



# VISION IAS

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## GENERAL STUDIES (TEST CODE : 1025)

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Medium Eng./Hindi	English	Registration Number	95371
Center	ORN	Date	13 Sep 2017

INDEX TABLE			INSTRUCTIONS
Q. No.	Maximum Marks	Marks Obtained	
1	12.5		<p>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)।</p> <p>2. There are TWENTY questions printed in ENGLISH &amp; HINDI इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं।</p> <p>3. All questions are compulsory. सभी प्रश्न अनिवार्य हैं।</p> <p>4. The number of marks carried by a question/part is indicated against it. प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।</p> <p>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।</p> <p>6. Word limit in questions, if specified, should be adhered to. प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।</p> <p>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।</p>
2	12.5		
3	12.5		
4	12.5		
5	12.5		
6	12.5		
7	12.5		
8	12.5		
9	12.5		
10	12.5		
11	12.5		
12	12.5		
13	12.5		
14	12.5		
15	12.5		
16	12.5		
17	12.5		
18	12.5		
19	12.5		
20	12.5		
Total Marks Obtained:			
Remarks:			

75, 3<sup>rd</sup> Floor, Old Rajinder Nagar Market, Near Axis Bank, New Delhi – 110060

103, 1<sup>st</sup> Floor, B/1-2, Ansal Building, Behind UCO Bank, Dr. Mukherjee Nagar, Delhi – 110009

## EVALUATION INDICATORS

1. Alignment Competence
2. Context Competence
3. Content Competence
4. Language Competence
5. Introduction Competence
6. Structure - Presentation Competence
7. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

All the Best

Answer all the questions in NOT MORE THAN 200 WORDS each. Content of the answers is more important than its length. All questions carry equal marks.

12.5X20=250

1. The dual use nature of space technology enables its utilisation for civilian as well as military purposes. In this context, examine the need for a Space Security Policy in India.

अंतरिक्ष प्रौद्योगिकी के दोहरे उपयोग की प्रकृति नागरिक एवं साथ ही सैन्य प्रयोजनों के लिए इसके उपयोग को सक्षम बनाती है। इस संदर्भ में, भारत में अंतरिक्ष सुरक्षा नीति की आवश्यकता का परीक्षण कीजिए।

The use of space as a medium to further human progress started with the launch of Russian satellite Sputnik at the height of cold war era. This led to various concerns:-

- Concerns over militarization of space
- Concerns over hosting weapons of mass destruction in space
- Colonization of space

Yet, space also enabled the development of technology.

↳ For this end, the Convention on Peaceful Use of Outer Space was signed along with the Moon Treaty. These allowed only the peaceful use of space.

Presently, the space offers multiple uses:-

1. Satellites, which significantly help our core infrastructure to function

2. Scientific experiments -

↳ Eg. the Micius satellite experiment with quantum cryptography

But, concerns abound that with increasing defence sophistication, the space may be used for setting military bases, or as a medium to launch wide range missiles. Eg: North Korea Threat

Further, private companies too have started their ventures into space.

Eg: Indus of India designing its moon mission

Elon Musk's plans to make the moon habitable -

In light of these technological advancements, it is imperative for India to have a Space Security Policy

1. Lack of any effective regulation can be catastrophic if space technology is used for evil ends

2. Presently, there is no responsibility on the space waste being generated

3. There is no specific liability in case a failed space mission causes loss to human life or property.

4. The coming era may require militarization of space, for which prior forethought is required.

A Space Security Policy, in line with international space law will boost our country's space ventures in the right direction.

2. What are the issues associated with coastal security in India? In this context, discuss whether a Central Marine Police Force can help in addressing these issues.

भारत में तटीय सुरक्षा से संबद्ध मुद्दे क्या हैं? इस संदर्भ में, चर्चा कीजिए कि क्या एक केंद्रीय समुद्री पुलिस बल (सेंट्रल मरीन पुलिस फोर्स) इन समस्याओं को हल करने में सहायता कर सकता है?

In India, coastal security is of three types:

1. Territorial waters (upto 12 nautical miles)  
↳ with State Coastal Police jurisdiction with State Police Stations
2. Exclusive Economic Zone (upto 200nm)  
↳ with Coast Guard.
3. High Seas  
↳ with Indian Navy

Often, the policing in territorial waters is not upto the mark, as seen by the 26/11 infiltration through the sea.

Issues:

1. lack of coordination
2. lack of effective equipment with

Coastal Police which is closest to water.

3. lack of effective & specific training
4. budgetary constraints leading to poor upgradation

5.

