



# VISION IAS

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## GENERAL STUDIES (TEST CODE : 1150)

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Medium Eng./Hindi	English	Registration Number	58233
Center	N/A	Date	20-Aug-2018

INDEX TABLE			INSTRUCTIONS
Q. No.	Maximum Marks	Marks Obtained	
1	10		<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 <b>TWENTY</b> questions printed in <b>ENGLISH &amp; HINDI</b> इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं।</p> <p>3. <b>All questions are compulsory.</b> 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 मुख 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>
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Total Marks Obtained:			
Remarks:			

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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. Technical solutions are necessary to augment the traditional methods of guarding the border. In this context, while mentioning the different components of Comprehensive Integrated Border Management System (CIBMS), discuss how it can help to address the gaps in the present system of border security. (150 words) 10

सीमा चौकसी की पारंपरिक विधियों का संवर्द्धन करने हेतु तकनीकी समाधान आवश्यक है। इस संदर्भ में, व्यापक एकीकृत सीमा प्रबंधन प्रणाली (कंप्रिहेन्सिव इंटीग्रेटेड बॉर्डर मैनेजमेंट सिस्टम: CIBMS) के विभिन्न घटकों का उल्लेख करते हुए, चर्चा कीजिए कि सीमा सुरक्षा की वर्तमान व्यवस्था में विद्यमान कमियों को दूर करने में यह कैसे सहायता कर सकता है।

India has long and porous borders which need comprehensive guarding because of various issues like terrorism, illegal migrants, cross border crime, smuggling etc. While the traditional methods of patrolling and fencing by border security forces exist the government is also taking use of technological aids to augment their efforts.

The Comprehensive Integrated Border Management System (CIBMS) is a technological solution that the govt. has adopted. It has 3 major components:

- High Tech Surveillance Systems like Radar, Lasers, Sensors, Cameras etc. for unceasing and comprehensive 24/7 surveillance along the borders.
  - Communication Systems like Radio, Walkie Talkies, Intranet, Satellite Communication and Fibre Optic Cables to seamlessly transmit the information gathered by the surveillance systems to the security personnel.
  - Command Centre manned around the clock to act on any incursions. This would address lacunae such as Adverse Climatic Conditions; Personnel Shortage; Bribing<sup>at</sup> the checkpoints; Night Vision; Inability to patrol inaccessible locations etc.
- So the CIBMS system if properly installed and used will prove to be a game changer in the unceasing struggle to safeguard our borders.

2. In comparison to conventional warfare, the possibility of successful deterrence against cyber warfare is both limited and complicated. Discuss. Also, elaborate upon India's preparedness in this regard. (150 words) 10

पारंपरिक युद्ध की तुलना में, साइबर युद्ध के विरुद्ध सफल भयादोहन (निवारण) की संभावना सीमित और जटिल दोनों हैं। चर्चा कीजिए। साथ ही, इस संबंध में भारत की तैयारियों का संक्षिप्त वर्णन कीजिए।

After land, Air and Water ; Cyber and Space are the next frontiers in modern warfare. However cyber warfare is unique in its challenges, the open nature of the Internet and the truly global functioning of its institutions means that traditional <sup>defence</sup> ~~deterrence~~ methods will not work in cyber warfare -

Here the adversary can be either state actors or non state actors and the goals could be terrorism, warfare, cyber crime or cyber fraud.

A devastating attack could be launched from anywhere and could target vital defence institutions for eg St

Stuxnet virus launched against Iran's Nuclear Reactors which ~~was destroyed~~ destroyed a fan in the reactor.

The Challenges faced are +

- India's cyber databases and servers could be located outside its territorial jurisdiction
- Lack of Coordination between Govt. Institutions dealing variously with fraud, cyber terrorism, safeguarding the internet and the army.
- Lack of Awareness of this and phenomena and consequently not taking common precaution like strong passwords on sensitive data.
- The Lack of Public Private Collaboration.
- Reliance on hardware imported from countries like China or Software from USA.

However some measures taken by the Govt. :-

- Setting up of Cert - In as nodal agency on cyber crimes.
- Mandatory disclosing of cyber attacks by private companies.
- Make in India being extended to hardware
- Cyber Swachhta Kendra ; Botnet Clearing and Malware Wiping Centre for analysis of these.
- Army, Airforce and Navy coming up with operational papers on how to protect their critical data and institutions in the event of attacks on their IT infrastructure.

In addition to defence, India needs to invest and research Cyber-Offence as well to truly protect its national

3. Analyse the impact that the instability in the wider South Asian region has on India's internal security. What steps can be taken to minimise such impact? (150 words) 10

किम्बत दक्षिण एशियाई क्षेत्र में अस्थिरता का भारत की आंतरिक सुरक्षा पर पड़ने वाले प्रभावों का विवेचन कीजिए। ऐसे प्रभावों के अल्पीकरण हेतु क्या कदम उठाए जा सकते हैं?

"We Can Choose Our Friends, but not our Neighbours" - Mr. AB Vajpayee.

