

ECONOMY
Promoting Blue Economy

Recently, the union minister of science and technology and earth science said that the Blue Economy is the sixth dimension of Government of India's Vision of New India by 2030. A Draft Policy document on Blue Economy has been prepared by the Ministry Of Earth Sciences taking into consideration the reports of the expert working groups which emphasizes holistic development and growth of India's Blue Economy.

What is India's Vision of New India by 2030?

- In the Union Budget of India 2019 the Finance Minister laid out the Vision 2030 while highlighting India's transformation in the last five years.
- India is poised to become a USD5 tn economy by 2025 and aspires to become a USD10 tn economy by 2030.
- The dimensions of Vision-2030 outlined are as follows:
 1. To create physical and social infrastructure for ten trillion dollar economy and to provide ease of living.
 2. Digital India led by the youths with innumerable start-ups and million of jobs.
 3. To make India pollution free by focusing on Electrical Vehicles and renewables.
 4. Rural industrialisation using modern technologies to generate massive employment.
 5. Clean rivers, with safe drinking water to all Indians and efficient use of water in irrigation using micro-irrigation techniques.
 6. Besides scaling up Sagarmala, India's coastline and ocean waters will power development
 7. Through our space programme – Gaganyaan, India becoming the launch-pad of satellites for the World
 8. Self sufficiency in food production and producing food in the most organic way.
 9. A healthy India by 2030 and a distress free health care and wellness system for all. Ayushman Bharat and women participation would be an important component in it.
 10. Employees working with elected Government, transforming India into Minimum Government Maximum Governance nation.

What is the Blue Economy?

- The concept was introduced by Gunter Pauli in his 2010 book- "The Blue Economy: 10 years, 100 innovations, 100 million jobs".
- It is the sustainable use of ocean resources for economic growth, improved livelihoods and jobs, and ocean ecosystem health.
- It advocates the greening of ocean development strategies for higher productivity and conservation of ocean's health.
- Blue Economy emphasizes on integration of development of the ocean economy with social inclusion, environmental sustainability, combined with innovative business models.
- **It encompasses–**
 1. **Renewable Energy:** Sustainable marine energy can play a vital role in social and economic development.
 2. **Fisheries:** Sustainable fisheries can generate more revenue, more fish and help restore fish stocks.
 3. **Maritime Transport:** Over 80% of international goods traded are transported by sea.
 4. **Tourism:** Ocean and coastal tourism can bring jobs and economic growth.
 5. **Climate Change:** Oceans are an important carbon sink (blue carbon) and help mitigate climate change.
 6. **Waste Management:** Better waste management on land can help oceans recover.

What is the Significance of the Blue Economy?

- **High Return on Investment:** According to a research commissioned by the high-level panel for a sustainable ocean economy shows that USD1 invested in key ocean activities yields five times i.e. USD5 in return, often more.
- **Synergy With SDG:** It supports all of the United Nations' Sustainable Development Goals (SDGs), especially SDG14 'life below water'.
- **Sustainable Energy:** Supporting the increasing demand for renewable energy, offshore regions have tremendous potential in the form of offshore wind, waves, ocean currents including tidal currents, and thermal energy.

- **Importance For India:** With an over 7,500-km-long coastline spread across nine coastal states, 12 major, and 200 minor ports, India's blue economy supports 95% of the country's business through transportation and contributes an estimated 4% to its Gross Domestic Product (GDP).

What are the Steps taken to Promote Blue Economy?

- **Deep Ocean Mission:** It was launched with an intention to develop technologies to harness the living and non-living resources from the deep-oceans.
- **India-Norway Task Force on Blue Economy for Sustainable Development:** It was inaugurated jointly by both the countries in 2020 to develop and follow up joint initiatives between the two countries.
- **Sagarmala Project:** The Sagarmala project is the strategic initiative for port-led development through the extensive use of IT enabled services for modernization of ports.
- **O-SMART:** India has an umbrella scheme by the name of O-SMART which aims at regulated use of oceans, marine resources for sustainable development.
- **Integrated Coastal Zone Management:** It focuses on conservation of coastal and marine resources, and improving livelihood opportunities for coastal communities etc.
- **National Fisheries Policy:** India has a National Fisheries policy for promoting 'Blue Growth Initiative' which focuses on sustainable utilization of fisheries wealth from marine and other aquatic resources.

