



IAS PARLIAMENT

Information is Empowering

A Shankar IAS Academy Initiative



MONTHLY MAINSTORMING

FEBRUARY
2022

A compilation of Mains questions with model answers, from Current Affairs of the month



SCAN TO
DOWNLOAD

iasparliament.com

INDEX

MONTHLY MAINSTORMING.....	3
FEBRUARY 2022.....	3
G.S PAPER I.....	3
1. Culture.....	3
2. Geography.....	3
G.S PAPER II.....	4
3. Polity.....	4
4. Judiciary.....	5
5. Government Policies.....	5
6. Education.....	8
7. Health.....	8
8. International Relations.....	10
G.S PAPER III.....	13
9. Economy.....	14
10. Agriculture.....	19
11. Energy.....	20
12. S & T.....	22
13. Environment.....	23

MONTHLY MAINSTORMING

FEBRUARY 2022

G.S PAPER I

1. CULTURE

Ramanujacharya was a great social reformer and worked for the upliftment of the society. Substantiate

KEY POINTS

- Ramanujacharya also known as Ilaiya Perumal was born to Kanthimathi and Asuri Kesava Somayaji in Sriperumbadur, Chennai.
- The great poet-saint Ramanuja was an eminent teacher and the founder of Vishishtadwaita. He is an expert in Vedic scriptures.
- Shri Ramanujacharya wrote nine scriptures called Navaratnas and composed numerous commentaries on Vedic scriptures.
- A community of Vaishnavites has been following his path called Vedanta. Sri Ramanujacharya was also known for his social reforms.
- Ramanujacharya was known to advocate social equality among all sections of people.
- His greatest contribution is the propagation of Vasudhaiva Kutumbakam which means all universe is one family. He traveled across the country and propagated about social equality, and known for his many other social reforms.
- This statue is built to commemorate the 11th century of great Vaishnavite saint Ramanujacharya for his work.
- Shri Ramanujacharya wrote nine scriptures called Navaratnas and composed numerous commentaries on Vedic scriptures.

2. GEOGRAPHY

The occurrence of solar flares from the sun impacts the earth various ways. Explain

KEY POINTS

- Starlink has lost dozens of satellites that were caught in a geomagnetic storm causing them to fall from orbit before they could be commissioned.

- The satellites were designed to burn up on reentry into the Earth's atmosphere, and did not create debris in space.
- Solar storms are magnetic plasma ejected at great speed from the solar surface. They occur during the release of magnetic energy associated with sunspots ('dark' regions on the Sun that are cooler than the surrounding photosphere)
- Not all solar flares reach Earth, but solar flares/storms, solar energetic particles (SEPs), high-speed solar winds, and coronal mass ejections (CMEs) that come close can impact space weather in near-Earth space and the upper atmosphere
- Solar storms can hit operations of space-dependent services like global positioning systems (GPS), radio, and satellite communications. Geomagnetic storms interfere with high-frequency radio communications and GPS navigation systems.
- Aircraft flights, power grids, and space exploration programmes are vulnerable.
- CMEs, with ejectiles loaded with matter travelling at millions of miles an hour, can potentially create disturbances in the magnetosphere, the protective shield surrounding the Earth.
- With the increasing global dependence on satellites for almost every activity, there is a need for better space weather forecasts and more effective ways to protect satellites.
- Some of the books of Shri Ramanujacharya are Sri Bhashya, Vedartha Sangraha, Vedanta Sara and Bhavartha Ratnakara.
- He worked tirelessly for the upliftment of people with the spirit of every human being equal regardless of nationality, gender, race, caste, or creed.

G.S PAPER II

3. POLITY

Co-operative federalism is necessary to improve, provide robust road safety plans and infrastructure in the country. Discuss

KEY POINTS

- Union Minister for Road Transport and Highways remarked that "the target is to reduce 50% of road accidents by 2025".
- The Motor Vehicles (MV) Act of 1988 was partially amended in August 2019, and some of the amended and new sections which made traffic violations more stringent, came into effect from 2019.
- The automation of processes is still in its infancy and limited to large cities. The number of 'hit and run' cases may decrease if the 'Intelligent Traffic Management System' is implemented on highways and other major roads.
- The actual enforcement staff and equipment (due to a limited road safety fund or other funds at the disposal of the police) are insufficient to effectively check traffic violations.

- There are inadequate funds for the rectification of black spots and the undertaking of traffic calming measures. Though more than 60% road accidents reportedly take place because of over-speeding.
- The accident data collection format of the Ministry of Road Transport and Highways, and now a part of the Crime and Criminal Tracking Network & Systems (CCTNS) of the police, is quite cumbersome (it requires about 60 fields to be filled up).
- Unless the States and the Centre are on the same page in improving and strengthening the infrastructure of States by enabling more funds, merely and only fixing targets will not be a pragmatic approach.

4. JUDICIARY

A delicate balance of power is required to be maintained between the Supreme Court and the High Courts for efficient judiciary in the country. Elaborate

KEY POINTS

- An integral requirement of a federal state is that there be a robust federal judicial system which interprets this constitution, and therefore adjudicates upon the rights of the federal units and the central unit, and between the citizen and these units.
- The Indian Constitution envisaged the equality of power of High Court judges and Supreme Court judges, with a High Court judge not being a subordinate of a Supreme Court judge.
- The Collegium also has the power to transfer judges and chief justices from one High Court to another.
- This has inevitably led to the balance tipping in favour of a centralisation of the judiciary. The greater the degree of centralisation of the judiciary, the weaker the federal structure.
- The Supreme Court of India today, by playing the role of a collegium, effectively wields the power to appoint a person as a judge to a High Court or to transfer him or her to another High Court,.
- The third of the factors identified by us is the creation of parallel hierarchies of courts and tribunals, whether it be the Competition Commission, or the company law tribunals, or the consumer courts.
- An integral requirement of a federal state is that there be a robust federal judicial system which interprets the constitution.