Much of India's security concerns are related to its immediate neighbourhood, Pakistan, Nepal, Afghanistan, Maldives, Sri Lanka, ~~the~~ Bangladesh and Myanmar.

However, the ~~instability~~ ~~has been~~ region has been unstable :-

- Pakistan based and sponsored Islamic Terrorist Groups and State Sponsored unrest in J&K.
- Sri Lanka has defeated LTTE but there exist ex-LTTE members and sympathisers there and in Tamil Nadu. More worryingly Sri Lanka's debt troubles have meant that China has (on lease) taken over Hambantota Port (String of Pearls).
- Afghanistan is still unstable and Taliban has been resurgent in the rural areas.
- Nepal has had a rise in anti India sentiment and is making overtures to China.

- Peace Borders of Bangladesh and Myanmar have meant that whenever there is instability there refugees can come to India.
- India is at the middle of the 2 hotspots of global drug ~~regions~~ <sup>producing</sup> regions; the Golden Crescent; Myanmar and Afghanistan.
- Bhutan was party to the Doklam Affair.
- Possible Steps :-
- SAARC should be revived, it can act as a dialogue forum; confidence and trust building measures can be taken; economic interdependence increased, joint anti terrorism operations; development through trade etc.
- India should address religious fundamentalism within its borders to prevent terrorism, secessionism and radicalisation.
- Bilateral talks with all its neighbours to prevent their Chinese Influence from growing.
- Promoting Cultural and People to People Contacts

Ultimately, India's desires to be a global power and can only come true when its a regional power and lives in a safe and secure neighbourhood.

4. Highlighting its mandate, discuss the significance of International Solar Alliance in positioning India to a key global leadership role. (150 words) 10

अंतर्राष्ट्रीय गौर गठबंधन के अधिदेश पर प्रकाश डालने हुए, भारत को एक प्रमुख वैश्विक नेतृत्वकर्ता की भूमिका में स्थान दिलाने में इसके महत्व पर चर्चा कीजिए।

The International Solar Alliance is an alliance of countries living lying btw Tropic of Cancer and Capricorn to harness their Solar Power Potential jointly launched by the PM of India and President of France at the sideline of the COP 21 UN Climate Change Conference.

Its major target is to promote the use of Solar energy and it proposed that to achieve the aim of 1000 TWh of Solar Energy by 2030 the ISA will ÷

- Mobilise 1000 US dollars <sup>for funding</sup> ~~for research~~
- It will promote research in more efficient photovoltaic cells and more efficient batteries.
- Fund under developed countries in installing Solar Power ~~to~~ facilities.
- Develop innovative solutions to bring down capital cost.

The ISA is a highly relevant institution at a time when the Global Community is dealing with Anthropogenic Climate Change and after USA leaving the Paris Climate Agreement India can position itself as a leader in the international effort to combat climate change. With India promising funding and personnel support; also the Permanent Secretariat of this institution is to be at Gurugram; and its rich potential in developing and using Solar Energy India should be the world leader in this domain.

If the ISA can fulfill its mandate, ~~and~~ get most of the ~~121~~ eligible countries on board (currently around 60 have joined) then India can <sup>rightfully</sup> take a key global leadership role.

5. Despite a strong case for a Broad based Trade and Investment Agreement (BTIA) between India and the European Union (EU), negotiations have been stuck for long owing to multiple factors. Analyse. (150 words) 10

भारत और यूरोपीय संघ (EU) के बीच व्यापक आधार वाले व्यापार और निवेश समझौते (ब्रॉडबेस्ड ट्रेड एंड इन्वेस्टमेंट अग्रीमेंट: BTIA) हेतु गूढ़ परिस्थितियां होने के बावजूद कई कारकों के चलते वार्ता लम्बे समय में अटकती हुयी है। (विश्लेषण कीजिए।)

India and EU have been Strategic Partners since 2004 and it is India's single largest trading partner as well as largest source of FDI. Thus,

calls for a BTIA b/w India and the EU have been emerging from a long time.

However negotiations which began in 2007, have been on hold since 2013 because :-

- India's protectionist stance on automobiles.
- EU's concerns over tariff rates on dairy products, wines and spirits.
- India's insistence on diluted rights of Investors whereas EU insists on a robust Investor State Dispute Settlement Mechanism. EU is opposed to the model Bilateral Investment Treaty ~~model~~ prepared by India.

- India wants to protect its farmers from the highly subsidised agricultural sector of EU.
- India wants to free movement of skilled workers and relaxed visa regimes.
- EU's strict data protection laws don't accept India as a data secure nation which affects the IT Service Industry.

Though the EU-India BTIA would have great economic benefits to certain sectors of the economy like Pharmaceutical, FDI, Textile and Leather etc negotiations have been seemingly stuck. However in the changing global climate with USA's insistence on bilateral trade deals, Brexit, undermining of the WTO both etc. India and the EU would be well served if they can come to an agreement which can still provide a fillip to the idea of free, fair and mutually beneficial trade.