Way Forward

- With its vast maritime interests, the blue economy occupies a vital potential position in India's economic growth.
- It could well be the next multiplier of GDP and well-being, provided sustainability and socio-economic welfare are kept center-stage.
- India should look to adopt the Gandhian approach of balancing economic benefits with sustainability for meeting the broader goals of growth, employment generation, equity and protection of environment.

2. BrahMos Export to Philippines

Recently, Philippines has signed a deal with BrahMos Aerospace Private Ltd, for the supply of a shore-based anti-ship variant of the BrahMos supersonic cruise missile. This is the first export order for the missile, a joint product of India and Russia. The Philippines wants to induct this missile amid tensions with China over the disputed islands in the South China Sea.

Several countries have shown interest in acquiring the BrahMos missile. For example, discussions are in advanced stages with Indonesia and Thailand.

What are the features of BrahMos Missile?

- BrahMos is a joint venture between the Defence Research and Development Organisation of India (DRDO) and the NPOM of Russia. BrahMos is named on the rivers Brahmaputra and Moskva.
- It is a two-stage (solid propellant engine in the first stage and liquid ramjet in second) missile.
- It is a multiplatform missile i.e it can be launched from land, air, and sea and multi capability missile with pinpoint accuracy that works in both day and night irrespective of the weather conditions.
- It operates on the "Fire and Forgets" principle i.e it does not require further guidance after launch.
- Brahmos is one of the fastest cruise missiles currently operationally deployed with speed of Mach 2.8, which is nearly 3 times more than the speed of sound.
- Recently, an Advance Version of BrahMos (extended range sea-to-sea variant) was test fired.
 1. Following India's entry into the MTCR (Missile Technology Control Regime) club in June 2016, the range is planned to be extended to 450 km and to 600km at a later stage.
 2. The BrahMos missile was initially developed with a range capped at 290 km.

What is Missile Technology Control Regime (MTCR)?

- It is an informal and voluntary partnership among 35 countries to prevent the proliferation of missile and unmanned aerial vehicle technology capable of carrying greater than 500 kg payload for more than 300 km.
- The members are thus prohibited from supplying such missiles and UAV systems that are controlled by the MTCR to non-members.

- The decisions are taken by consensus of all the members.
- This is a non-treaty association of member countries with certain guidelines about the information sharing, national control laws and export policies for missile systems and a rule-based regulation mechanism to limit the transfer of such critical technologies of these missile systems.
- It was established in April 1987 by G-7 countries – USA, UK, France, Germany, Canada, Italy, and Japan.

What is the Status of India's Defence Exports?

- Defence exports are a pillar of the government's drive to attain self-sufficiency in defence production.
- Over 30 Indian defence companies have exported arms and equipment to countries like Italy, Maldives, Sri Lanka, Russia, France, Nepal, Mauritius, Sri Lanka, Israel, Egypt, UAE, Bhutan, Ethiopia, Saudi Arabia, Philippines, Poland, Spain and Chile.
- The exports include personal protective items, defence electronics systems, engineering mechanical equipment, offshore patrol vessels, advanced light helicopters, avionics suits, radio systems and radar systems.
- However, India's defense exports are still not upto the expected lines.
 1. The Stockholm International Peace Research Institute (SIPRI) ranked India at number 23 in the list of major arms exporters for 2015-2019.
 2. India still accounts for only 0.17% of global arms exports.
- Reason for dismal performance in India's Defense exports is that, India's Ministry of Defense so far has no dedicated agency to drive exports. Exports are left to individual corporations, like BrahMos or the defence public shipyards and undertakings.
- In this context, the KPMG report titled 'Defence Exports: Untapped Potential recommends the first step of setting up of an exclusive "defence export help desk". On the basis of inputs from the help-desk, the report says, Indian companies could work with government machinery to realise exports.
- If India is successful in providing big-ticket military systems to countries in the neighbourhood, it won't just be a boost for defence exports but will also be a strategic step to counter China's influence as it provides defence products in Asia, including Pakistan, Bangladesh and Myanmar.