5. GOVERNMENT POLICIES

***Do you think that the recent budget has ignored the distress caused by the pandemic?
Comment***

KEY POINTS

- The finance minister emphasised robust tax collections, an optimistic projection for GDP growth and a futuristic economy driven by technology, clean fuel, and smart cities.
- The share of the top 10 per cent in the total national income stands at 57.1 per cent whereas the share of the bottom 50 per cent in total national income stands at 13.1 per cent.

- Indeed, an additional Rs 51,971 crore have been allocated towards settlement of outstanding guaranteed liabilities of Air India and this amount has been accounted for in the total expenditure.
- Provision of basic public goods must be a key area of focus. Last year, only 44 per cent of the amount allocated to the Department of Water and Sanitation had been spent till December 2021.
- India's real GDP in FY 2019-20 was Rs 145 lakh crore. This has shrunk by Rs 15-20 lakh crore over the last two years.
- To get back on the growth track and to increase the size of the economy, economic policy needs to alleviate distress and focus on expanding the incomes and consumption of those at the bottom of the pyramid.
- Widening of inequalities due to a two-speed, K-shaped recovery will hurt consumption demand and threaten social stability as well as economic growth.

Do you think that the state employment laws in India go against the idea of being a unified nation? Comment

KEY POINTS

- The Supreme Court of India will soon hear a petition to remove the stay on the Haryana State Employment of Local Candidates Act, or the Haryana Act, that reserves 75% of jobs in the private sector in the State for local residents.
- There are at least three important constitutional questions that arise from this Act. First, Article 19(1)(g) of the Constitution guarantees freedom to carry out any occupation, trade or business.
- This Act, by requiring private businesses to reserve 75% of lower end jobs for locals, encroaches upon their right to carry out any occupation.
- There have been several cases related to public employment. For example, the Supreme Court, in 2002, ruled that preference given to applicants from a particular region of Rajasthan for appointment as government teachers was unconstitutional.
- The Maharashtra Act, which provided reservations for Marathas was struck down by the Supreme Court in May 2021 on grounds of breaching the 50% limit. It stated that the 50% limit is "to fulfil the objective of equality".
- States have enacted laws that limit employment for citizens from outside the State. These laws raise questions on the conception of India as a nation.
- The Constitution conceptualises India as one nation with all citizens having equal rights to live, travel and work anywhere in the country.

Despite the support provided by the government, more needs to be done to achieve the India's semiconductor dream. Explain

KEY POINTS

- The pandemic has brought to the fore the fragility of the global supply chain of semiconductor manufacturing.
- It is timely, therefore, that India has approved a \$10 billion package to incentivise the manufacturing of semiconductors in the country.

- Getting fab manufacturing will also build on India's strength in design. We have the largest number of chip designers outside of the U.S. who are working on state-of-the-art systems and technologies.
- Fab clustering, where key semiconductor supply chains and related businesses are in one place to create backward and forward linkages, would also play a key role in creating an ecosystem for the semiconductor industry.
- Apart from incentivising more FDI in electronics to deepen our supply chains through incentive schemes, we need to focus on encouraging Indian manufacturers and start-ups to enter and master complex R&D and manufacturing verticals.
- Indian engineers have contributed immensely to this area in multinational companies. We must encourage them to set up their design start-ups with handsome government grants and tax incentives.
- Premier research institutions such as the Indian Institute of Science should also be asked to work aggressively on R&D in chip designing and manufacturing.
- By working aggressively in new cutting-edge technologies, India can ensure that it becomes atmanirbhar.

The inspection and the labour statistical systems should be reviewed as the Government is in the process of framing the Vision@2047 document. Discuss

KEY POINTS

- CRUSHED Report 2021 released by Safe in India (SII), reported in this daily, portrays a dismal picture concerning occupational safety and health in the auto sector.
- However, occupational safety and health (OSH) has not received due attention from law-makers and even trade unions in India.
- Labour Bureau has not considered expanding the scope of statistics on injuries by adding sectors such as plantations, construction, the service sector, etc.
- According to the Directorate General, Factory Advice and Labour Institutes (DGFASLI)'s Standard Reference Note for 2020 in 2019, the proportion of working in sanctioned posts for factory inspectors (employment rate) for India was 70.60%.
- But major States such as Maharashtra (38.93%), Gujarat (57.52%), Tamil Nadu (58.33%), and Bihar (47.62%) had poor employment rates of inspectors
- Liberalisation of the inspection system as has been effected during the last 20 years will not promote sound labour market governance.
- Simplifying the annual returns and self-certification systems weakens the already poorly placed labour statistical system regarding all variables especially industrial injuries.
- The labour codes, especially the OSH Code, the inspection and the labour statistical systems should be reviewed as the Government is in the process of framing the Vision@2047 document for the Labour Ministry.