The coastal space is extremely vital for our country as:

1. vast reservoir of oil, gas & minerals needs to be safeguarded
2. threats of piracy
3. protection of our fishermen who may stray into international waters
4. disaster management & warnings can be averted better
5. curbing drugs smuggling & weapon infiltration
6. refugees coming in through the sea route

In light of this, the 13<sup>th</sup> Defence Security Plan recommended setting of a Coastal Marine Police Force.

- ↳ Such a centralised police force will be on the lines of BSF & NSG
- ↳ specific niche training & area of command
- ↳ improved budgetary allocations for better equipment
- ↳ Central authority will ensure better coordination between the coastal states as well as Indian navy.

Such a force will go a long way in helping India secure her coastal frontiers from all possible threats, and is a welcome proposal.

3. Cyber terrorism holds serious potential to paralyze economic and financial institutions in India. What are the issues and challenges w.r.t. India's cyber security? What initiatives has the Gol taken to address the same?

साइबर आतंकवाद भारत में आर्थिक एवं वित्तीय संस्थाओं को शक्तिहीन करने संबंधी गंभीर धमता रखता है। भारत की साइबर सुरक्षा से संबद्ध मुद्दे और चुनौतियाँ क्या हैं? इनका समाधान करने के लिए भारत सरकार ने कौन-सी पहलें की हैं?

With data being the new oil, warfare is no longer conventional. Cyber terrorism refers to the use of information technology to cause economic or political instability in a country.

1. With digital banking taking root in India, there is risk of user details being stolen.

2. Distributed Denial of Service (DDoS) attacks can paralyse stock markets and economy.

3. Threats like wannacry ransomware can exploit vulnerabilities to extort huge amounts of cash.

4. Aadhar data may be stolen for personification & forgery.

Yet, there are multiple challenges to securing cyber security in India:

1. lack of uniformity in devices & software makes it difficult to set common standards
2. Most of our country is flooded with cheap chinese imports, leading to China having access to our data & vulnerabilities
3. Private companies are not willing to spend on cyber security protection.
4. The importance given to cyber security largely depends on an organisation's work culture.

Realising the importance of cyber security, the government has taken the following steps :-

1. Identifying communications network as critical ~~core~~ information infrastructure under the IT Act, 2000.
2. Releasing the National Cyber Security Policy, 2013
3. Having local chip requirements under Telecom Policy, 2012.
4. Sectoral CERTs for quick response
5. Cyber Police Cells in states
6. Employing young professional ethical hackers to resolve any threats to the government

These steps, inter alia, are stepping stones towards achieving cyber security in India.

4. Critically examine the feasibility of fencing the Indo-Myanmar border as a strategy to contain insurgency given the existing Free Movement Regime (FMR) between the two countries.

उग्रवाद को नियंत्रित करने की रणनीति के रूप में भारत-म्यांमार सीमा पर बाड़ लगाने संबंधी व्यवहार्यता का, दोनों देशों के बीच मौजूदा मुक्त आवागमन व्यवस्था (Free Movement Regime) के परिप्रेक्ष्य में आलोचनात्मक परीक्षण कीजिए।

The Indo Myanmar border is home to close-knit tribal communities living on either side. Many Indian families have their lands in Myanmar and vice versa.

↳ To allow for movement, there exists a free movement regime between the two countries.

→ It allows free movement upto 16 kms on both sides of the border.

→ It boosts trade, people to people contact & supply of essential services.

However, the FMR became notorious as:-

1. Drug trafficking from Myanmar which lies on the goldentriangle edge.

2. Trafficking of women & children

3. Supply of money & arms to insurgents.

↳ Most north eastern states have active insurgency movements  
eg: NSCN in Nagaland; the movement in Assam.

→ There is nexus between the insurgents & money they obtain for drug trafficking.

→ With the FMR, they are easily able to acquire arms to strengthen their movement.

As a suggestion, fencing of the border was proposed:-

1. Having check points like in Bangladesh border
2. Floodlighting; Patrolling;  
Fencing
3. Movement only through dedicated

points-

The feasibility :

- Indo Myanmar border terrain is extremely porous due to rivers & hills  
↳ physically fencing may not be feasible.
- It will cut off communities from their ancestral lands
- It may intensify the insurgency due to anger against the move.

Any such step will have many ramifications. While desirable, locals must be involved in designating movement checkpoints to ensure their way of life is not affected much.

5. What do you understand by 'lone wolf attacks'? In the wake of increasing lone wolf attacks across the globe, assess India's vulnerability to such attacks. Also, suggest measures that can prevent such attacks.

'लोन वुल्फ हमलों' से आप क्या समझते हैं? विश्व भर में बढ़ते लोन वुल्फ हमलों को देखते हुए इस प्रकार के हमलों के प्रति भारत की सुभेद्यता का आकलन कीजिए। साथ ही, इस प्रकार के हमलों के रोकथाम हेतु उपाय सुझाइए।

Lone wolf attacks refer to terrorist acts in which the perpetrator is not trained personally. Instead, he or she is guided by a shared ideology which makes him attack without any funding on part of any organisation.