ENVIRONMENT

Coal Gasification

Recently, the Delhi-based non-profit, Centre for Science and Environment (CSE), has raised concerns about the Union Government's announcement on coal gasification projects in the Budget 2022-23. The budget proposed four pilot projects for coal gasification and conversion of coal into chemicals required for the industry.

According to CSE, the process of coal gasification is not attractive from a climate change point of view.

What is Coal Gasification?

- **Process:** Coal gasification is a process in which coal is partially oxidised with air, oxygen, steam or carbon dioxide to form a fuel gas.
 1. This gas is then used instead of piped natural gas, methane and others for deriving energy.
 2. In-situ gasification of coal – or Underground Coal Gasification (UCG) – is the technique of converting coal into gas while it is still in the seam and then extracting it through wells.
- **Production of Syngas:** It produces Syngas which is a mixture consisting primarily of methane (CH₄), carbon monoxide (CO), hydrogen (H₂), carbon dioxide (CO₂) and water vapour (H₂O). Syngas can be used to produce a wide range of fertilizers, fuels, solvent and synthetic materials.
- **Significance:** Steel companies typically use coking coal in their manufacturing process. Most of the coking coal is imported and is expensive.
 1. To cut costs, plants can use syngas, which comes from coal gasification plants in the place of coking coal.
 2. It is primarily used for electricity generation, for the production of chemical feedstocks.
 3. The hydrogen obtained from coal gasification can be used for various purposes such as making ammonia, powering a hydrogen economy.

What is the Hydrogen Economy?

- It is an economy that relies on hydrogen as the commercial fuel that would deliver a substantial fraction of a nation's energy and services.
- Hydrogen is a zero-carbon fuel and is considered an alternative to fuel and a key source of clean energy.
- It can be produced from renewable sources of energy such as solar and wind.
- It is an envisioned future where hydrogen is used as fuel for vehicles, energy storage and long-distance transport of energy.
- The different pathways to use hydrogen economy includes hydrogen production, storage, transport and utilization.
 1. In 1970, the term 'Hydrogen Economy' was coined by John Bockris.
 2. He mentioned that a hydrogen economy can replace the current hydrocarbon-based economy, leading to a cleaner environment.

What are the Concerns associated with Coal Gasification Plants?

- **Environmental Perspective:** Coal gasification actually produces more carbon dioxide than a conventional coal-powered thermal power plant. According to CSE estimates, one unit of electricity generated by burning gasified coal generates 2.5 times more carbon dioxide than what would result when burning the coal directly.
- **Efficiency Perspective:** The syngas process converts a relatively high-quality energy source (coal) to a lower quality state (gas) and consumes a lot of energy in doing so. Thus, the efficiency of conversion is also low.

INTERNATIONAL RELATION

India-Russia Cooperation at the UNSC

Recently, the Bilateral consultations on United Nations related issues were held between India and Russia in New Delhi. Russia is set to assume the presidency of the UN Security Council in February, 2022. The discussion came in the backdrop of tensions between Russia and Ukraine over possible eastward expansion by NATO.

Earlier, the 21st India-Russia annual summit took place at New Delhi which also included the first 2+2 ministerial dialogue of India's foreign and defence ministers with their Russian counterparts.

What is the importance of Cooperation in UN and Multilateral Fora?