6. EDUCATION

Multilingual education is based on the increasing use of one's mother tongue, a key component of inclusion in education. Analyse

KEY POINTS

- For centuries, India has been home to hundreds of languages and thousands of dialects, making its linguistic and cultural diversity the most unique in the world.
- According to the UN agency, at least 43% of the estimated 6,000 languages spoken in the world are endangered an alarming figure indeed.
- It would be pertinent to note that the National Education Policy (NEP) 2020 is a visionary document which encourages the use of mother tongue as the medium of instruction till at least Class five but preferably till Class eight and beyond.
- The collaboration between the AICTE and IIT Madras to translate some courses on the central government's e-learning platform, Study Webs of Active Learning for Young Aspiring Minds (SWAYAM) into eight regional languages such as Tamil, Hindi, Telugu, Kannada, Bengali, Marathi, Malayalam and Gujarati, is commendable.
- According to the Language Census, whose findings were widely reported in 2018, India is home to 19,500 languages or dialects, of which 121 languages are spoken by 10,000 or more people in our country.
- It is our collective responsibility to revive and revitalise the 196 Indian languages which fall under the "endangered" category.

7. HEALTH

Do you think that there is a need to create public health data architecture for the country?
Comment

KEY POINTS

- In a country perennially thirsty for reliable health data, the National Family Health Survey (NFHS) is like an oasis. It has a large volume of data that is openly accessible.
- The report of the fifth round of the NFHS was recently released (covering phase 2 States where data collection was delayed due to the novel coronavirus pandemic).
- It is the Indian version of the Demographic and Health Surveys (DHS), as it is known in other countries. Currently, the survey provides district-level information on fertility.
- The NFHS is coordinated by the International Institute for Population Sciences (IIPS Mumbai) and the actual survey is outsourced. There is an entrenched set of agencies which survive on this survey.
- There have been previous attempts to align these surveys but they have failed as different advocates have different "demands" and push for inclusion of their set of questions.
- States have to become active partners including providing financial contributions to these surveys. For a detailed understanding on some issues, each round of survey can focus on a specific area of interest.

It is also very important to ensure that the data arising from these surveys are in the public domain.

India must raise the standard of living for citizens, besides regulating the use of antibiotics to mitigate Anti-microbial resistance. Explain

KEY POINTS

- The recent publication of The Lancet's global burden of bacterial antimicrobial resistance an elaborate and studied estimate validated by using counterfactual analysis.
- It identified the pathogens and pathogen-drug combinations that cause such resistance. Bacterial AMR occurs when the drugs used to treat infections become less effective, as a result of the pathogens becoming resistant to the drugs.
- This happens due to indiscriminate use of antibiotics, availability of antibiotics over the counter, poor hygiene and sanitation, antimicrobial use in the farming and poultry industry, lack of vaccines and newer antibiotics, and poor infection control practices in hospitals.
- The Chennai Declaration, a consortium of doctors and health-care institutions against AMR, was also formed in 2012 to draw up a road map.
- No doubt AMR offers humanity one of the most complex challenges that it has faced; but the recognition that solutions are not only in the realm of science is necessary.
- While the scientific community looks for solutions in its ken, governments must raise the standard of living for citizens, provide them accessible and affordable quality health care, besides regulating the sale and use of antibiotics.
- Not doing so in studied haste will only land up eroding the significant health-care gains India has proactively, and painfully at times, secured over the years.

Food fortification offers a cost-effective complementary strategy for addressing the problem of under-nutrition. Discuss

KEY POINTS

- The government of India has planned to take accelerated steps to distribute fortified rice through the social safety net schemes of Targeted Public Distribution System, PM Poshan and ICDS in all parts of the country.
- Given that rice is the staple cereal for 65 per cent of Indians, fortifying rice with micronutrients and supplying it through safety net channels, which cover 800 million people, provides a promising opportunity for plugging the nutritional gaps.
- The success of the Costa Rican rice fortification programme has been mainly ascribed to a centralised rice industry, leveraging of the existing distribution channels, collaborative efforts of private and public sectors and ensuring consumer acceptability, among others.
- One example is the World Food Programme's collaboration with the Odisha Government to distribute fortified rice across 1,449 schools in Gajapati district through MDM scheme in 2012.

- Gajapati's schoolchildren experienced a reduction of 20 percentage points in the prevalence of anaemia as opposed to 14 percentage points in Rayagada, indicating a reduction of six percentage points that can be attributed to intake of fortified rice.
- Further, collaborations with knowledge and implementation partners would help leverage their expertise in implementation and measuring the impacts of the programme.

8. INTERNATIONAL RELATIONS

Discuss the significance of United Nations Security Council's joint statement on nuclear weapons.

KEY POINTS

- The P5 statement reaffirms that a “nuclear war cannot be won and must never be fought” because of its “far-reaching consequences”.
- The P5 statement was followed by a warning from UN Secretary-General that nuclear annihilation is “just one misunderstanding or miscalculation away”.
- Gandhi taught us that the right to peace is an essential framework for all human rights and that waging peace is everyone's work, regardless of vocation, profession, or discipline.
- This is required at multiple levels, ranging across the planetary, global, supranational, regional, national, and local levels of social cognition and action.
- Critical peace education should perform a number of tasks. Among these are: Bearing witness to negativity
- Gandhi would have certainly welcomed the slender but significant UN Resolution 39/11 (November 12, 1984), which “solemnly proclaims that the peoples of our planet have a sacred right to peace” and equally solemnly declares that the “preservation of the right of peoples to peace and the promotion of its implementation constitute a fundamental obligation of each State”.
- The subsequent UN Resolution 53/243 B, declaring a programme of action for a culture of peace (1999) also owes a great deal to Gandhi's legacy and mission. May the managers of our education system no longer privilege ignorance and the promotion of social indifference, resilient even now.

