

INTERNATIONAL RELATIONS

❖ **India-US: The High Tech Boost**

- **CONTEXT: India and the United States elevated their strategic partnership with the launch of an initiative on Critical and Emerging Technology or iCET.**
- **Initiative on Critical and Emerging Technologies (iCET)**
 - The iCET involves collaboration in a range of areas including Quantum computing, Semiconductors, 5G and 6G wireless infrastructure, and Civilian space projects such as lunar exploration.
 - Aim: iCET aims to position the two countries as trusted technology partners by building technology value chains and supporting the co-development and co-production of items. It also aims to address regulatory restrictions, export controls and mobility barriers through a standing mechanism
 - Defence: On the defence front, iCET aims to expand India-US cooperation in fields like artificial intelligence and military equipment.
 - ✓ Industrial cooperation: The iCET announced a new bilateral defence industrial cooperation roadmap that will be intended to accelerate defence technology cooperation.
 - ✓ Fighter jet engine production in India: The USA under this has also agreed to produce a fighter jet engine in India for the indigenously manufactured Light Combat Aircraft.
 - ✓ GE Aerospace has applied for an export licence for jet engine production and phased transfer of technology to Indian entities.
- **Significance**
 - Depth to the relationship: If implemented with speed and purpose, the bilateral Initiative on Critical and Emerging Technologies (iCET) could lend a new strategic depth and breadth to the expanding engagement between India and the United States.
 - Against the rising and assertive China: Lending urgency to the iCET is the growing convergence of Indian and US interests in managing the security, economic, and technological challenges presented by a rising and assertive China.
 - Reducing dependence on Russia: India is also looking to reduce its over-dependence on Russian weapons and military technology and to produce more weapons at home in partnership with western countries.
- **Challenges**
 - Hurdles on Indian side: The US has flagged the need for regulatory and policy consistency and overcoming tax and custom hurdles on the Indian side.
 - China factor: The new initiative has also been criticized by China. China believes India is willing to ramp up its ties with the US to advance technology and attract more funding to replace its position in the global industrial and supply chains.
 - Though, iCET has no explicit reference to China.
- **India-USA Relations**
 - India and US share values of democracy, rule of law, human rights, and religious freedom that bind the countries together.
 - Bilateral engagement: India and the United States enjoy a comprehensive global strategic partnership covering almost all areas of human endeavour, driven by shared democratic values, convergence of interests on a range of issues, and vibrant people-to-people contacts.
 - ✓ Regular exchanges at the leadership level have been an integral element of the expanding bilateral engagement.
 - ✓ Despite the COVID-19 pandemic, India-U.S. cooperation witnessed intense engagement under various bilateral dialogue mechanisms in a wide range of areas including defence, security, health, trade, economic, science & technology, energy and people-to-people ties.
 - Defence and Security: India-US defence cooperation is based on the “New Framework for India-US Defence Cooperation”, which was renewed for a period of ten years in 2015. In 2016, the defence relationship was designated as a Major Defence Partnership (MDP).
 - ✓ The MDP recognizes a shared desire to build a comprehensive, enduring and mutually beneficial defence partnership.
 - Defence agreements have been signed in recent years. These includes:
 - ✓ Logistics Exchange Memorandum of Association (August 2016)
 - ✓ Memorandum of Intent between the U.S. Defence Innovation Unit (DIU)
 - ✓ the Indian Defence Innovation Organisation – Innovation for Defence Excellence (2018)
 - ✓ Communications Compatibility and Security Agreement (September 2018)
 - ✓ Industrial Security Agreement (December 2019);
 - ✓ Basic Exchange and Cooperation Agreement (October 2020).
 - Bilateral military exercises and defence exchanges are important aspects of deepening military-to-military cooperation.