↳ As individual effort is required, it has the potential to happen very frequently w/o any planning by an organisation.

→ It is very difficult to prevent as the individual merges in with the crowd.

Eg: The Paris mowing down attack

→ Ideology cannot be prevented

from reaching the individual as the internet is too vast; and also due to freedom of speech.

India is quite vulnerable:

1. a vast population that can be indoctrinated easily.
2. already active Khalistan & ISIS movements can learn from such attacks and try the same
3. inadequate public safety infrastructure in the form of CCTVs, etc.
4. unemployed youth may carry out such attacks as they get direction by following ideology

Measures can be taken to prevent the attacks:—

1. Public awareness campaigns so that any hint of inclination to carry such an attack can be reported at the earliest.
2. Improving infrastructure. Filling up of police vacancies & manning all important checkpoints.
3. Stringent controls on arms licensing.
4. CCTV cameras at all junctions.
5. Better access of mental health facilities to successfully bring those who are indoctrinated back to their regular lives.

6. What are the factors that lead to generation of black money in India? Discuss the role played by India both domestically and internationally to neutralise the menace of money laundering and black money.

भारत में काले धन के मूजन की परिस्थितियों को उत्पन्न करने वाले कारक क्या हैं? घरेलू और अंतरराष्ट्रीय दोनों स्तरों पर मनी लॉन्ड्रिंग तथा काले धन के खतरे को निष्प्रभावी करने में भारत की भूमिका की चर्चा कीजिए।

Black money refers to any money that is not accounted for. Factors responsible :-

1. not wanting to pay taxes → tax evasion.
2. India's lenient tax treaties with tax havens like Cyprus, Mauritius, Cayman Islands
3. To use money for illegal means such as terrorism, insurgency
4. Presence of portfolio investors & using the route of participatory notes to avoid registration in India.

Being a developing country, India loses out on a lot of money which if taxed would have increased

our revenues. Role played by India in this field is immense :-

Internationally :-

- India is a member of the Financial Action Task Force, and the Enforcement Directorate regularly reports to the FATF.
- Signing a number of tax treaties to check tax evasion
- Introducing GAAR (General Anti Avoidance Rules) to curb tax avoidance as well.
- Full cooperation with authorities in the More recent Fonseca leaks case
- Pressurising Switzerland to release details of Indians holding money in its banks.

Nationally:

- SEBI has tightened norms for participatory notes.
- Enacting the Prevention of Money Laundering Act & making punishments stringent
- Use of big data by Income Tax officials to find tax evaders
- Pradhan Mantri Kaishik Kalyan Yojana & Income Disclosure Scheme
- Using social media to track discrepancies between income declared & lifestyle of the assessee

These steps have made India one of the leading voices against the menace of black money.

7. The national security of the country cannot be strengthened until we focus on intelligence sharing and ensure greater coordination among agencies. Elaborate. Also, highlight the steps being taken by the government to strengthen its intelligence network.

जब तक हम विभिन्न एजेंसियों के मध्य आसूचना साझाकरण (इंटेलिजेंस शेयरिंग) एवं बेहतर समन्वय पर ध्यान केंद्रित नहीं करेंगे, देश की राष्ट्रीय सुरक्षा को सुदृढ़ नहीं किया जा सकता। विस्तारपूर्वक बताइए। साथ ही, सरकार द्वारा अपने आसूचना नेटवर्क को मजबूत बनाने के लिए उठाए गए कदमों पर भी प्रकाश डालिए।

The national security of a country, vital for its survival, is handled by various agencies. Example, in India we have:

1. CBI
2. Serious Fraud Investigation Office for white collar crimes
3. Intelligence Bureau for internal intelligence
4. Research & Analysis Wing for external intelligence
5. National Security Guard for nuclear security.

In light of multiple agencies working on intelligence, it is of utmost importance that the

information collected by one agency is shared with the other.

↳ If not done, operating in silos can lead to major security lapses

• For coordination, it is necessary to strictly define the areas of operation of different agencies so that no overlap takes place.

• By having comprehensive inputs from different sources, a holistic picture can emerge.

Steps being taken by the government:

1. Proposal for a National Intelligence Grid (NATGRID)
2. Crime & Criminal Tracking Network
3. Stressing on inter-agency coordination

& reporting.

Way ahead:

- Similar to the proposal of Chief of Defence Staff, a high rank post can be created to act as a coordinator for all agencies.
- This coordinator can act as a single point of access for the Prime Minister or Home Minister.
- Having monthly meetings of all agencies to improve work culture.