6. Accession to the Ashgabat agreement is valuable for connecting India to its extended neighbourhood. What is the Ashgabat Agreement? Assess its significance for India. (150 words) 10

अश्गाबात समझौते में शामिल होना बन्तुतः भारत के लिए अपने विस्तारित पड़ोस में जुड़ने की दृष्टि से मूल्यवान है। अश्गाबात समझौता क्या है? भारत के लिए इसके महत्व का मूल्यांकन कीजिए।

The Ashgabat Agreement is an agreement for establishing facilitation of transit and transportation between the regions of Central Asia and the Middle East

in 2011. However, recently India too has joined it in 2018 causing the no. of countries as members to extend to 6, India, Oman, Iran, Kazakhstan, Turkmenistan and Uzbekistan

Its benefits to India are manifold :-

- Connectivity and Trade - India has been desirous of extending its trade with and through the Central Asian region. This will supplement its <sup>other</sup> efforts such as Gwadar Port in Iran or the International North South Corridor
- Export Market for Indian goods in the Central Asian Republics

- Import of minerals and other such goods from Europe, Russia, and Persian Gulf countries will be enhanced.
- Strategic benefit as India will gain access to ~~the~~ imp. area like Strait of Hormuz.
- Increase India's Ease of Doing Business.
- Energy Security from access to Persian Gulf.
- Counter China's OBOR initiative.
- Synergy with existing projects like Gomadar Port, Project Mausam, FNSTC etc.

However, the project still has concerns regarding the unstable governments in the region; credit requirements; USA-Iran conflicts; Security Challenges due to terrorism et al. ~~Thus~~  
If India can augment its potential then this agreement can be the spring board for further growth.

7. The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) is a natural choice for India to fulfill key foreign policy priorities. In this context, discuss the issues behind hitherto slow progress and the reasons for reinvigorated optimism regarding BIMSTEC.

(150 words) 10

बहु-क्षेत्रीय तकनीकी एवं आर्थिक सहयोग के लिए बंगाल की खाड़ी प्रकल्प (BIMSTEC), भारत के लिए अपनी विदेश नीति संबंधी प्रमुख प्राथमिकताओं की पूर्ति हेतु एक स्वाभाविक चयन है। इस संदर्भ में, अब तक हुए धीमी प्रगति के पीछे निहित मुद्दों और BIMSTEC के संबंध में पुनर्जीवन होने आशावाद की वजहों की जाँचिए।

2017 marked the 20<sup>th</sup> anniversary of ~~the~~ BIMSTEC however its performance in these years has been disappointing. Bringing together the 7 littoral states of the Bay of Bengal India, Bangladesh, Thailand, Nepal, Bhutan, Myanmar and Sri Lanka

this project provided for opportunities for mutual benefit and cooperation among these nations.

It could act as a bridge between South Asian and ~~SARF~~ <sup>ASEAN</sup> countries with Myanmar as the ~~door~~ frontier.

However annual summits have taken place only thrice. The causes for this are:-

- Lack of Leadership. Thailand, Myanmar

are more engaged with ~~SARAC~~ ASEAN's more integrated model while the South Asian countries have wasted effort in trying to make SARAC as a success.

- No FTA within members has hindered economic openness.
- Poor Connectivity b/w member countries
- Lack of funding and manpower.

However with growing protectionism in global trade, regional groupings have become extremely important.

So considering the logjam at SARAC and the vast potential of an India this grouping for the members and potentially with ASEAN there has been a growing interest <sub>visible</sub> in this grouping.

The establishment of a Secretariat at Dhaka; India's Look and Act East Policy; Transport agreements like Kaladan Multimodal Project; Mekong Ganga Cooperation; India hosting BRICS-BIMSTEC joint summit are some of the reasons for renewed hope.

8. What do you understand by Free Space Optical Communication (FSOC) Technology? Critically explain its potential in connecting rural and remote areas in India. (150 words) 10

फ्री स्पेस ऑप्टिकल कम्युनिकेशन (FSOC) प्रौद्योगिकी में आप क्या समझते हैं? भारत में ग्रामीण और दूरस्थ क्षेत्रों को जोड़ने में इसकी क्षमताओं की आलोचनात्मक व्याख्या कीजिए।

Free Space Optical Communication technology is a tech where information is transmitted through the <sup>free</sup> movement of light particles in space. It is a line of sight technology. It has an advantage over existing technology like Optical Fiber cables of being wireless and thus can be used where connections are not practical.

This technology can be of great benefit for connecting rural and remote areas of India as :-

- These are at present either unserved or served through high latency and low bandwidth mediums.
- This has the high bandwidth of Optical technology and the speed (latency) too.

- It requires low investment cost.
- It is a secure system because of the LOS requirement.

However it cannot yet be freely used :-

- It is affected by climatic and weather conditions like rain, haze, fog etc.
- Physical obstructions can block the LOS.
- It requires high power consumption.
- Other light sources or misalignment errors affect it.

The benefits of it merit a focused, detailed and fool proof plan for installing and operating it in rural areas.

9. What are Orphan Drugs? Examine the significance of putting in place a policy framework for such drugs in a developing country such as India.