- ✓ In addition to a number of service-to-service exercises, 2019 a tri-services exercise– Tiger Triumph- was conducted in November 2019.
- ✓ Bilateral and regional exercises include Yudh Abhyas (Army); Vajra Prahar (Special Forces); RIMPAC; Red Flag.
- ✓ In November 2020, the Royal Australian Navy joined the U.S.-India-Japan MALABAR Naval Exercise held in the Bay of Bengal and the Arabian Sea.
- ✓ Both sides have conducted a number of PASSEX with the US carrier groups in the Indian Ocean Region.
- The four Quad partners (India, Japan, United States & Australia) first formed a “Core Group” in 2004, to swiftly mobilise aid during the joint response to the 2004 Tsunami. Since 2017, Quad engagements have increased and intensified.
- In 2019, the first Quad Foreign Ministerial Meeting was held in New York (December 2019).
- Counter-Terrorism Cooperation: Cooperation in counter-terrorism has seen considerable progress with information exchange, operational cooperation and sharing of counterterrorism technology and equipment. India-U.S. Joint Working Group on Counter-Terrorism oversees the expanding CT cooperation.
- Cyber Security Cooperation: The India-US Cyber Framework signed in September 2016, provides for expanding cooperation in the cyber domain.
- Trade & Economic Relations: The rapidly expanding trade and commercial linkages form an important component of the multi-faceted partnership between India and the United States.
- The U.S. is India’s second-largest trading partner and a major destination for our exports of goods and services.
- Bilateral trade in goods and services stood at US\$ 146 billion in 2019.
- During the financial year 2020-21, India received the highest ever foreign direct investment amounting to USD 81.72 billion, as per data published by the Ministry of Commerce and Industry, Government of India.
- The US replaced Mauritius as the second largest source of foreign direct investment into India during 2020-21 with inflows of USD 13.82 billion.
- The US is one of the top 5 investment destinations for Indian FDI.
- Energy sector: India and the US have a strong bilateral partnership in the energy sector. In 2010, a bilateral Energy Dialogue was launched.
- Science and Technology: India-US cooperation in Science and Technology is multi-faceted and has been growing steadily under the framework of the India-US Science and Technology Cooperation Agreement signed in October 2005, which was renewed for a period of ten years in September 2019.
- ISRO and NASA are working together to realise a joint microwave remote sensing satellite for Earth observation, named NASA ISRO Synthetic Aperture Radar (NISAR).
- Education partnership: It is an important pillar of India-US ties and both countries share strong linkages and a history of higher education collaborations.
- ✓ The United States Educational Foundation in India (USEFI) was set up after a bilateral agreement on education exchange was signed between India and the US on February 2, 1950.
- Indian Diaspora: About 4.2 million Indian American/Indian origin people reside in the US. The Indian Americans [3.18 million] constitute the third largest Asian ethnic group in the US

PRELIMS

1. **Vaccine-derived polio**

➤ **CONTEXT: The risk of global spread of vaccine derived poliovirus remains a public health emergency of international concern, a World Health Organization committee has found after looking into updates from 10 countries.**

- Several countries reported climate-related disasters, including both flooding and drought, that were causing greater vulnerability to several disease outbreaks, including polio.
- The ongoing conflict in several polio-affected countries also continued to pose significant challenges to the programmes.
- However, the successful introduction of the novel oral polio vaccine and re-introduction of the trivalent oral polio vaccine (tOPV) are expected to mitigate the risk of the international spread of cVDPV2.
- Clusters of WPV1: There remain only three genetic clusters of WPV1 internationally — a cluster in Pakistan, one in Afghanistan and one in Africa.

➤ **About**

- Vaccine-derived polioviruses are related to the active viruses in the oral polio vaccine (OPV).
- OPV works by infecting cells in the gut with weakened polioviruses, allowing the body to safely develop immunity to polio without the risk of paralysis posed by the real disease. The weakened viruses would still infect you. One will develop a lifelong immunity, but will not get paralyzed. But the vaccine-derived virus will still be able to transmit from person to person

- Vulnerabilities and threats:
 - This transmission becomes problematic in communities with low vaccination rates.
 - If the virus can spread for a long time, it has many chances to mutate and revert to a dangerous paralytic form.
 - In communities with low vaccination rates and poor sanitation, however, the live weakened virus that is contained in the oral polio vaccine may be allowed to circulate for long periods.
- Advantages of oral polio vaccine (OPV)
 - People who receive OPV cannot be silent spreaders.
 - After developing an immune response to the vaccine, they are immune to polio for life.
 - Polioviruses cannot replicate in their gut and infect others.
- Symptoms and treatment: Affecting mainly children under five, it is often asymptomatic but can also cause symptoms including fever and vomiting.
- ✓ Around one in 200 infections leads to irreversible paralysis, and among those patients, up to 10% die.
- ✓ There is no cure, but since a vaccine was found in the 1950s, polio is entirely preventable.