There are good reasons for a Free Trade Agreement that will spell many opportunities for India and Britain. Explain

KEY POINTS

- As part of that transformation, the two leaders declared their ambition to more than double bilateral trade by 2030, which totalled over £23 billion in 2019.
- They directed their governments to take rapid steps to reduce barriers to trade, and to complete the groundwork necessary to begin work on a Free Trade Agreement (FTA) by the end of 2021.
- Unlocking the export of British apples to India and enabling a greater number of Indian fisheries to export shrimp to the U.K. Small but meaningful steps by which both countries have demonstrated they can and have taken concrete measures to stimulate growth.

- The U.K. thrives on free trade. Having left the European Union's common trade bloc after 47 years (in 2020), we are building a network of like-minded democracies committed to free trade.
- India has an extraordinary opportunity to transform its economy and society in the next 30 years, as it hits its demographic sweet spot, at the heart of the Indo-Pacific region where half the world's people live and 50% of global economic growth is produced.
- It gives a new framework within which the two countries can grow and flourish together, putting the colonial economic relationship where it belongs.

Since the central asian region remains significant in India's strategic thinking, the engagement with the region remains crucial. Explain

KEY POINTS

- India has limited economic and other stakes in the central asian region, primarily due to lack of physical access.
- India's mission Central Asia today reflects, and is responsive to, the new geopolitical, if not the geo-economic, realities in the region.
- The decline of American presence and power in the broader region (due primarily to the U.S. withdrawal from Afghanistan) has led to a reassertion by China and Russia seeking to fill the power vacuum.
- India's engagement of Central Asia would also help it to consolidate its post-American Afghan policy. U.S. withdrawal from Afghanistan has landed India in a major dilemma – it has very limited space to engage Taliban 2.0 despite the current relationship whose future depends on a number of variables.
- An even bigger challenge for India may be Iran. India's best shot at reaching the CARs is by using a hybrid model – via sea to Chabahar and then by road/rail through Iran (and Afghanistan) to the CARs.
- India's ongoing outreach to Iran and the now-postponed visit of the Iranian foreign minister to New Delhi help repair some of the damage done to the relationship over the years.

Minister of external affairs visit to Australia provides opportunity to strengthen quad group and bilateral ties. Explain

KEY POINTS

- Minister's visit is beyond the bilateral; what draws him for his first visit to Melbourne, in his current role, is the meeting of the Quad Foreign Ministers from Australia, Japan, United States and India after more than two years.
- Bilateralism and multilateralism have not come easy for India. It is tempting to forget history, even be amnesiac about recent times, in the flood of affection that prevails today between New Delhi and Canberra.
- The Indian diaspora is finally coming of age in Australia; the population of Indian-born people has doubled in the last decade, and for the last five years.
- India remains the top source of skilled migration. The tourist and student traffic from India, which had been impacted by the sealing of Australia's borders because of Covid, should revive after the full opening of borders later this month.

- The bilateralism merges seamlessly into the multilateral agenda for the Quad, which formally or on the sidelines, will spend much of its time devoted to Beijing, its belligerence, its revisionism and its revanchism across the region.
- What is now vital is to demonstrate that these partnerships can truly deliver on transforming the reality on the ground by giving the Quad real substance and the Indo-Pacific a fighting chance at stability despite now predictable Chinese subversiveness.

An India-UAE free trade agreement will enable cumulative investment flows and help achieve desired export targets. Explain

KEY POINTS

- India has embarked on a new journey a new free trade agreement (FTA) journey to be precise with renewed zeal and vigour.
- India's approach towards FTAs is now focusing more on gaining meaningful market access and facilitating Indian industry's integration into global value chains.
- This is a very welcome move, where the Government of India can be seen actively revisiting pending FTAs, entering into fresh negotiations and also being open to interim and mini-trade deals.
- The UAE has emerged as an important economic hub not just within the context of the Middle East/West Asia, but also globally.
- Although the UAE has diversified its economy, 'the hydrocarbon sector remains very important followed by services and manufacturing. Within services, financial services, wholesale and retail trade, and real estate and business services are the main contributors'.
- India is aiming to achieve the U.S.\$1 trillion of merchandise exports and As part of the GCC, the UAE has strong economic ties with Saudi Arabia, Kuwait, Bahrain, and Oman, meaning the UAE shares a common market and a customs union with these nations.
- Under the Greater Arab Free Trade Area (GAFTA) Agreement, the UAE has free trade access to Saudi Arabia, Kuwait, Bahrain, Qatar, Oman, Jordan, Egypt, Iraq, Lebanon, Morocco, Tunisia, Palestine, Syria, Libya, and Yemen.

The crisis in Ukraine results in a serious blow to the global economy which is emerging from the pandemic. Examine

KEY POINTS

- The stand-off between Russia and the West over the former's imminent invasion of Ukraine is set to deal a serious impact on the global economy mainly through trade, finance and macroeconomic channels.
- On the financial side, the standoff could lead to an inflow into safe haven assets, besides commodities, weakening currencies of emerging economies if it intensifies.
- The Reserve Bank of India should, in the event that the crisis worsens, be prepared to defend the rupee at prevailing levels.
- This situation throws into jeopardy the 8-8.5 per cent real growth projection of Economic Survey 2021-22 for the next fiscal based on oil ruling at \$70-75 a barrel and withdrawal of global liquidity being "broadly orderly".