8. In what ways is the approach of "Act East" Policy different from "Look East" Policy? Suggest certain priority areas on which India should focus upon to fulfill its ambitious geostrategic and economic goals in the region.

"लुक-ईस्ट" नीति की तुलना में "एक्ट ईस्ट" नीति का दृष्टिकोण किस प्रकार भिन्न है? इस क्षेत्र में अपने महत्वाकांक्षी भू-रणनीतिक और आर्थिक लक्ष्यों को पूरा करने के लिए कुछ ऐसे प्राथमिकता क्षेत्रों का सुझाव दीजिए जिन पर भारत को अपना ध्यान केन्द्रित करना चाहिए।

→ In the look East policy, the emphasis was on having international policy that gave importance to the region East of India by keeping it in mind while framing policies.

↳ It led to formation of BIMSTEC, cooperation with ASEAN.

→ In contrast, the Act East policy involves active commitment in terms of partnership & strengthening ties. As opposed to looking at the east, we are now acting hand in hand with the east.

↳ Eg: The clubbing of BIMSTEC summit with BRICS last year

• Moving towards RCEP with ASEAN nations.

Priority areas in the Act East Policy: -

1. Containing the rise of China
  - China is fast emerging as a superpower in not only the South China sea, but also till Europe with its ambitious one Belt one road project.
  - India by looking & acting east, seeks to neutralise the effect of China by partnering with ASEAN countries.
2. Important role of BIMSTEC & Myanmar
  - BIMSTEC is finally being given its due as it is an issue free relationship as opposed to SAARC
  - The strategic location of Myanmar & BIMSTEC in connecting South & South East Asia require importance

to be given here.

3. Oil & Gas exploration in Indian Ocean
4. Safeguarding its fishing waters
5. Partnership with Japan on defence, investment and other areas
6. Pushing forth on RCEP
7. Being an active participant in peaceful resolution of North Korea conflict.
8. Banking on its soft power to increase people to people ties.

9. In recent years there has been an increasing convergence between Russia and China on several global issues. What are its implications for India? What steps should be taken by India to protect its national interests?

हाल के वर्षों में रूस और चीन के बीच कई वैश्विक मुद्दों पर समाभिरूपता (कन्वर्जेंस) में निरंतर बढ़ोतरी देखी गयी है। भारत के लिए इसके क्या निहितार्थ हैं? भारत द्वारा अपने राष्ट्रीय हितों की रक्षा करने के लिए कौन-से कदम उठाए जाने चाहिए?

Historically, Russia & China were united with the shared communist ideology. Presently, they share the following interests:-

1. Fanning Pakistan to control Afghanistan.
2. Both ~~have~~ <sup>conduct</sup> military exercises ~~conducted~~ with Pakistan.
3. Russia's keen interest in One Belt One Road Project
4. BRICS convergence
5. Both seek to dismantle the superpower status of USA.

Russia's convergence with China is worrying for India as:-

1. Russia has traditionally supported India, and India's relationship with Pakistan is hostile.
  2. China's policy of encircling India will become dangerous if Russia too supports China in case of any future attack.
  3. Russia may prefer China over India in future defence partnerships.
  4. Both Russia & China have vast amounts of natural resources which are useful for India.
  5. Russia has a history of intervening  
↳ Eg: Afghanistan, Crimea  
and Russia's intervention in favour of China in case of a future ~~Russ~~ Doklam type conflict will not be good for the subcontinent.
- Therefore, to protect its interests,

India must take the following steps:

1. Continued dialogue with both Russia & China for good relations
2. Increasing its outreach in South East Asia & West Asia so as to have support in case of any conflict.
3. Not rely on anyone country as allegiances change quickly in a multipolar world.
4. Strengthen border defence & intelligence gathering facilities.

10. After remaining peripheral to India's foreign policy priorities, the Indian Ocean has received some attention in recent years. Nonetheless, given the significance it holds, involvement of actors with diverse interests and existing challenges, it is imperative that India redoubles its efforts in shaping the future of the region. Discuss.