445

(150 words) 10

ऑर्फन ड्रग्स क्या है? भारत जैसे एक विकसित देश में ऐसी दवाओं हेतु एक नीतिगत ढांचा स्थापित करने के महत्व का परीक्षण कीजिए।

In general in the Pharmaceutical Industry the giant corporations ~~to~~ develop new drugs and recoup the costs of R & D through profits made on selling these then patented drugs.

However for rare diseases like hemophilia, the companies can't recoup the costs of ~~the~~ research and development hence these drugs are called Orphan Drugs.

In countries like USA, UK the govt. has policies to stimulate research in these ignored diseases, incentives such as shorter trials; tax breaks etc. to make it commercially viable for the companies to invest in them.

In India, the insurance companies often treat these diseases as ~~rare~~ pre-existing conditions hence there is a critical need for the govt. to promote development of treatment for these disease. India's investment in R&D in the private sector is poor compared to developed countries however, orphan drugs can provide a unique opportunity. As the R&D scene is in general very competitive and given the headstart the foreign companies have local companies prefer to make generics. However govt. policies promote R&D, patents, business-friendly regulators etc. can cause a push to Indian companies to take a lead in developing cures. So Indian companies can ~~adopt~~ 'adopt' these orphan drugs

10. Discuss the obstacles in women's access to science education in India and also suggest remedial measures to overcome these obstacles.

(150 words) 10

भारत में विज्ञान की शिक्षा तक महिलाओं की पहुँच के मार्ग में अनेक बानी बाधाओं पर चर्चा कीजिए और इन बाधाओं को दूर करने के लिए उपचारगमक उपाय भी सुझाइए।

Though Indians often tend to hail scientific education, yet it's observed that it, traditionally male bastion,  
↓  
remains a <sup>ratio</sup>

With enrolment in premier institutions like IIT's often as bad as 1:15 the govt. has taken steps like scholarships, awareness campaigns, fee waivers, application fee waivers etc. to remedy this. Yet the problems persist because :-

- Parental and Societal issues. With certain streams like Mechanical considered unbecoming to girls or societal expectations of girls to take arts and boys to take science.
- Financial issues. Parents tend to prioritise the education of sons over daughters.

- If science colleges are coeducational then parents might not prefer to send daughters there.
- Lack of role models in STEM fields.

However the govt. can take remedial measures like -

- Safety and Security concerns should be addressed.
- Fee concessions or reservation for girl candidates. Like in IIT's the no. of seats ~~have been increased~~ for girls.
- Primary education at rural areas to be improved and made more accessible.
- Showcase female role models in STEM
- Promote jobs for women in science fields to make it a viable and attractive career

Thus, these <sup>policy changes</sup> schemes can make India's scientific revolution a gender equal one.

11. Giving examples, elaborate how India's approach to becoming a net security provider in the Indian Ocean Region is taking shape. What are the challenges and opportunities associated with this approach?

(250 words) 15

उदाहरण देने हुए, मविम्नार वर्णन कीजिए कि किस प्रकार हिंद महासागर क्षेत्र में सामरिक सुरक्षा प्रदाता (नेट मिक्स्युरिटी प्रोवाइडर) बनने का भारत का दृष्टिकोण आकार ले रहा है। इस दृष्टिकोण में संबद्ध चुनौतियां एवं अवसर क्या हैं?

The Indian Ocean Region is of critical importance to India's Security National Interest. With 95% of India's trade passing through this region, ensuring its security, ~~and~~ freedom of navigation and open Sea Lines of Communication (SLOC) are primary concerns for India.

Furthermore around 80% of global trade flows through this area hence the whole world has a vested interest in the freedom of trade in this region. So if India doesn't ensure freedom of trade it creates a vacuum for other countries like China <sup>or</sup> USA to step in and potentially threaten Indian Concerns.

Steps taken by India are -

- India has bilateral agreements with various countries to patrol to sea.
- Multilateral agreements like Quad agreement to commit to free trade.
- India with its position jutting into the ocean and strategic bases at Andaman & Nicobar & Lakshadweep can use these strategic checkhold when needed.
- Strengthening the Navy with investment in Subs and Ships (like Aircraft Carriers from Russia) to transform it into a blue water navy.
- Ensuring India's border security with advanced drones, strengthening the Coast Guard & intelligence gathering.
- Naval exercises like Malabar exercise or Project Milan.
- India has committed resources to fighting piracy at Somalia.
- Agreements for ensuring security with countries like Oman and setting

up docking arrangements in Malaysia for Navy

- Indian Ocean Rim Association
- Indian <sup>ocean</sup> Naval Symposium with navies of Indian ocean littoral nations.

Though India faces Challenges like an increasingly assertive China establishing bases as part of maritime CPT BRQ (Border Road, dry) at places like Hambantota Port (Sri Lanka) and Guadar Port (Pakistan) to encircle India in a String of Pearls; bases by ambitious countries like USA, UK, China at strategic islands like Diego Garcia, Djibouti; piracy and maritime terrorism; climate change led break weather incidents; growing disenchantment in neighbouring countries like Maldives

However opportunities are there as the Asian countries are looking toward India as a counter to China and as a net security provider and if India can leverage its soft and hard power it can fulfill its objectives in this region.