- The Monetary Policy Committee's inflation projection of 4.5 per cent for 2022-23 looks more optimistic than before; it has been observed that a 10 per cent rise in crude prices can lead to a 40-50 basis points rise in retail inflation.
- The Centre's tax revenues could be dented if it is forced to take an excise duty hit on fuel in the larger economic interest. The overall picture is worrying but the only consolation is that Russia is not a major trading partner.

In the context of Ukraine crisis, Government of India must incentivize farmers to grow more oil seeds. Explain

KEY POINTS

- Sunflower is India's fourth most consumed cooking oil, after palm, soyabean and mustard. The country imports about 98 per cent of its sunflower oil requirement almost 93 per cent of that coming from Ukraine and Russia.
- The ongoing conflict and disruption in shipments from Black Sea ports is rubbing off on these oils too, compounded by dry weather in South America and Indonesia imposing a 20 per cent domestic market sale obligation on its palm oil exporters.
- The country's vegetable oil import bill totalled \$11.09 billion in 2020-21 and \$14.02 billion in April-December 2021, which may well cross \$17-18 billion for the whole fiscal.
- Russia is, incidentally, also the world's top wheat exporter, with Ukraine at third position both in wheat (behind Australia) and maize (after the US and Argentina).
- The government should declare higher MSPs preferably, as a one-time bonus for groundnut, soyabean, sesamum and sunflower to incentivise farmers to grow these oilseeds in the ensuing kharif season.
- There is a need for focused campaigns, especially in states such as Punjab, Haryana, Telangana and Andhra Pradesh, to wean farmers away from paddy to oilseeds, pulses and cotton.
- The best way to do it is through guaranteed MSP procurement which may not be required if open market prices stay high.

G.S PAPER III

9. ECONOMY

As India is too vulnerable to oil prices, India must secure oil needs through various modes of investment. Explain

KEY POINTS

- European countries discovered an uncomfortable truth that renewable energy doesn't always mean reliable energy and rushed to buy natural gas to make up the shortfall.
- Natural gas is used to manufacture urea—and a spike in gas prices will make fertiliser, and therefore food more expensive.
- This should worry India, which imports almost 4 million barrels/day or 1.4 billion barrels/year of oil, a number that will continue going up for the foreseeable future.
- Electric two-wheelers are still a small slice of the two-wheeler market, which in turn accounts for a fraction of petrol demand and petrol accounts for less than 15% of India's total oil consumption.
- India sits next to the world's largest oil exporters in West Asia, and the returns from oil investments can be used to pay for oil from one of these countries.
- As an oil importer with large and growing needs, India too is vulnerable to oil prices when they rise sharply and can use the same approach to reduce its risks.
- At times when oil prices are low, as they have been from 2015-2020 including a brief stretch of negative price, some of the windfall can be channelled into such a fund, to mitigate pain if oil prices rise sharply.

The introduction of a taxation regime for virtual digital assets has provided opportunities for the investors. Elaborate

KEY POINTS

- Finance Minister has proposed to tax all profits from transactions in such assets at 30% along with the applicable surcharge and cess, and a 1% tax to be deducted by buyers while trading in any virtual digital asset beyond a threshold.
- While trading profits will be taxed at, according to crypto industry players, a higher rate compared to other jurisdictions, no deductions will be allowed on account of setting off losses from such trading or from any other capital losses.
- The only deduction permitted would be the cost of acquiring the asset. The term 'property' under the I-T Act is being expanded to include virtual digital assets so that such assets received as a gift shall be taxable except when received from relatives.
- The Government may still not consider them fully legit, yet the tax regime indicates the hard option of an outright ban that was signalled in the nomenclature of a proposed crypto law last year is off the table.
- The delay in arriving at a decision also pre-empts Indian start-ups and innovators from developing products and ideas that can be scaled up globally given the nature of these assets.
- It is time those words are matched with a clear regulatory framework soon instead of ambiguous waffling and dithering.

Public Sector Banks need to move towards Banking as a Service model. Do you agree with this view? Explain

KEY POINTS

- Public Sector Banks (PSBs) need to increasingly connect or forge partnerships with technology partners and move towards the Banking as a Service (BaaS) model.
- This will allow banks to rapidly innovate and expand their product and service offerings through a collaborative partner ecosystem.
- This could happen by providing easy access to digital lending to SME (small and medium enterprises) with minimal paperwork;
- Digitalising agriculture lending by bringing in GIS (Geographic Information System) and other data intensive technology;
- It emphasised that PSBs can play a significant role in India's quest towards truly Atmanirbhar (self-reliance) by ensuring a simplification of lending process to ensure credit delivery catering to all segments of the population, especially to the agriculture and manufacturing sectors.
- The Fourth Industrial Revolution will use Green Hydrogen & EV (carbon neutral fuels) is building on the digital revolution that has been occurring since the last four decades.
- "It is characterised by a fusion of technologies that is blurring the lines between the physical, digital, and biological spheres.
- It is this interlinkage between an Industry 4.0 Model and Banking 4.0 model that we must constantly pursue in the future.