दीर्घकाल तक भारत की विदेश नीति की प्राथमिकताओं में हाशिये पर रहने के उपरान्त, हिंद महासागर ने हाल के वर्षों में कुछ ध्यान आकर्षित किया है। इसके अंतर्निहित महत्व, विभिन्न हितों वाले देशों के शामिल होने और मौजूदा चुनौतियों को दृष्टिगत रखते हुए, यह आवश्यक है कि भारत इस क्षेत्र के भविष्य को आकार प्रदान करने में अपने प्रयासों को और अधिक बढ़ाए। चर्चा कीजिए।

India is soon realising the value of geostrategic Indian Ocean. It holds multiple significance:-

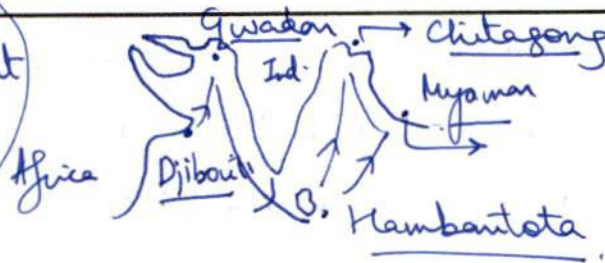
1. Economic

- Polymetallic nodules in the seabed
- Fishing waters
- Hydrocarbon exploration

2. Geostrategic

- With China's encirclement of India through its string of pearls, there are active concerns that India should focus on its maritime defence

Encirclement  
of  
India



- The island nations of Indian Ocean (Maldives, Mauritius, Madagascar) have historically relied on Indian help in fulfilling their ambitions & safeguarding territories. It is important for India to ensure its influence remains intact.
- Vast number of Indian diaspora in East Africa that need to be safeguarded.
- Threats of Chinese military bases around India; and troubling ties between Bangladesh's reliance of China.

In light of these challenges, it is imperative for India to double its efforts in the Indian Ocean region by

- Strengthening navy presence
- Increased coordination among Indian Ocean Arc IOR-ARC states
- Focussing on Asia Africa Development Corridor to ensure India remains in Africa's favour.

11. What are the objectives and key achievements of the United Nations Commission on International Trade Law (UNCITRAL)? Also, highlighting India's association with the Commission, identify its influence on various domestic legal regimes.

अंतरराष्ट्रीय व्यापार कानून पर संयुक्त राष्ट्र आयोग (यूनाइटेड नेशन कमीशन ऑन इंटरनेशनल ट्रेड लॉ: UNCITRAL) के उद्देश्य और प्रमुख उपलब्धियां क्या हैं? साथ ही, इस आयोग के साथ भारत की संबद्धता पर प्रकाश डालते हुए विभिन्न घरेलू विधिक व्यवस्थाओं पर इसके प्रभाव की पहचान कीजिए।

The UNCITRAL is a UN special body whose primary goal is to standardise & give model laws on the shape international trade law must take.

The most significant contribution of UNCITRAL has been in the field of arbitration. UNCITRAL's model law on arbitration was the framework behind our 1996 Arbitration Act.

UNCITRAL works with the WTO to offer the world some coherence in the field of international trade law.

India's association :

1. India has been regularly sending members to the commission
2. India acts as a voice for developing countries in the Commission and ensures the policies are not biased in favour of developed countries.
3. India's arbitration acts are based on UNCITRAL model laws.
4. India uses the dispute resolution mechanism provided by it to resolve its trade disputes with investors.
5. UNCITRAL acts as a pressure point to force countries to have its trade law in consonance with UNCITRAL standards.

UNCITRAL is assuming a more important role day by day as international trade grows. The recent model BIT of India which has earned the ire of countries is being discussed in UNCITRAL.

12. What are the issues and challenges faced by Indian migrants in the Gulf countries? Enumerate the steps taken by the Indian government to address these.

खाड़ी देशों में भारतीय प्रवासियों द्वारा सामना किए जाने वाले मुद्दे एवं चुनौतियाँ क्या हैं? इनसे निपटने के लिए भारत सरकार द्वारा उठाए गए कदमों को सूचीबद्ध कीजिए।

The Gulf Countries are home to

- Skilled Indian migrants working in high paying jobs

- Unskilled Indians working on construction sites.

Both provide major remittances to India. Therefore, it is vital that they remain safe.

Challenges faced :-

1. The Kafala System

- Unskilled workers have all their documents taken as security by their employer.

- Causes multiple hardships & makes them rights-less.

2. Volatile Political Environment

- The Syrian war, Qatar crisis

all lead to a state of instability making all workers vulnerable.

3. Stringent criminal law based on Sharia  
- ensures high punishments for even small crimes

4. Poor wages, working conditions

5. Racial attacks and lesser freedoms

Steps taken by the Government:

1. Urging Forging strong ties with the Gulf to ensure stability in relationship.

2. Requesting the governments to follow Qatar's line & abolish the kafala system.

3. Twiplomacy → To effectively &

quickly resolve complaints of trapped Indians

4. Having proactive embassy & consulate officials.

5. Organising rescue missions for trapped Indians.

In addition, private <sup>Indian</sup> individuals too are chipping in by

↳ Arranging heavy bails for those accused of petty crimes

→ Providing decent food & lodging

→ Moral support & community presence

13. The recent breakthrough in the Civil Nuclear field is a sign of India-Japan relations moving beyond the calculations of complementarities and cooperation. Analyse in view of the multiple factors shaping India-Japan relations.