12. The UNODC (United Nations Office on Drugs and Crime) has pitched for the need of an integrated approach in order to address the difficulties in preventing, detecting, investigating and prosecuting Transnational Organised Crimes (TOC). Elaborating on these difficulties, discuss how an integrated approach can help in tackling TOCs. (250 words) 15

पार-राष्ट्रीय संगठित अपराधों (ट्रान्सनेशनल ऑर्गनाइज्ड क्राइम्स: TOCs) को रोकने, पता लगाने, जांच करने और अभियोजित करने में आने वाली कठिनाइयों से निपटने के लिए UNODC (यूनाइटेड नेशंस ऑफिस ऑन ड्रग एंड क्राइम्स) ने एक एकीकृत दृष्टिकोण की आवश्यकता पर बल दिया है। इन कठिनाइयों का मखिम्लार वर्णन करते हुए, बर्चा कीजिए कि किम तरह एक एकीकृत दृष्टिकोण से TOCs से निपटने में महायता मिल सकती है।

Transnational Organised Crimes (TOC) are a form of organised crimes ~~which~~ which transcend national boundaries, involving coordinated actions by criminals living in different countries. These are often observed to be closely linked to terrorists so they provide a stark challenge to law enforcement.

Some of the common forms are ÷

- Drug Smuggling
- Human Trafficking
- Smuggling
- Cybercrime
- Smuggling of weapons

These ~~are~~ are often observed to help terrorists access both goods and money.

The difficulties of curbing it are multidimensional :-

- Prevention
- Weak preventive, regulatory laws or statutes.
- Uncoordinated action between industries.
- Rise in global extremism and radicalisation across the internet.
- Criminals can safely collaborate over secure end to end encrypted communications.
- Lack of actionable intelligence

### Detection

- Secure ~~com~~ encrypted communications and fake identity cards.
- Porous borders and open borders with some states, for eg. majority of fake currency in India came via Nepal & Bangladesh.
- Weak intelligence networks

### Investigation

- They require specialised skills.
- Inadequate information sharing norms.
- Lack of cooperation b/w<sup>all</sup> the countries where the crime occurred

### Prosecution

- Weak legislation which is outdated and unable to handle today's complex frauds.
- Lack of cooperation b/w countries like difficulties in extradition of criminals.
- International Law is a specialised, niche and misunderstood branch which comes into play here.

To counter this an integrated approach as highlighted by UNODC is required. The 1<sup>st</sup> step should be signing and ratifying the multilateral protocols such as UNTOC. This will update the legislative framework to handle these cases bringing it in line with the best practices of the world. Also ~~the~~ enhance bilateral cooperation and set institutional frameworks for intelligence sharing both within Indian institutions and foreign intels.

Alongwith this capability and capacity building of police, CBI, IR, RAW etc. should be taken.

13. Highlighting the need for SMART policing in India, suggest some administrative, legislative and technological reforms in order to realize this vision. (250 words) 15

भारत में SMART पुलिसिंग की आवश्यकता पर प्रकाश डालते हुए, इस दृष्टि को साकार करने के लिए कुछ प्रशासनिक, विधायी और तकनीकी सुधारों का सुझाव दीजिए।

SMART - Sensitive and Strict; Modern and <sup>with</sup> Mobility; Alert and Accountable; Reliable and Responsive; Trained and Techno Savvy.

These traits are needed because :-

- A sharp escalation in crimes.
- Growing pressure on the Criminal Justice System (CJS)
- Increasing pressure on police because of internal stresses like growing population, organised crimes, terrorism etc.
- Growing ~~and~~ mistrust b/w police and population at large.

The Reforms needed to achieve these aims can be subdivided as :-

#### ADMINISTRATIVE

- Separation of Crime Investigation duties and Law and Order Duties
- Dedicated focus on cyber crimes.
- Setting up of Police Establishment Boards to give autonomy to police from politicians.

- Following of Court give Guidelines in the selection of DOP by UPSC members.
- Fixed tenure of officers insulated from political pressures.
- Capacity building of police <sup>official</sup> officers by training at apt stages.

### LEGISLATIVE

- Centre should prepare a reformed Modern Police bill for states to adopt.
- The anachronistic and contradictory laws on the book should be reformed.  
There can be a Law Commission undertaking to reform the IPC acts.
- Greater synergy between the Prosecutors and Police to enable better investigation and adjudication.
- New laws be passed to enable police to deal with sophisticated crimes like cyber crimes or organised transnational crimes.

### TECHNOLOGICAL

- Police headquarters should be upgraded and equipped with latest communication

- means like walkie talkies, fiber optic cables.
- Digital policing enabling citizens to register FIR's or apply for passports et al online.
  - Dedicated and fully functional helpline number operated 24/7.
  - Using technology like DNA, Forensics, Ballistics by setting up a dedicated resource wing for this.
  - Setting up a database at national level with records of crimes (NCRB).