In order to boost exports, amendments in Special economic zones act need to be followed by better labour laws. Analyse

KEY POINTS

- At a time when India is poised to breach the annual \$400-billion target for exports, the move to change laws governing the Special Economic Zones Act comes as a big boost for the sector.
- About 270 SEZs are currently operational, though many more have been notified. In rewriting the SEZ legislation, the commerce ministry will be guided by the recommendations of the Baba Kalyani report, submitted in November 2018.
- India's coastline of 7,517 km, abutting nine states, can be leveraged to develop large hubs or industrial clusters near deep draft ports to enable goods to be sent out.
- A lower duty would, no doubt, help boost sales. But it will neutralise the advantages that SEZs enjoy, being specifically delineated duty-free enclaves, vis-à-vis domestic manufacturers to ensure a level-playing field.
- To be sure, the changes to SEZs need to be accompanied by better labour laws and lower levels of protectionism.
- Ahead of the Budget, it was cautioned industry telling it to brace for increased competition and think global since India was going to sign a host of 'very deep' FTAs with advanced economies like Australia, the UK and the EU.

Discuss the various impacts related to SEBI's recently approved key changes with respect to related party transactions.

KEY POINTS

- Related party transactions (RPTs) often are the route taken by Indian companies for easy access to capital, managing contract delays, mitigating supply constraints, curtailing costs, etc.
- Research by TARI shows over 51% of the financial fraud between 2012 to 2018—investigated by regulators and resulting in indictment—have used RPTs as the favoured mechanism.
- A key change is including “promoter” within the definition of a related party, and including any person/entity holding equity shares either directly or on a beneficial interest basis, amounting to 20% or more with effect from April this year, and 10% or more from April 2023.
- Another key change is revising the materiality threshold for obtaining shareholder approval to cover transactions that exceed Rs 1,000 crore or 10% of the annual consolidated turnover, whichever is lower.
- Accordingly, large transactions, even in the ordinary course of business, can be undertaken only pursuant to shareholders' approval.
- Unlike the Companies Act, 2013, SEBI has not chosen to provide any exemption to transactions done in the ordinary course of business and on an arm's length basis.
- SEBI's recent amendments hold the risk of a policy overkill and could adversely impact the business climate in India.

Enabling offline payments are critical in embracing the Digital India dream comprehensively. Discuss

KEY POINTS

- For a country such as India, characterised by sheer size and uneven regional development, access to amenities such as the internet is underlined by glaring differences.
- This scenario has been a barrier in India's vision to become a digital society, especially in the area of digital payments, as these methods require a working network/telecom connection at the merchant's or customer's end.
- An offline digital payment can be done without the need for any internet or telecom connectivity. Such payments can be done using any existing payments modes, such as cards, wallets, mobile devices etc.
- These measures will help reduce any fraud risk that may arise from allowing offline transactions, which are being processed without any Additional Factor of Authentication. Customers will also enjoy existing protections on limiting customer liability in case of any disputed transaction.
- Technologies such as NFC will allow offline payments without high charges incurred in USSD mode. SIM overlay is another potential solution, where payment functionalities are enabled on SIM card, allowing offline payments.
- Nearly 70% of India's rural population and 33% urban population is yet to adopt digital means of payments. For the country to fully embrace the Digital India dream, enabling offline payments will be critical given the boost it can give for digital payments.

Access to data in a trusted ecosystem can be instrumental in creating value and promote equitable access to digital and data economy. Examine

KEY POINTS

- India has the third largest start-up ecosystem in the world. Many of these start-ups, especially in agriculture, health, logistics and education require complete, accurate, usable and validated datasets.
- For an efficient data economy, it is imperative that data consumers can interact with one/multiple data fiduciaries through a platform.
- It is estimated that by 2025, data and AI could add up to \$500 billion to India's GDP. With so much data being generated, even if a part of this data is exchanged between public-private sector in a trusted ecosystem.
- Made practicable through a consent manager, namely, e-Sahamathi, it allows a citizen to provide her consent to interested third party private service providers to use her data for specified purpose.
- Through an open API, the third party can access the data of only that citizen who has explicitly consented. This ensures that the citizen always remains in control of her personal data.
- A third-party service provider desirous of accessing personal data is required to submit an application with the list of partners with whom the service provider will be sharing data.
- Data is an inexhaustible and limitless resource. With fourth industrial revolution technologies, data can be used, re-used and re-purposed with infinite possibilities.

Corporate Social Responsibility funding can be invested to create a better social transformation in the country. Discuss

KEY POINTS

- In 2019, Finance Minister Nirmala Sitharaman announced that the scope of corporate social responsibility (CSR) is being expanded to allow firms to support research and innovation by government-funded incubators.
- A policy environment that encourages CSR investments in technology-led solutions has made sustainable and scalable solutions a reality.
- Additionally, collaborations with local bodies and the establishment of governance and community engagement structures can ensure these projects become self-sustainable in the long run.
- For example, IIT Madras is home to one of the best deep tech startup ecosystems in the country with one new tech start-up being incubated every week.
- The fact that the government's CSR policy allows a company to choose to intervene at any point in the end-to-end tech value creation process is a great enabler.
- Leveraging CSR for innovation through educational institutions such as the IITs also presents an opportunity to harness and nurture the potential of the students and faculty.
- It is time for companies to leverage their CSR to invest in projects which will create transformative value in the long term, drive change, contribute to the research and innovation ecosystem, and nurture future talent by building partnerships with institutions of learning.