नागरिक परमाणु क्षेत्र में हाल ही में प्राप्त सफलता भारत-जापान संबंधों का अन्योन्याश्रितताओं (अनुपूरक) और सहयोग से परे जाने का चिह्न है। भारत-जापान संबंधों को आकार प्रदान करने वाले विविध कारकों का विश्लेषण कीजिए।

India and Japan share historical relations. Buddhism spread to Japan from India. Yet, in concrete terms the relations never took off as comprehensively. Trade remained a major component:-

1. Maruti - Suzuki partnership
2. India as a market for Japanese goods in field of technology

In this light, the India-Japan Nuclear Deal is a major breakthrough -

1. India's waiver granted by NSG coupled with India's record in this field made Japan ready to enter into the deal.
2. India relied on Japan due to its trustworthiness.

3. Any concerns of Japan transferring technology that failed in the Fukushima disaster no longer remain after Fukushima started functioning again.

This deal will boost India's goal of clean energy; and its reputation of being a responsible player in this field.

Other factors in India - Japan relations :-

1. High Speed Rail from Mumbai to Ahmedabad being supplied by Japan with a soft loan.
2. Japanese investments in Indian industry.
3. Cooperation between ISRO & JAXA; the space organisations of the two countries.

4. Ocean studies collaboration between Ministry of Earth Sciences & Japanese ministry.
5. Tsunami & Earthquake proof technology cooperation
6. People to people cooperation, with many Indians studying or working in Japan.
7. India - Japan partnership in Asia - Africa region ~~part~~ growth corridor to counter rising influence of China.

Therefore, India - Japan relationship ~~has a long way to go~~ <sup>can go a long way</sup> in providing a stable relationship between the two countries.

14. The Commonwealth grouping has been accused of talking about ideals that it does not uphold and wasting the resources of governments. Critically analyse the statement and comment on the relevance of the Commonwealth grouping in present times.

राष्ट्रमंडल समूह पर उन आदर्शों के संबंध में चर्चा करने जिनका स्वयं इसके द्वारा अनुसमर्थन नहीं किया जाता एवं सरकारों के संसाधनों का अपव्यय करने के आरोप लगते रहे हैं। इस कथन का आलोचनात्मक विश्लेषण कीजिए एवं वर्तमान समय में राष्ट्रमंडल समूह की प्रासंगिकता पर टिप्पणी कीजिए।

The genesis of the commonwealth grouping lies in the independence of former British colonies. The features of this organisation are:-

1. no political commitments towards each other
2. membership based on shared history & culture
3. Queen Elizabeth is the formal head.

Of late, the commonwealth is being criticised for having no effective purpose →

- members meet & it wastes resources without any effect

in economic & political conditions of its members.

- no role in sanctioning / protesting against the human rights violations by its members.

- no significance as most nations are unable to identify with each other now.

Yet, the Commonwealth cannot be dismissed :-

1. any strain on economic resources is minimal as membership does not require any fee to be paid
2. a voice to act against colonization.
3. Big members like India, Canada, Australia can provide direction

4. People to people cooperation  
as many members of different  
nations went to other colonies  
as indentured labourers.

Therefore, attempts must be made  
to revive & reform the commonwealth  
instead of doing away with it.

↳ The overbearing British presence  
can be mutually toned down

→ Instead of the past, concrete  
action in the present and a vision  
for the future is needed.

15. ISRO has successfully flight tested the Reusable Launch Vehicle-Technology Demonstrator (RLV-TD). Discuss the significance of RLV and bring out the differences between RLVs and conventional Launch Vehicles (LVs). What are the challenges in successful execution of RLVs?

इसरो (ISRO) ने पुनः प्रयोज्य प्रक्षेपण वाहन-तकनीक प्रदर्शक (रियूजेबल लॉन्च व्हीकल-टेक्नोलॉजी डेमोस्ट्रेटर: RLV-TD) की उड़ान का सफलतापूर्वक परीक्षण किया। RLV के महत्व पर चर्चा कीजिए तथा RLVs एवं पारंपरिक प्रक्षेपण वाहनों (लॉन्च व्हीकल: LVs) के बीच अंतर स्पष्ट कीजिए। RLVs के सफल कार्य-निष्पादन में क्या चुनौतियां हैं?

The RLV-TD is a significant step taken by ISRO to bring its capabilities at par with other nations.

A conventional LV launches a satellite, but is not recovered post flight. It gets oxidised in the process & cannot be recovered again. This leads to excess costs every time.

A RLV, on the other hand, can be reused again for multiple launches. By using RLV, ISRO will save many costs & time on its part. It will also give an

edge over other countries in terms of launch capability.