2. No bar on contesting two seats in one poll

- **CONTEXT: The Supreme Court rejected a petition to bar candidates from contesting from more than one constituency in the general or assembly elections.**

- SC called it a matter of “parliamentary sovereignty” and “political democracy”.
- The matter squarely falls within the “legislative domain” (

➤ **Contesting Elections from 2 Constituencies**

- Section 33(7) of the Representation of People Act (RPA) permits a candidate to contest any election (parliamentary, state assembly, biennial council, or by-elections) from up to two constituencies.
- The provision was introduced in 1996 prior to which there was no bar on the number of constituencies from which a candidate could contest.
- Section 70 of RPA states that if a person is elected to more than one seat in either House of Parliament or in the House or either House of the Legislature of a State, then, unless within the prescribed time he resigns all but one of the seats all the seats shall become vacant.

➤ **Government’s View on the validity of Section 33(7)**

- The Government is of the opinion that the law cannot curtail the right of a candidate to contest elections and curtail the polity’s choice of candidates.
- Before the amendment, candidates could contest from any number of constituencies. The government had said the restriction to two constituencies was reasonable enough, and there was no need to change the law now.

➤ **View of Election Commission of India (ECI) on Section 33(7)**

- The EC had, in an affidavit in 2018 informed the Supreme Court that it had proposed an amendment to Section 33(7) in 2004.
- The EC had pointed out that “when a person contests election from two constituencies, and wins from both, he has to vacate one seat out of the two constituencies. Which means a by-election would be required from one constituency involving avoidable expenditure on the conduct of that bye-election”.
- The EC had even suggested that a candidate should deposit an amount of ₹5 lakh for contesting in two constituencies in an Assembly election or ₹10 lakh in a general election. The amount would be used to cover the expenses for a by-election.

3. Deep Ocean Mission

- **CONTEXT: The Centre’s Deep Ocean Mission, which aims to explore marine biodiversity for the sustainable use of resources, has been allocated Rs 600 crore in the Union Budget 2023-2024.**

➤ **What is Deep-sea mining?**

- Deep-sea mining involves extracting ores rich in cobalt, manganese, zinc and other rare metals from the sea floor.
- They contain critical minerals needed to build batteries for electric vehicles and renewable energy capacity, smartphones and laptops, according to experts.
- In 2016, India was awarded a 15-year contract to explore an area of 75,000 square kilometres for mining polymetallic nodules from the Central Indian Ocean Basin at depths of 5,000-6,000 metres.

➤ **About Deep Ocean Mission:**

- The mission is expected to **explore the deep ocean** for resources and at the same time, **develop deep sea technologies** that can be used for sustainable use of ocean resources.
- The government is envisioning the new India by 2030 where the focus is also on the **Blue Economy**.
- The deep ocean mission has **six major components**:

- Ocean climate change advisory services: Under the mission, the government will work on development of models upon observations that will provide future projections of important climate variables.
- This will be made from seasonal to decadal time scales.
- This particular component will be supporting the “Blue Economy priority area of coastal tourism.”
- Technologies for deep sea mining, and manned submersible:
- The component is focused on developing a manned submersible that will be able to carry three people to a depth of 6000 metres in the ocean.
- Scientific sensors and tools can also be taken for an Integrated Mining System in order to conduct exploration services. There are only a few countries that have acquired this capability.
- Conducting deep ocean survey and exploration: The Indian government is trying to explore as well as identify potential sites that have multi-metal Hydrothermal Sulphides mineralization within the Indian Ocean mid-oceanic ridges.
- Technological innovations for exploration and conservation of deep-sea biodiversity: Under this component, the focus of the government will be bioprospecting of deep sea flora and fauna and also study how utilization of deep sea can be sustainable.
- Energy and freshwater from the ocean: For off-shore energy development, the aim under this component will be studying the detailed engineering design for offshore Ocean Thermal Energy Conversion (OTEC). This will also power a desalination plant.
- Advanced marine station for ocean biology: The marine stations will be formed to study ocean biology and engineering. This component will translate research into industrial application and product development through on-site business incubator facilities.