These reforms are sorely needed to keep the faith of the people in the Rule of Law and Democracy.

14. Discuss the reasons behind private sector playing a merely peripheral role in defence manufacturing in India. Also, explain how the Draft Defence Production Policy, 2018 seeks to augment private sector participation in defence manufacturing in India. (250 words) 15

भारत में रक्षा विनिर्माण के क्षेत्र में निजी क्षेत्रक द्वारा अत्यंत गौण भूमिका निभाने के पीछे उत्तरदायी कारणों की खोज कीजिए। साथ ही, व्याख्या कीजिए कि किस प्रकार ड्राफ्ट डिफेंस प्रोडक्शन पॉलिसी, 2018 (रक्षा उत्पादन नीति मसौदा, 2018) भारत में रक्षा विनिर्माण के क्षेत्र में निजी क्षेत्रक की भागीदारी बढ़ाना चाहती है।

India is one of the largest arms importers in the world. Due to rising costs of imports and high Current Account Deficit, the govt. is pushing for making defence equipments in India.

The reason for Private Sector lagging have been :-

- Pub Sector lacks technological know how.
- The Public Sector & DRDO, Def. Establishment Boards etc. are favoured in tenders awarded.
- The only customer for weapons in the Indian Army, there <sup>is little to</sup> ~~are~~ no export demand for these goods.
- Uncertainty<sup>in</sup> policy environment and extensive regulatory interference.
- The Army often rejects these weapons even when ~~established~~ manufactured by PSU's as the pub. sector is wary of these.

To overcome these the govt. has established a new Draft Defence Policy.

The provisions of this are →

- Private defence partners to play the role of systems integrators and set up an extensiveness system comprising development partners, specialised vendors and supply partners.
- Promotion of exports of weapons (but) to be encouraged through govt to govt contacts and funding given by govt.
- Increase in automatic FDI cap.
- Govt. to take measures to promote Ease of Doing Business.
- Encouragement of the Armed Forces to procure goods from Start Ups and MSME establishments.

- Innovation for Defence Excellence (iDEX) has been <sup>envisaged by</sup> set up ~~to~~ Defence Innovation Hubs throughout the country to provide necessary incubation and infrastructure support to start ups.

This industry - friendly policy is expected to augment private participation and improve infrastructure support. ~~to~~

15. While India and Russia have enjoyed good relations since the Soviet era, relying on the past may not be enough to deal with shift in the relationship in light of the rapidly evolving geopolitical realities. Comment.

(250 words) 15

यद्यपि सोवियत युग में ही भारत और रूस के संबंध मधुर रहे हैं, तथापि अतीत पर निर्भरता तैज़ी में विकसित होती भू-राजनीतिक वास्तविकताओं के प्रकाश में, संबंधों में आये बदलाव में निपटने हेतु पर्याप्त नहीं भी हो सकती है। टिप्पणी कीजिए।

India and Russia have a long standing, tried and tested relationship harking back to the Treaty for Friendship and Cooperation signed in 1971. After the Cold War ended India as part of its Strategically Autonomous Outlook sought to improve ties with both Russia and the West and has largely succeeded in doing so. There has been growth in trade in both volume and domains ranging from Pharmaceuticals, Energy, Weapons, Agriculture etc. Russia is still the largest supplier of weapons to India and has cooperated in sharing

technology as well like the Brahmoos missile . Furthermore Russia has helped India gain membership in organisations like Shanghai Cooperation Organisation and is a key member of groupings like BRICS .

However the recent shift in geopolitics has led to some challenges in Indo Russian relations :-

- The US-Russia rivalry in Syria and Russian sanctions for its role in Ukraine (Crimea and MH17 bombing)

have made their economy weak . This led to growing Russian-Chinese involvement which is concerning to India .

- US sanctions on Russia have led to roadblocks for India's deals such as for the S 30 anti missile system . (As Indians could be sanctioned by US for not complying with these)

- Growing Russian Pakistani military cooperation is of concern.
- Russia has supported China led CPEC and BR0 and called on India to join it.
- Growing troubles b/w the West and Russia have put India in an uncomfortable situation to pick sides.
- India's growing engagement with US in trade and even weapons related matters and Indian actions like joining the Quad have been viewed negatively by Russia.

Thus, there is growing evidence of a chill in relations despite the PM Modi's quote of 'One Old friend being better than two new friends'.

It seems that while that message was meant to reassure Russia about India's value to the ties,

it can be a hint to them to value India as well.

16. In what ways has the engagement between India and its diaspora evolved over the years? What role can the Indian diaspora play in furthering and shaping India's foreign policy goals? (250 words) 15

भारत और इसके हायम्पोरा के बीच सहभागिता बीते वर्षों के दौरान किस तरह विकसित हुई है? भारत की विदेशी नीति के लक्ष्यों को आगे बढ़ाने और आकार देने में भारतीय हायम्पोरा क्या भूमिका निभा सकते हैं?