Challenges in successful execution of RLV:-

1. Cost benefits remain to be seen

→ The cost of development is more than a regular launch vehicle

→ The cost of maintaining the launch vehicle will add on to the expenses

2. Old technology

→ The RLV technology is decades old, but only NASA has used it in the past

→ Challenge is to make the recovery of the vehicle easier

by improving existing technology.

### 3. Fear of failure / glitch

→ If the RLV fails / bursts,  
it will lead to huge losses.

→ Yet, the benefits in terms of  
increased frequency of flights  
surely outweighs the costs if  
research is done properly to create  
a lasting technology.

16. Women constitute just 14% of science researchers in India, though they are no longer a minority within higher education when it comes to STEM. Analyse the reasons for this state of affairs and discuss how it can be addressed.

यद्यपि भारत में विज्ञान शोधकर्ताओं की कुल संख्या में महिलाएं केवल 14% ही हैं, किन्तु STEM के संदर्भ में उच्च शिक्षा के अंतर्गत वे अब अल्पसंख्यक नहीं हैं। इस स्थिति के कारणों का विश्लेषण कीजिए और चर्चा कीजिए कि इसका समाधान किस प्रकार किया जा सकता है?

Women are increasingly choosing STEM (science, technology, engineering & mathematics) streams in graduation

→ Earlier, mostly males studied this subject

→ Women like Shakuntala Devi have broken all stereotypes associated with women being incapable of STEM.

However, the education in STEM is not translating into employment in STEM. That is, many women with a degree in science are not actually employed in the field of research.

The reasons could be :-

1. Poor focus on research as it is not highly remunerative.
2. Preferring higher paying jobs that do not significantly involve research.
3. Societal pressure to get married upon completion of education as STEM subjects take have a long curriculum duration.
4. Presence of discrimination in hiring women & presence of glass ceiling.
5. Employers not ready to undertake responsibility of paid maternal leave under the recent Amendment Act.

Steps that can be taken to address:-

1. Encouraging models of work & research from home  
↳ Improving internet access

→ creating an library of titles in books, journals for easy access

2. Incentivising parents & girls themselves to pursue a career in research by quoting the example of ISRO's women scientists

3. Providing women reasonable accommodation within research campuses to help them manage family life as well.

4. Employers to take more women  
These steps may help change the state of affairs & convert the educated women into a skilled workforce.

17. What do you understand by Internet Governance? Has the recent development of ICANN becoming free from the US government solved the issues of Internet Governance? What should be the way forward?

इंटरनेट गवर्नेंस से आप क्या समझते हैं? क्या संयुक्त राज्य अमेरिका की सरकार से ICANN के मुक्त होने की हाल ही की घटना ने इंटरनेट गवर्नेंस के मुद्दों का समाधान किया है। आगे की राह क्या होनी चाहिए?

Internet Governance refers to principles that determine how the internet should be governed.

- The internet is recognised as a critical informational infrastructure.

- The well-being of the internet is extremely vital for our water supply, gas supply, air travel, trading & many other critical activities.

- Questions that internet governance seeks to answer:-

1. Who owns the internet
2. Who has the responsibility for controlling the internet
3. How should the internet be protected.

ICANN emerged as the global center for internet governance.

↳ Many attacked it as it was controlled heavily by US government

→ Was argued that internet governance with ICANN is not truly free.

The recent protests lead to US government withdrawing itself from ICANN. This has renewed efforts in the field of internet governance

Way forward:-

1. The internet is global commons (res communis). Any decision on internet governance must be taken by all stakeholders on the principle of consensus.

2. The north-south divide in proliferation of internet cannot be overlooked. Some leeway must be given to developing countries.
3. The internet must remain
- open
  - free
  - fair.
- Principles of net neutrality must be adhered to.
4. Data protection & privacy must be given due weightage.
5. A potent cyber security infrastructure must be in place.

18. Increase in the cases of nosocomial infections has emerged as a major concern in India. What are nosocomial infections? What are its causes and why is it a major concern in India? Identify the measures required to combat these infections.

भरत में नोसोकुमियल संक्रमण (nosocomial infections) के मामलों में बढुुतरी एक प्रमुख चिन्ता के विषय के रूप में उभरी है। नोसोकुमियल संक्रमण क्या हैं? इसके कारण क्या हैं और यह भरत में एक प्रमुख चिन्ता का विषय क्यों है? इन संक्रमणों की रोकथाम करने हेतु उपायों की पहचान कीजिए।

Nosocomial infection refers to an infection that is acquired from a medical establishment viz hospitals & clinics.