4. Goal of ‘Suposhit Bharat’ under the Poshan Abhiyan

➤ **CONTEXT: This information was given by Minister of Ayush Shri Sarbananda Sonowal in a written reply in Lok Sabha.**

- The Ministry of Ayush is knowledge partner with the Ministry of Women and Child Development in the Poshan Abhiyan to achieve the ultimate goal of ‘SUPOSHIT BHARAT’; and actively participated in this program and celebrates Poshan Pakhwada and Poshan Maah every year since year 2018.
- Ministry of Ayush, in order to provide technical guidance and support based on the Ayush principles of regional and seasonal variations in the body and considering the local preferences, has developed advisory for preferred food and dietary items to address Kuposhan Mukh Bharat, which include general dietary advisory, advisory for pregnant women, lactating mothers, children, specific recommendations for anaemia in pregnancy and malnourished children which have been shared with Ministry of Women and Child Development. The same has been endorsed by MoWCD to all States.
- Ministry of Ayush has developed four yoga modules for the beneficiaries of Anganwadi Services- yoga module for children of age 3 to 6 years, for adolescent girls, for pregnant ladies and for lactating mothers.
- These modules have been provided to all Integrated Child Development Services (ICDS) functionaries and Anganwadi workers for training / further dissemination to the beneficiaries.
- The Government of India has approved “Saksham Anganwadi and Poshan 2.0”- an Integrated Nutrition Support Programme scheme of Ministry of Women and Child Development during the 15th Finance Commission period 2021-22 to 2025-26.
- “The common core” of Saksham Anganwadi and Poshan 2.0 center on maternal nutrition, infant and young child feeding norms, treatment protocols for Severe Acute Malnutrition / Moderate Acute Malnutrition and Wellness through Ayush practices to reduce wasting and underweight prevalence besides stunting and anemia.
- Mission POSHAN 2.0 including Poshan Abhiyaan has a total financial implication of Rs.1,81,703 crores, comprising Rs.1,02,031 crore as Central share and Rs.79,672 crore as State share.
- Poshan 2.0 shall focus on Maternal Nutrition, Infant and Young Child Feeding Norms, Treatment of MAM/SAM and Wellness through AYUSH.
- It will rest on the pillars of Convergence, Governance, and Capacity-building.
- Poshan Abhiyan will be the key pillar for Outreach and will cover innovations related to nutritional support, ICT interventions, Media Advocacy and Research, Community Outreach and Jan Andolan. Mission Poshan 2.0 will integrate several key strategies to fulfil its objectives, viz., Corrective strategies, Nutrition Awareness strategies, Communication strategies and Creation of green eco-systems.

ANSWER WRITTING

Q. Discuss the benefits and challenges associated with the satellite-based Internet system.

Satellite Internet Services is a wireless internet connection which uses satellites in space to get an Internet signal from the Internet Service Provider (ISP) to users. The idea of a space internet system is not new. It is being used

through Geostationary Satellite for selective users. In the last few years, various private companies are aiming to deliver broadband satellite Internet around the world through their fleet of Low Earth Orbit (LEO) satellites.

Benefits of satellite-based internet system:

- Satellite-based internet brings seamless connectivity in the regions where fibre connections can't reach e.g., hills and remote islands.
- Faster than Digital Subscriber Line (DSL) connection with continuously improving technology with present speeds reaching around 100 Mbps.
- It can help in bridging the digital divide gap in the country and also help in achieving the Digital India mission.
- Satellite-based internet can play a significant role in emergency or disaster recovery due to limited ground infrastructure. It can also help in Helps in effective navigation and military surveillance.
- It can be used for effective public service delivery even in remote areas. Further availability of speedy internet services can open new economic avenues for the local populace.

Challenges associated with satellite-based internet system:

- Low Speed and High Latency in comparison to fibre optic cables. Further, satellite-based internet is costly when compared to wireless cellular networks.
- Astronomers and scientists have also complained about increased "light pollution", a reference to light reflected from man-made satellites that can interfere with and be mistaken for light coming from other heavenly bodies.
- Potential to increase space junk which has the potential to damage spacecraft or collide with other satellites. There are already almost 1 million objects larger than 1cm in diameter in orbit, a by-product of decades of space activities.
- Initially, space activities were dominated by the government. However today the balance of power has shifted from countries to companies. As a result, there are questions related to who regulates these companies, especially given the large number of nations that contribute to individual projects.

Therefore, satellite-based internet can usher in an era of reliable and uninterrupted services to a large number of people. However, the concerns and challenges associated with them should also be dealt with in an effective manner.