- Both Sides stresses the importance of reinvigorating multilateralism, with the central coordinating role played by the United Nations in world affairs.
 1. Russia welcomed India's election as a non-permanent member of the UN Security Council with an overwhelming majority for a two-year term.
 2. Russia supports India's candidacy for permanent membership of a reformed United Nations Security Council and of the Nuclear Suppliers Group.
- Both Sides support the comprehensive reform of the UNSC to reflect contemporary global realities and to make it more representative, effective and efficient in dealing with issues of international peace and security.
- Both Sides are committed to enhanced cooperation within BRICS. Russia congratulates India on its successful BRICS Chairmanship in 2021, including hosting of the XIII BRICS Summit on 9th September 2021 and adopting the New Delhi Declaration.
- The role of the New Development Bank (NDB) is recognised by both sides as vital to addressing development challenges, including health and economic impact of the covid-19 pandemic and encouraged the NDB to explore the possibility of financing more social infrastructure projects, including those that use digital technologies.
- India and Russia recognise the achievements of the Shanghai Cooperation Organization (SCO) in the last two decades of its operation and believe that it has the great potential for further interaction among the SCO Member States.
- They intend to focus particularly on increasing the effectiveness of countering terrorism, extremism, drug trafficking, cross-border organized crime, and information security threats, in particular by improving the functionality of the SCO Regional Anti-Terrorist Structure.
- They are also determined to cooperate within the G20 format and intensify the same on issues of global and mutual interest, keeping in view India's presidency of the G20 in 2023.

- Both sides agree that safeguarding of global commons including our oceans, outer space and information space should be based on the principles of transparency, accessibility and upholding international law.

What stand India has taken in UNSC on Russia-Ukraine Tensions?

- At the UN Security Council (UNSC) meeting on Ukraine, India also called for the immediate de-escalation of the situation while taking into account the security interests of all.
- India called for quiet diplomacy and the peaceful resolution of the Russia-Ukraine tensions. "Quiet diplomacy" refers to one state's efforts to influence the behavior of another state through discreet negotiations or actions.
- India was one of three countries (Kenya and Gabon were the others) that abstained from a procedural vote on whether or not Ukraine would be discussed. China and Russia voted against the move. The US, which initiated the meeting, and nine other countries voted to hold the discussion.
- India reiterated its support for a July 2020 ceasefire, the 2014 Minsk Agreement and the Normandy Process.
- The Normandy Format refers to discussions held between Russia, Ukraine, Germany and France, who have met since 2014, when Russia annexed Crimea.
- India also called for quiet diplomacy as both the West, led by the US, and Russia have been talking tough publicly. India is concerned about the security of the more than 20,000 Indian nationals — including students — living in Ukraine.

Way Forward

Although India and Russia cannot do much about each other engaging with their rivals, they have no reason to be satisfied with the poor state of their commercial ties.

To give a start to the revival of their ties, India and Russia shall focus on laying a clear path for expansive economic cooperation and generating a better understanding of each other's imperatives on the Indo-Pacific.

PRELIMS FACT**India's First Graphene Innovation Centre in Kerala**

Recently, the Kerala government announced that the country's first Graphene Innovation Centre would come up in Thrissur, Kerala. It is a joint venture of Digital University of Kerala, Centre for Materials for Electronics Technology (C-MET) and Tata Steel Limited.

- Earlier in 2020, the researchers from the City University of Hong Kong had produced a laser-induced form of graphene masks that inactivate the coronavirus species.

What is the Graphene Innovation Centre?

- An Innovation Center is a cross-functional plan that creates a safe haven for new ideas.
- With opportunities for individual and group collaboration across time zones and continents, it's a place that fosters a culture of innovation through the creation, sharing, and testing of ideas.
- The India Innovation Centre for Graphene would come up in Thrissur at a cost of Rs 86.41 crore. Of the 86.41-crore, the Union Government would provide Rs 49.18 crore and private business houses Rs 11.48 crore.
- The state government would provide the basic infrastructure for the project. The Centre would help attract investors to develop graphene products.

What is its Significance?