Causes :-

1. Low immunity ; high potency
  - The patients visiting hospitals have low immunity while the strain of virus is highly potent due to increased resistance. This makes them deadly.
2. Poor hygiene in hospitals
3. Not separating contaminated tools

4. Reusing equipment without sterilising it.

5. Lack of awareness on such infections

### Concerns:

1. A major concern is that these infections are highly resistant as they breed in a comparatively sterile environment and yet are able to become highly resistant.
2. While doctors usually acquire immunity to such infections in their environment, they are so potent that even doctors are threatened.
3. Increased burden on healthcare
4. Quick mutations in the virus making it even harder to suppress.

### Measures to combat infections:

- Enforce strict hygiene norms
- Segregate all contaminated waste & equipment
- Reduce contact between infected patients and visitors
- Wearing N95 masks in hospitals to stop respiratory route transmission
- Spread adequate awareness
- Research in this field and finding novel ways to curb the impact.

19. There is a growing concern that robots, automation and AI will transform the labour markets and lead to massive job loss across the world. Comment. Also mention the steps that can be taken to mitigate the impact of increased automation and AI.

इस विषय में चिंता बढ़ती जा रही है कि रोबोट, ऑटोमेशन (स्वचालन) एवं AI, श्रम बाजार को रूपांतरित कर देंगे और परिणामस्वरूप विश्व भर में बड़े पैमाने पर रोजगारों की हानि होगी। टिप्पणी कीजिए। बढ़ते ऑटोमेशन (स्वचालन) एवं AI के प्रभाव को कम करने हेतु उठाए जा सकने वाले कदमों का भी उल्लेख कीजिए।

When the Industrial Revolution occurred in the 18<sup>th</sup> century, there were similar concerns that traditional workers will go out of work. Instead,

- no. of jobs increased
- the skill set required of a worker changed.

Similarly, the coming in of the 4<sup>th</sup> industrial revolutions with robots & AI has led to similar concerns.

- AI has enabled robots to not only think like humans (machine learning) but also make decisions (deep learning)

- The boundaries between human

and artificial are getting blurred.

• There is a significant fear of most manual as well as skilled jobs being done by robots.

Eg: robots are already in use in major banking firms.

Yet, the fears may be misplaced

1. The rising automation will lead to skilled jobs.

2. Boost to the care economy  
- More effort on human care & pursuit as machines will be doing the other work for us.

3. Focus on other pursuits rather than money.

To counter the disruptive effects of AI, the following steps can be taken:-

1. Providing for a Universal Basic Income.  
↳ It can be funded from the money saved by employing AI.
2. Skilling workers in tasks such as counselling, old age care of a growing old population, medicine, judiciary, bureaucracy, fine arts.  
↳ Such sectors will not be fully automated in the near future.  
↳ Shifting education to cater to these sectors will be a good step.
3. Enhancing cyber security architecture and protecting privacy.

20. The importance of IPRs as a marketable financial asset and economic tool needs to be recognised. Elaborate. In this context, analyse how the National Intellectual Property Rights (IPR) Policy intends to lay the future roadmap for intellectual property in India.

विक्री-योग्य (विपणनयोग्य) वित्तीय परिसंपत्ति एवं आर्थिक उपकरण के तौर पर IPRs के महत्व को मान्यता प्रदान किए जाने की आवश्यकता है। विस्तारपूर्वक बताईए। इस संदर्भ में, विश्लेषण कीजिए कि राष्ट्रीय बौद्धिक सम्पदा अधिकार (IPR) नीति भारत में बौद्धिक सम्पदा का भावी रोडमैप किस प्रकार निर्धारित करना चाहती है?

IPR, or intellectual property rights are rights over ownership of  
→ Copyright / Trademark / Patent / Plant Variety.

→ IPRs are of immense financial value. They help a company distinguish itself from its competitors; and allows it to exclude competitors.

Eg: 1. Patanjali Ltd. cannot use the trademark of Debur

2. Patented drugs can <sup>usually</sup> only be manufactured by the patent holder.

→ IPRs are seen as a reward for contributing in innovation. By providing

property rights, the owner of IPR is allowed to bank upon the intellectual property thus created. It ensures competitors do not piggy-back upon the success of an established player.

Yet, in light of social welfare, IPRs have exceptions.

1. Fair use of copyright & trademark. Eg: for education
2. Compulsory licensing of patents

India's National IPR Policy 2016 seeks to balance the property rights with the exceptions.

1. Boost on innovation.
2. Ease of IPR filing
3. Designating CIPAM under Ministry of Commerce as nodal authority
4. online processes.

5. Cutting down inspection period to have quicker IPR grants
6. Boosting start ups
7. Building an IPR inventory that will tell if an IPR is already registered.
8. Respecting & recognising global IPRs.
9. Allowing fair use & compulsory licensing.

The new IPR policy is in line with the goal of Make in India & Ease of Doing Business.