India is the country (acc. to International Migration Report) with the largest diaspora in the world. Dealing with this large and spread out diaspora has been a challenging but important arena for Indian Foreign Policy makers and the policies have evolved through the years →

- In India's early years the engagement was limited to cultural ties. India PM Nehru advised the Indian diaspora to assimilate in their home countries and not to think of themselves as aliens. This was

was followed by a non interventionist  
foreign policy.

- The ~~to~~ hands off policy was put under strain in situations like Uganda where the then govt. ordered the mass expulsion of all ethnic Indians. Indian actions were limited to humanitarian actions.
- Over the years Indian Overseas business groups have been a factor in deepening India's ties with those countries.
- They are a source of investment in Indian concerns as well as skills.
- Growing economic and political clout of groups like Indian Americans has led to advancement of Indian national interest.
- They were a way to escape sanctions following Op Polkaran and the sanction put on India by buying bonds.

The role played by Diaspora can be summarised as Building Transnational Networks; Source of Funding & Investment; Remittances; Lobbying; India's Soft Power etc.

So the govt has reciprocated with :-

- Relaxation of visa norms and adoption of OCI, PIO cards with benefits therein.
- Improving Connectivity of flight with various countries and making the visa granting process less cumbersome.
- Pravasi Bharatiya Divas type of engagements with diaspora.
- Schemes like VATRA where NRI's who have expertise in science can come and teach in India.

Such schemes need to be promoted and complaints of diaspora like bureaucratic inefficiency and red tapism need to be solved for India to be able to benefit from the unique advantage of its diaspora.

17. Sluggish progress of the Doha round signals that the WTO is proving to be ineffective in promoting free trade. Identifying the factors behind this, comment on the relevance of WTO in present context. (250 words) 15

दोहा दौर की धीमी प्रगति संकेत करती है कि WTO, मुक्त व्यापार को प्रोत्साहित करने में अप्रभावी सिद्ध हो रहा है। इसके पीछे उत्तरदायी कारकों की पहचान करते हुए, वर्तमान संदर्भ में WTO की प्रासंगिकता पर टिप्पणी कीजिए।

WTO is a body concerned with promoting international trade and free, and fair and open markets.

The Doha Inter-Ministerial meeting round has proven to be a very challenging moment for WTO as it has turned out to be a division between Developed & Developing countries on →

- Agricultural Subsidies: Developed nations want the developing nations to adhere to the amber, blue and red classification and stick to the 10% and 5% limit. The developing nations want a consensus on public stockholding issue (New peace clause has also ended)
- Opening Agricultural Markets: Developing

nation want the right to close exports or imports when needed for food safety reasons whereas developed nations want to keep their massive subsidies on agriculture whilst opening trade barriers.

- IPR issue : The developed nations are in favour of stringent norms in IPR while India & other developing nations have been successful in compulsory licensing.
- Trade in Services : India is desirous of more liberal norms for trade in services.
- Special & Differential Treatment : Developed nations agree to this in principle but want to divide the developing nations by differentiating in level of development b/w China, India and Sub-Saharan nations for eg.

Besides these specific policy disagreements there has been growing backlash against globalisation and liberalisation.

decreased by elections of protectionists.

The anti WTO stance of USA has culminated in erection of tariff and non tariff barriers, not ~~at~~ ratifying new judges to be appointed on the arbitration panel of WTO (and trade wars). This has promoted regional and bilateral deals like RCEP.

- However WTO is still relevant cause:-
- Regional deals are regionally limited. And have stringent (more than WTO) conditions on IPR or subsidies.
  - Dispute resolution can be biased.
  - India can better serve its interests in WTO than bilateral deals.
  - ~~Ind~~ Countries will suffer when global trade declines and becomes stratified.

Thus, if structural reforms to make WTO more responsive and relevant are undertaken then it can regain its preeminence in global discourse on free trade.

18. India's engagement with its extended neighbourhood in West Asia has evolved into a 'Look West' approach in recent times. However, multiple faultlines in this volatile region require a balancing act on the part of India. Discuss (250 words) 15

पश्चिम एशिया में अपने विस्तारित पड़ोस के साथ भारत की सहभागिता हाल के दिनों में 'लुक वेस्ट' दृष्टिकोण के रूप में विकसित हुई है। हालांकि, इस अस्थिर क्षेत्र में उपस्थित कई फाटलाइन्स भारत की ओर से एक गतुलनकारी कार्यवाही की मांग करते हैं। चर्चा कीजिए।

India's foreign policy initiative in the West Asia region is guided by a desire to <sup>best</sup> serve the interest of its population by fulfilling its energy needs; promoting FDI; safeguarding its diaspora.

That said, the region is extremely volatile with multiple axes of mutual antagonism emerging, religious wars, terrorism, revolutionary movement, sectarian differences etc. Sidestepping these faultlines is a tricky task for India as it tries to maintain the best possible relationship with the countries.

Earlier Indian involvement was not in the strategic dimension, India never interfered in inter

country conflict and promoted peace.

However with growing aspirations to be a super regional power India's Look West approach now transcend mere economics :-

- Use Diaspora as a strategic tool.
- Institutionalisation of security, defence and anti terror cooperation measures
- Having friendly relations with Saudi Arabia, Israel and Iran.