- The project would give a major fillip for scientific research as well as the state's industrial sector.
- Kerala's human resources capital could be effectively exploited by the proposed Centre, which would help Kerala to emerge as a knowledge-based economy.

What is Graphene?

- Graphene is a one-atom-thick layer of carbon atoms arranged in a hexagonal lattice. It is the building-block of Graphite, but graphene is a remarkable substance on its own with a multitude of astonishing properties.
- It is the thinnest, most electrically and thermally conductive material in the world, while also being flexible, transparent and incredibly strong.

- Often referred to as a wonder material for its extraordinary electrical and electronics properties, graphene could replace Indium and thereby bring down the cost of OLED (organic light-emitting diode) screens in smartphones, studies have shown.
- Graphene has a lot of promise for additional applications: anti-corrosion coatings and paints, efficient and precise sensors, faster and efficient electronics, flexible displays, efficient solar panels, faster DNA sequencing, drug delivery, and more.

2. Winter Olympics

The Russian President, Pakistan Prime Minister and five Presidents from Central Asia will reach China for the opening of the Winter Olympics.

What is the Significance of the Visit?

- The Russian President will discuss the ongoing crisis with Ukraine with the Chinese President. China has close relations with Russia but has been largely silent on the crisis in Ukraine amid a build-up of Russian forces along its borders.
- The Pakistan Prime Minister is expected to discuss investments from China and speed up the China Pakistan Economic Corridor (CPEC) plan. China has also declared that it sought to discuss developing communications satellites for Pakistan and to cooperate on the construction of the Pakistan Space Centre.
- Due to the alleged human rights violations in the Xinjiang province of China, the US, the UK, Canada and Australia have announced a “diplomatic boycott” of the games.

What is the Winter Olympics?

- Winter Olympics is the premier competition for sports that are played on ice or snow.
- It is held every four years and features participants from across the world. Ice skating, ice hockey, skiing and figure skating are some of the popular sports that are played at the Winter Games.
- The first Winter Olympics were held in 1924 in Chamonix, France.
- Winter sports were initially played at the Summer Olympics, with the 1908 London Olympics hosting four figure skating events and Antwerp 1920 having figure skating as well as ice hockey.
 1. However, in 1924, a separate event was created for winter sports, called the International Winter Sports Week.
 2. It was held in Chamonix, France – the host country for the 1924 Summer Olympics.
- Two years later, the International Winter Sports Week in Chamonix was officially recognised as the first Winter Olympic Games.
- This year's edition of the Winter Olympic Games will be held in Beijing, China from 4th February to 20th February 2022.
- India has been participating in the Winter Olympics since 1964.

DAILY ANSWER WRITING PRACTICE

Qns. Critically analyse the consonance of the ‘Citizenship Amendment Act (CAA) 2019’ with the Indian Constitution. (250 Words)

Introduction

The Citizenship (Amendment) Act, 2019 (CAA) was notified on December 12, 2019 and came into force from January 10, 2020. It seeks to amend the Citizenship Act, 1955.

Body

Provisions of CAA

- The objective of the CAA is to grant Indian citizenship to persecuted minorities — Hindu, Sikh, Jain, Buddhist, Parsi and Christian — from Pakistan, Bangladesh and Afghanistan.
- Those from these communities who had come to India till December 31, 2014, facing religious persecution in their respective countries, will not be treated as illegal immigrants but given Indian citizenship.
- The Act provides that the central government may cancel the registration of OCIs on certain grounds.

CAA is in consonance with principles of Constitution

- This Bill will come as a big boon to all those people who have been the victims of Partition and the subsequent conversion of the three countries into theocratic Islamic republics.

- Government has cited that the partition of India on religious lines and subsequent failure of the Nehru-Liaquat pact of 1950 in protecting the rights and dignity of the minorities in Pakistan and Bangladesh as the reasons for bringing this Bill.

