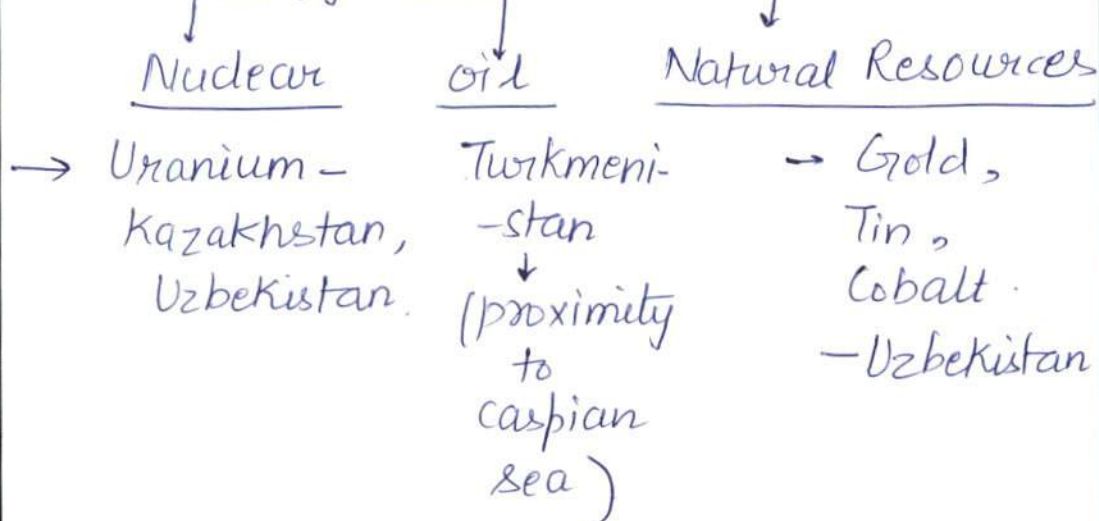
भारत के लिए मध्य एशिया के महत्व पर टिप्पणी करते हुए, हाल के दिनों में संबंधों में हुई प्रगति पर प्रकाश डालिए, साथ ही साथ ऐसे मुद्दों का उल्लेख कीजिए जिन पर संबंधों को और अधिक सुदृढ़ करने हेतु ध्यान दिया जाना अभी भी शेष है।



IOR Indian ocean Region

Importance of Central Asia

① Energy Security



① Strategic

- Farkhor air base at Tajikistan
- extended neighbourhood.
- Countering Chinese influence
- Insurgency and religious extremism

② Economic

Trade still lags at \$2Bn and large reserves of unexplored resources

Progress Made

- Connect Central Asia Policy 2012 was the 1 step to reach out.
- Trade ties to be elevated with investment of over \$1Bn at recent 2018 - foreign minister meeting
- 1 Central Asia India conference 2018 signing MOUs in the field of health, ITES, space, technology, education, etc.
- Proposal of the pipeline through Mongolia — (Essar oil)
- Infrastructure projects such as -

INSTC corridor, Ashgabat Agreement

ITR convention

Steps need to be Taken

- ① Expedite the implementation of the EEU - India FTA to spearhead trade
- ① Development Partnership to address Youth bulge and investment opportunities
- ① Air Connectivity - Air Freight corridors
- ① Joint exploration in the resource rich Caspian sea projects.

'Central Asia' is historically neglected but an area of 'hope', with leveraging India's growing economic potential in services, the energy rich region can create complementary relationship.

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's growing
economic clout
(fastest major
economy) corresponds
to its geostrategic
aim of SAGAR
(Security and
Growth for All)
in the Indian
ocean region.

Fig : Islands of India



Thus, the
importance of the
island territories correspond to
its geopolitical, geoeconomic and
geostrategic aim of the net
security provider in IOR.

Geopolitical

- ① Proximity to the maritime neighbourhood which is fragile (eg: Sri Lanka, Maldives, Mauritius)
- ① close to the SEA - South east Asia and a bridge for the development of India's 'Act East Policy'
- ① SAGAR and maritime renaissance and maritime diplomacy with IORA and the IONS.
- ① Littoral states of the resource rich Africa - proximity to the islands.

Geoeconomic

- ① The center of Gravity has shifted from Atlantic to Indian ocean.

- ① 65% of the world trade and 53% of oil trade through strait of Malacca, Hormuz and Redsea nearest to these islands.
- ② Refuelling and docking of the transshipment of the ports (LPI-WB)
- ③ SAGARMALA port development in the Andaman region

Geo strategic

- ① Maritime piracy, drugs, and trafficking across Borders.
- ② TRI SERVICE Command in the Andaman and Nicobar region
- ③ Countering Chinese cheque book diplomacy and encirclement of the India.

Cultural

- ① Project Mausam which provides cultural linkages to the monsoon dominated region.

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।

LWE continues to be the most critical national issue even after 71 years of independence

The problem is multi dimensional in aspect thus need a fine tune of security and development measure to be solved.