Given the government's intention to protect small investors from excessive volatility, a higher tax rate is much warranted in crypto currency markets. Elaborate

KEY POINTS

- Cryptocurrencies have been gaining momentum as the preferred trading and/or investing vehicle across the globe and at home.
- Budget 2022 defined cryptocurrencies under the broad umbrella of virtual digital assets, including DeFi (decentralised finance) and NFTs (non-fungible tokens).
- Further, 1 per cent TDS shall be levied against any transaction. Losses made on any transaction are not deductible against any other income.
- While investors have welcomed the recognition of cryptos as a digital asset by the government, some experts opine that the tax rate is high, which might hurt and deter small investors.
- The move to levy TDS is also welcome as this will ensure that government will be able to track all such transactions, thereby helping monitor money laundering activities.
- Further, this high tax rate may deter small, casual and uninformed investors from the market and save them from incurring huge losses.
- While a 30 per cent flat rate of digital tax seems high, it may not be a deterrent as far as big investors are concerned.
- A higher rate would do well given the risk-return profile while trading in cryptos and overall opaqueness concerning how the crypto prices work.
- Further, given the government's intention to protect small investors from excessive volatility and cheating, a higher tax rate is much warranted.

To truly enhance the sustainability of MSMEs, the regulators should allow more fin-tech companies to participate in TreDS platform. Explain

KEY POINTS

- TReDS was launched by the Reserve Bank of India (RBI) in 2018 with the sole objective of tackling the needs of MSMEs, which are two-fold: promptly en-cashing receivables and eliminating credit risk.
- TReDS, a digital platform, was set up to be a catalyst for the growth of MSMEs by bringing in transparency and facilitating access to finance by auctioning their bills and invoices raised against large corporates, including government departments and public sector undertakings.
- Micro-enterprises are often thin-file borrowers and also supply to smaller buyers the current depth of TReDS exchanges does not support such small buyers and sellers.
- In India, there were 6.3 crore MSMEs registered in 2021; micro-enterprises constituted 94.5% of them, followed by small enterprises at 5% and medium enterprises at 0.5%.
- There was a surge in TReDS usage to fund the MSME units and meet their priority sector lending obligations. Subsequently, the government adjusted to this increased demand and widened the scope of the Factoring Act of 2011 to allow NBFCs to be a part of TReDS.
- Allowing more of these players under the umbrella will increase the platform's reach and impact, and only then will this type of credit be genuinely inclusive.

The incidence of unclaimed bank deposits can be minimized via meaningful cooperation between commercial banks and customers. Discuss

KEY POINTS

- Unclaimed deposits are commonly defined as those deposits which are lying in accounts not operated for a period of 10 or more years.
- Section 26 of the Banking Regulation Act, 1949 requires banks to submit to RBI information about these accounts within 30 days after each calendar year ends.
- Public Sector Banks (PSBs), obviously, had the highest share both in terms of number of accounts (84 per cent) and amount outstanding (83 per cent).

Possible solutions

- Organising area-wise special camps for revival or disposal of unclaimed accounts.
- Monitoring the position of unclaimed deposits in customer grievance redressal meetings at various levels.
- Business Correspondents can help establish contact with the holders of inoperative accounts or their legal heirs and reactivate the accounts.
- Asking banks to report the unclaimed deposits data population group-wise (i.e., rural/semi-urban/urban/metro) so that the issue can be tackled more effectively.
- Commenting upon the position of unclaimed deposits while carrying out on-site inspections of banks.

10. AGRICULTURE

India's performance in Agriculture orientation index necessitates the need to attain a higher agricultural-growth. Discuss

KEY POINTS

- While the overall budgetary allocation towards the agricultural sector has marginally increased by 4.4% in the Union Budget 2022-23, the rate of increase is lower than the current inflation rate of 5.5%-6%.
- The picture changes and rather looks disappointing when we look at the Agriculture Orientation Index (AOI) an index which was developed as part of the Goal 2 (Zero Hunger) of the 2030 Agenda for Sustainable Development in 2015.
- The AOI is calculated by dividing the agriculture share of government expenditure by the agriculture value added share of GDP.
- India holds only the 38th rank in the world, despite being an agrarian economy wherein a huge population is dependent on the agricultural sector for its livelihood.
- the Pradhan Mantri Annadata Aay SanraksHan Abhiyan (PM-AASHA) experienced a significant reduction to only one crore as against the allocation of Rs 400 crore in 2021-22.
- The intensification in government spending towards the agricultural sector is the key to attain the sustainable development goals of higher agricultural growth and farm income.

- The focus on development of irrigation facilities, urban infrastructure and development of national highways must be complemented with an emphasis on the development of rural infrastructure and rural transportation facilities.

As the funds are allocated under Rashtriya Krishi Vikas Yojana, suggest measures to scale up chemical-free farming in the country.

KEY POINTS

- Currently-operational schemes such as the Paramparagat Krishi Vikas Yojana and the National Project on Organic Farming did not find any mention in the budget.
- Focus on promoting natural farming in rainfed areas beyond the Gangetic basin. Home to half of India's farmers, rainfed regions use only a third of the fertilisers per.
- Enable automatic enrolment of farmers transitioning to chemical-free farming into the government's crop insurance scheme, PM Fasal Bima Yojana (PMFBY).
- Any transition in agriculture crop diversification, change in farming practices adds to the farmer's risk. Covering such risks could enhance the appetite of the farmers to embark on the transition.
- Not every farmer has the time, patience, or labour to develop their own inputs. To address this challenge, combine the promotion of natural farming with the setting up of village-level input preparation and sales shops.
- Learning from peers, especially champion farmers, through on-field demonstrations has proved highly effective in scaling up chemical-free agriculture in Andhra Pradesh.
- India's food system needs a holistic transformation in demand, production, and supply chains. Let's hope 2022-23 is the inflection point when we convert intent into action in our journey towards achieving a chemical-free food system.