CAA is not in consonance with principles of constitution

- The first is that the Citizenship (Amendment) Act is against the letter and spirit of our Constitution. Articles 5 to 11 of the Constitution deal with citizenship, and the Citizenship Act, 1955, lays down criteria for citizenship based on birth, descent, registration, naturalization, and citizenship by incorporation of territory.
- By setting new criteria, the Citizenship (Amendment) Act goes against the premise of common citizenship regardless of differences of caste, creed, gender, ethnicity and culture.
- Further, Article 14 of the Constitution lays down that the “State shall not deny to any person equality before the law or the equal protection of the laws within the territory of India”.
- The Citizenship (Amendment) Act is divisive, deeply discriminatory and violative of human rights.
- Our national unity was won through struggle; the Citizenship (Amendment) Act is one of the many threats to its survival. Our hard-won Constitution recognizes individual and social differences, and that we must weave the cord of unity by creating a sense of belonging and inclusiveness for all.
- The Citizenship (Amendment) Act attempts to create and deepen communal division and social polarization in the country.
- The Act gives eligibility for citizenship to Hindus, Sikhs, Buddhists, Jains, Parsis and Christians from Afghanistan, Bangladesh and Pakistan who entered India on or before December 31, 2014, and specifically excludes Muslims from that list.
- In granting citizenship on the basis of religion, it discriminates against Muslims and rejects the basic concept of secularism.
- That the Citizenship (Amendment) Act is discriminatory and violative of human rights has been recognized by those who have come out on the streets in many States, in opposition to the Act.
- The agenda of Hindutva and its ultimate goal of establishing a “Hindu Nation” underlie the Citizenship (Amendment) Act, is well established both by past experience and the present actions of the BJP-Rashtriya Swayamsevak Sangh.
- In the days since the passage of the CAA, multiple protests across north and Northeast India last week. Ironically, these protests are themselves expressions of India’s overlapping multi-religious, multi-ethnic character that the CAA seeks to undermine.
- The mobilizations in the Northeast were about anxieties of ethnicity, culture and language as much as religion while the protests in Delhi, Aligarh and Lucknow are chiefly about religious identity and discriminatory exclusion of Muslims from the CAA.

Conclusion

The onus is now on the Supreme Court, being the Guardian of the Constitution, to interpret the provisions of the Act and test its Constitutionality that whether the “classification” done in the Act is “reasonable” or not if tested against Article 14. The policy towards illegal migrants and refugees needs wider debates and deliberation. However, religion can never be the basis of Indian Citizenship.

DAILY QUIZ

Q1. Consider the following statements about domestic systemically important bank (D-SIB).

1. RBI declares only Public Sector Banks as domestic systemically important bank.
2. Banks become systemically important due to their size, cross-jurisdictional activities and interconnection.
3. Banks whose assets exceed 2% of GDP are considered part of this group.

Which of the statements given above is/are correct?

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

Q2. Consider the following activities :

1. Spraying pesticides on a crop field

2. Inspecting the craters of an active volcano
3. Collecting breath samples from spouting whales for DNA analysis

At the present level of technology, which of the above activities can be successfully carried out using drones?

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

Q3. Consider the following statements:

1. The Special Protection Group was created in 1985.
2. The SPG protects Prime Minister and his immediate family members only.
3. The SPG force is controlled by the Indian Army.

Which of the statements given above is/are correct?

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

Q4. The Horn of Africa is a term used to denote the region containing

1. Djibouti
2. Eritrea
3. Ethiopia
4. Somalia

Select the correct answer using the code below:

- a. 1, 2 and 3 only
- b. 1, 3 and 4 only
- c. 2, 3 and 4 only
- d. 1, 2, 3 and 4**

Q5. With reference to the period of Gupta dynasty in ancient India, the towns Ghantasala, kadura and Chaul were well known as

- a. ports handling foreign trade.**
- b. capitals of powerful kingdoms.
- c. places of exquisite stone art and architecture.
- d. important Buddhist pilgrimage centres.