However we must be cognisant of the specific issues faced by India +

- USA and wider involvement in region. For eg. USA's anti Iran stance being supported by Israel and SA. India has great stake in the Iranian energy resources and strategic interests too.

- Pakistan's closeness with Arab countries. India though has managed to isolate Pakistan on their state

sponsored terrorism by ~~and~~ getting UAE to condemn it too.

- China's diplomatic initiative in that region. Also their port in Djibouti.
- Proxy USA Russia conflicts in Syria or Iran-SA conflict in Yemen
- Israel and Palestine will remain a boistering issue and India is desirous of good relations with both.
- The Asian Premium charged by OPEC countries.

The importance of West Asia to India cannot be overstated. India needs to pay sustained political and diplomatic attention to the region and should be aware of the continuously shifting quicksand that are always waiting for a single misstep.

19. The rapid diffusion of Artificial Intelligence begets unique opportunities and challenges for India. Discuss. What can be done to address these challenges? (250 words) 15

आर्टिफिशियल इंटेलिजेंस (कृत्रिम बुद्धिमत्ता) का तीव्र प्रसार, भारत के लिए विशिष्ट अवसर और चुनौतियां उत्पन्न करता है। चर्चा कीजिए। इन चुनौतियों का समाधान करने के लिए क्या किया जा सकता है?

AI is a term given to programs or machines acting in a way that mimics human intelligence.

Long considered a pipe dream recent advances in tech are making AI not a proposal for the future but a reality of the present.

AI has great scope for India's development :-

- Its disruptive nature means that it'll spawn new industries and jobs. It can help address unemployment and economic growth challenges that way.
- It has great scope for improving healthcare and education.
- India can become a world leader in AI by proper research focussed initiatives.
- Self driving cars.

- More efficient management of power grids or railways/air traffic flow minimising wastage and accidents
- AI can augment the offensive and defensive capabilities of Armed Forces

However, it has some unique challenges too :-

- Regulatory challenges for the ethical and legal way of using AI.
- IT can cause loss of massive amounts of jobs.
- This job loss will cause massive social disruption as people find it hard to change careers.
- Traditional capitalism with demand and supply of jobs will be disrupted as supply is now done by machines, robots, automation and AI. But this will lead to great income wealth disparity.

- India lags behind developed nations in AI research due to lack of funding and awareness
- o Indian software industry will be worst affected as their service oriented jobs can be taken over by AI.

The steps to address this are:

- o National policy on AI. Research on implications and how to ~~stop~~ <sup>negate</sup> them.
- o AI adoption across industries to take the benefit from it.
- o Consideration of Universal Basic Income (UBI)
- o Adoption of AI subject in the curriculum.
- o Funding to research and startups in AI.

India must not be a 'luddite' and only focus on the ~~the~~ negative aspects of AI. Technology <sup>change</sup> is inevitable and India must ensure it's driving the change and not merely being driven by it.

20. Water shortage in India has been sought to be addressed through various policy and technological interventions. Explain. Also, examine the benefits of desalination technology and the costs associated with it. (250 words) 15

भारत में विभिन्न नीतिगत और तकनीकी उपायों के माध्यम से जल की कमी की समस्या का समाधान करने के प्रयास किए जा रहे हैं। व्याख्या कीजिए। साथ ही, विलंबनीकरण प्रौद्योगिकी के लाभों एवं इसमें संबद्ध लागतों का परीक्षण कीजिए।

India is blessed with many rivers and a beautiful monsoon. Yet its water needs are ever rising. A recent NITI Aayog report has showcased the bleak future of India as inter state river water disputes continue to percolate.

The govt has sought to address these by +

- National Water Mission to conserve water, minimise wastage etc.
- Technological interventions such as real time monitoring of aquifers.
- Effort on ground water conservation.
- Rain Water Harvesting.
- Promoting traditional water conservation norms like Paua is Rajastha.

- o Efficient agriculture by PMKSY.
- o Tying up with Israel to leverage their expertise in micro-irrigation like drop or sprinkler irrigation

Desalination is a method very much in vogue in water deficient regions close to the sea like Israel or UAE. As the name implies it is to do with purifying saline water of excess salt and sea minerals to make it fit for human use.

The methods could be distillation, electrolysis etc.

The benefits of this are :-

- India has a long coastline of 7600km with perisular rivers having a high water demand and no perennial source. This tech could save these coastal region.
- o India is rapidly urbanising especially in port cities this could meet these need.

- Low ground water levels, insufficient and erratic rainfall means that a reliable source of water is needed. (The SGA)

However this method is very costly, and the fossil fuel requirements are enough to make it currently financially unviable. The residue salts and minerals need to be disposed of safely. If they're dumped in the ocean they can change its salinity causing great harm to marine ecology and environment at large. If dumped on land it can cause salinity of land.

Also the growing cost of water means that the rich would only afford it.

Hence, the govt. needs to promote research in a better form of desalination which can largely address the above concerns as India doesn't want to encounter a situation of 'Zero Hour' as in Cape Town, South Africa.