Reasons of LWE

- (i) Lack of the Tribal assimilation and integration in the society.
- (ii) Economic, social and political deprivation.
- (iii) Development induced displacement.
- (iv) Basic amenities - provisioning services deficient
- (v) Lack of human development (HDI less than 0.21)
- (vi) Insecurity and violence - drugs, arms & money laundering

(VII) Structural deficiency - Law enforcement agencies and p & p contact is missing on a larger scale.

Measures to balance

(A) Security

- ① Modernisation of the Police forces (Prakash Singh Judgement and Julio Robiero committee recommendations)
- ① Community policing - people's participation in securing law and order
- ① SRE (Security Related Infrastructure expenditure scheme)
- ① provisioning of the funds (6-8%)
Budget of the Ministry of Tribal and Home affairs earmarked.
- ① Stringent implementation of the laws and guidelines.
(PESA, FRA, etc)
- ① Awareness and counselling support

to focus
(CRPF,
etc)

Development

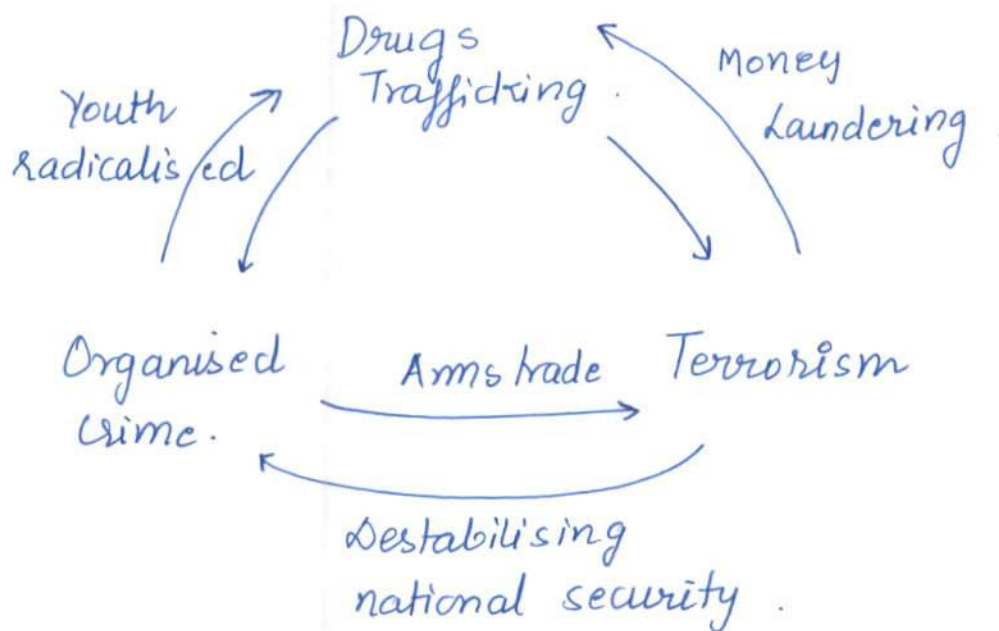
- ① Special scheme for the road construction in LWE - central sector by BRO
- ① Component of Housing under PMAY-G
- ① Inclusion of districts under the NITI Ayog - Aspirational district programme
- ① 'Nal se Tal' scheme for provisioning of the drinking water
- ① Democratic Decentralisation - 73rd amendment and strengthening role of Gram Sabha in minor major mineral allocation
- ① LARR 2013 implementation for the development induced displacement.

Recent, the Min of Home Affairs 2018 declared 38 out of the 162 districts LWE free spread over the 8 states only now which is a laudable step.

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।

Three axis of Evils : Drugs trafficking
organised crime and terrorism
are intricately linked complementing
each other's gravity.



- ① The Golden Crescent and the Golden Triangle in the IOR
provides the breeding ground
for the drug trade which gives
rise to cross border extremism.

(eg: India near Punjab-Pak border)
NE → Mizoram, Nagaland near the
Myanmar) Leading to the insurgency
(Gorkhaland, Bodoland, etc)

① Money Laundering which takes
place underground banking through
illegal routes (Hawala Transactions)

② Terrorists arms procurements
and the radicalised youth under
the influence of the drugs form
the breeding ground (eg: Afghan
Mujahedens, Boko Haram Africa)

③ Organised crimes such as
human trafficking, slavery -
sexual exploitation, trade in
women and children, cattle
trade perpetuated with the
drugs and money power (eg:-
Indo-Bangladesh Border, South-east

Asia)

Steps to arrest the menace of drugs

- a) Securing the sea lanes of the communication (SLOCs) - Maritime policy, counter insurgency.
- b) Narcotics and Drugs - Psychotropic substances (NPDS Act),
Prevention of the trafficking Bill 2019 - making trafficking a penal offence
- c) Bilateral and multilateral parts coordination agreements with IOR littoral states (Seychelles, Maldives →)
- d) National Drugs Abuse Policy to rehabilitate, reintegrate the addicts in the society
- e) Punjab Police - community support and awareness scheme.