MCQs

1. With reference to initiative on Critical and Emerging Technology or iCET consider the following statements
1. The idea was first mooted in the meeting between Prime Minister of India and President of USA on the margins of the Bali summit of the G20 in 2022.
 2. The iCET involves collaboration in a range of areas including quantum computing, semiconductors, 5G and 6G wireless infrastructure, and civilian space projects such as lunar exploration.
 3. Prime Minister's Office (PMO) and White House will directly monitor the initiative

Which of the above statement/s is/are correct?

- a) 1 only b) **2 and 3 only** c) 3 only d) 1 and 2 only

2. Consider the following

1. A vaccine-derived poliovirus (VDPV) is a strain related to the weakened live poliovirus contained in oral polio vaccine (OPV).
2. OPV is a safe and effective vaccine that contains a combination of one, two, or three strains of live, weakened poliovirus

Which of the above statement/s is/are correct?

- a) 1 only
b) 2 only
c) **Both 1 and 2**
d) Neither 1 nor 2

3. With reference to PM Poshan Scheme consider the following

1. It has been launched for an initial period of five years from 2021-22 to 2025-26.
2. Under the scheme a TithiBhojan concept was introduced which is a community participation programme in which people provide special food to children on special occasions/festivals.

Which of the above statement/s is are correct?

- a) 1 only
b) 2 only
c) **Both 1 and 2**
d) Neither 1 nor 2

4. With reference to Deep Ocean Mission consider the following

1. It would develop a manned submersible that can carry three people to a depth of 6,000 meters in the ocean for exploring and, then, extracting minerals in the deep seabed.

2. It aims to explore marine biodiversity for the sustainable use of resources.
3. As a part of the Deep Ocean Mission, India concluded the world's first locomotive trials of a deep-sea mining system in the central Indian ocean in the year 2022

Which of the above statement/s is/are correct?

- a) 1 and 2 only
- b) 3 only
- c) 1 and 3 only
- d) 1,2 and 3**

5. Consider the following statements :

1. In India, there is no law restricting the candidates from contesting in one Lok Sabha election from three constituencies.
2. In 1991 Lok Sabha Election, Shri Devi Lal contested from three Lok Sabha constituencies.
3. As per the- existing rules, if a candidate contests in one Lok Sabha election from many constituencies, his/her party should bear the cost of bye elections to the constituencies vacated by him/her in the event of him/her winning in all the constituencies.

Which of the statement/s given above is/are correct?

- a) 1 only
- b) 2 only**
- c) 1 and 3
- d) 2 and 3

6. With reference to Micro Irrigation Fund consider the following

1. Micro Irrigation Fund was set up in order to achieve the goal of 'per drop more crop'.
2. The fund is administered by Ministry of Jalshakti
3. The corpus of the fund is Rs. 50000 crores

Which of the above statement/s is/are not correct?

- a) 1 and 2 only
- b) 2 and 3 only**
- c) 1 and 3 only
- d) 1,2 and 3

7. VIHANGAM Drone Technology often mentioned in news has been introduced by which of the following?

- a) IIT Madras
- b) ISRO
- c) DRDO
- d) None of the above**

8. Which of the following statement is correct regarding "Operation Sadbhavana" often mentioned in news?

- a) It is a primary health care initiative launched by Ministry of DoNER in north eastern region
- b) It is an initiative of Ministry of Jalshakti for the lower Ganga regions for flood control
- c) It is an unique humane initiative undertaken by Indian Army in the State of Jammu & Kashmir.**
- d) It is an unique initiative of CBI to counter child pornography

9. With reference to Surajkund International Crafts Mela consider the following

1. This fair is held every two year in the month of February
2. The fair was upgraded to an international level in 2013.
3. For the 2023 edition Eight North Eastern States are the Theme State of the Mela.

Which of the above statement/s is/are not correct?

- a) 1 only**
- b) 1 and 2 only
- c) 2 only
- d) 2 and 3 only

10. With reference to Pradhan Mantri National Dialysis Programme (PMNDP) consider the following

1. The programme was launched to ensures availability of dialysis services at a very low cost to Below Poverty Line (BPL)
2. The Program has been implemented in a piloted basis in 13 districts.

Which of the above statement/s is/are not correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2**
- d) Neither 1 nor 2