Thus, multistakeholder and comprehensive approach is followed to get rid of this weed.

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।

Hindukush Himalayan Assessment

Report points that $\frac{2}{3}^{\text{rd}}$ of the icecaps would be lost by 2100 with 56%

biodiversity loss, Moreover, UNEP study points than more than 47% of the species are facing threat of extinction.

This scenario can be attributed to climate change as the biggest global issue today. with multidimensional impact.

Security and climate change

Why is it a threat? and what are the threats?

- a) Resource crunch "The dilemma of limited resources and unlimited wants". - more than 17% of world population in India with less than

4% of global resources (UN)

b) Extremism and insurgency -

Lack of development aids the anti-national and violence in already affected areas (Eg: LWE districts).

c) Xenophobia and anti immigrant

Sentiment : Europe stringent anti-immigration laws, US's wall at Mexico border, resistance against Global compact on Migration

d) Climate induced displacement

LDCs and Small Island states
eg: Tuvalu - 50% Pacific island already submerged under the sea level rise.

e) Climate Terrorism : Prospects of the ideologically radicalised youth take up arms and revolt against State and beyond due to climate induced furies (floods, landslides, etc)

UN has declared the climate change an international security issue following a report of IPCC.

India has supported the decision given the rising menace of the climate change and migration induced effects on the national economy and security.

However, concerns highlighted were the following :-

- a) Erosion of National authority / sovereignty over security of state.
- b) Limited resources and the climate refugees problem.
- c) India supports the multifaceted multilateral negotiations with consensus but with adequate "policy space" with respective states.
- d) Developing world plethora of the disproportionate problems.

Thereby, committing itself to the Paris agreement completely.

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।

Data Exclusivity in the Intellectual Property Regime refers to the condition wherein the pharmaceutical companies are reluctant to share their R&D data to implement the production of generic medicines by the other companies.

Indian Patents Act 1970 govern the IPR regime related to the data exclusivity concerns.

WTO TRIPS framework addresses the issue globally creating a balance between the IP rights of the companies and sustainable welfare of the developing world.

Arguments in favour

- Pharma companies such as Nexavar, GlaxoSmithKline are trans-national organisations which spend huge amounts in R&D and trials of a new drug reaching 40-50% of their total budget.
- Clinical trials usually take a lot of dedicated efforts and years to produce desired results.
- ROC (return on the capital) invested is usually low and the huge Gigabytes of data generated can be monetised to base future research and profits.
- The business driven model where welfare and data sharing can hamper innovation.

Arguments against :

- Low cost generic medicines are produced which aim to welfare domestically as well as exports to LDCs
- Aids the provisioning under sec 3 evergreening of patents and the compulsory licensing (sec 84)
- Global burden of diseases disproportionately.
 - 38% population wasted, 27% global TB Burden, 23% global NCD Burden - Report by GIACI and WHO.
- The Socialistic welfare model of Indian state.
- Aiding the generic pharma research and development.

[5C] has given stringent directives in 2016 to implement the data exclusivity and better provisioning of the welfare measures and medicines.

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?

According to a recent report by PSC on IT, India is expected to reach teledensity of 22.43 Mn (78%) by 2035.

In this context, the roll out of 5G spectrum over the existing 4G technology is prominent.

5G	4G
a) <u>Definition</u> : Fifth generation wireless telecom connectivity which uses <u>RF</u> (radiofrequency) to emit signals over transmission (video, voice, data)	fourth generation connectivity which uses <u>RF</u> too with variants of <u>VoLTE</u> (voice over the light transmission emitting) technology

b) Bandwidth

Occupies up to
300GHz on the
radio spectrum.

Occupies lesser
around 30GHz
on the electromagnetic
radio spectrum

c) Latency

Less than 1ms
ultra fast data
processing.

Around 10ms
data transmission
lag.

d) Energy density

Greater frequency
and bandwidth
allows faster processing
of data & efficiency

Lesser bandwidth
and frequency
allows lesser
efficiency and
interference of signals

e) Network congestion

is too little, number
of the connected
devices are $> 1Mn$

Number of the
devices connected
lesser than the
5G around 10,000
in the hexagonal cell.

f) Optical fibre

and seamless
2 way transmission

f) fibre plus
telecom connection
both.

Challenges

- Lack of the Backhaul infrastructure (the connectivity on ground and supporting framework)
- Digital awareness (Despite the roll out NDLM, PMGDISHA the tele-density remains low (48%-rural areas) .
- Institutional framework - Lack of dedicated Cyber security policy .
- Personal data protection (B.S. Srikrishna Committee) recommendation.
- Corruption and allocation of the spectrum (2G scam case)
- US-International pressure to remove Huawei (China) from trials .

IOT, AI, 4th IR are next big thing in India's: Knowledge economy . China could be a role model for seamless implementation