11. ENERGY

Irrespective of the costs, the budget boost to solar production linked incentive scheme will strengthen the energy security. Discuss

KEY POINTS

- The Budget has once again underscored the Centre's determination to promote solar power to curb carbon emissions and promote energy security.
- It has received proposals to set up a whopping 58 GW of module capacity (about four times prevailing levels), for which the initial sum of Rs4,500 crore was insufficient.

- Clearly, module capacity needs to be ramped up to meet decadal goals. India has targeted an installation of 280 GW of solar capacity by 2029-30, up from the existing level of 49.35 GW, whereas it has “limited operational annual capacities” of around 2.5 GW for solar PV cells and 9-10 GW of solar modules.
- To create another 230 GW of capacity over eight years would amount to an annual addition (or an integrated capacity to make modules from scratch from polysilicon to wafers to final assembly) of nearly 30 GW.
- The Centre’s push to solar must be complemented by a similar impetus to green hydrogen and frontier areas such as non-lithium based batteries, where no country holds an advantage as yet.
- China remains the leader in solar, but India’s chance lies in the evolution of a world order that seeks to develop alternative supply chains in crucial areas.

The recent budget’s push to capital expenditure will have multiplier effect in the Indian economy. Do you agree with this view? Comment

KEY POINTS

- Facing the trade-off between growth and inflation, the Finance Minister chose the former over the latter, and rightly so.
- As the real GDP growth rate for 2022-23 is estimated at 8-8.5 per cent by the Economic Survey 2021-22, the implicit rate of inflation works out to 3.1-2.6 per cent.
- The Budget aims at invigorating aggregate demand through public expenditure, and within it, through capital expenditure.
- While revenue expenditure has gone up by less than a per cent, capital expenditure has surged by nearly 25 per cent. This is besides the Rs 1 trillion grant given to States to increase capital expenditure from their side.
- Emphasis on public capital expenditure, a redeeming feature of the Budget, will have a multiplier effect on income augmentation, employment generation and, consequently, demand rejuvenation.
- So will credit demand. This will also “crowd in” private investment. Capital formation, both public and private, will provide a stepping stone for growth not only in the short-term but also in the long-term.
- The tax on “virtual digital assets” will enable the government to earn revenue while empowering income tax authorities to break new ground in reopening of closed cases.
- Therefore, taxpayers’ money has to be utilised appropriately, especially in a Budget which envisages massive capital expenditure.

The solution for unlocking India’s solar potential lies in strengthening its domestic production infrastructure. Analyse

KEY POINTS

- India accounts for merely 1% of the global production capacity; in contrast, China makes up 71%. With India missing competitiveness, there is huge dependence on imports of solar cells and modules.
- To combat this import dependence, the finance ministry has already ordered imposition of 40% and 25% Basic Custom Duty (BCD) on the import of solar modules and solar cells, respectively, from April 1, 2022.

- In India, purchasing the required material for solar energy production is a cost-intensive activity because of the existing policies, which puts Indian companies in a disadvantaged position as compared to other foreign players.
- The dismal state of documentation of land ownership is one of the key reasons that cause complications in the land acquisition/purchase process.
- Other factors that need to be considered for facilitating land availability for setting up solar plants include relaxing land ceiling limits for solar energy developers.
- Given India's demographic dividend advantage, labour supply does not appear to be a problem; however, ensuring the right skilling is the key.
- This requires organising training programs that aim to impart the right skills needed for the solar energy sector, and Budget FY23 has recognised and addressed these needs for the overall economy.

12. S & T

India should assess the technology-led growth priorities in the context of artificial intelligence's climate costs. Elaborate

KEY POINTS

- The “race” for dominance in AI is far from fair: Not only do a few developed economies possess certain material advantages right from the start, they also set the rules.
- They have an advantage in research and development, and possess a skilled workforce as well as wealth to invest in AI.
- The climate impact of AI comes in a few forms: The energy use of training and operating large AI models is one.
- In 2020, digital technologies accounted for between 1.8 per cent and 6.3 per cent of global emissions.
- At the same time, AI development and adoption across sectors has skyrocketed, as has the demand for processing power associated with larger and larger AI models.
- In 2021, UNESCO adopted the Recommendation on the Ethics of Artificial Intelligence, calling on actors to “reduce the environmental impact of AI systems, including but not limited to its carbon footprint.”
- Like most nexus issues, the relationship between climate change and AI is still a whisper in the wind. It is understudied, not least because the largest companies working in this space are neither transparent nor meaningfully committed to studying, let alone acting, to substantively limit the climate impact of their operations.

If each Indian start-up is encouraged to file and secure at least one patent, that can prove to be a big leap from current status. Discuss

KEY POINTS

- The Economic Survey 2021-22 indicates that the number of new recognised start-ups has increased to over 14,000 in 2021-22, from only 733 in 2016-17.

- The number of IP patents filed in India increased 30% in the past five years. This, in turn, has boosted India's ranking in the 'Global Innovation Index', taking it from 81 in 2015-16 to 46 in 2021.
- The Economic Survey has mentioned with concern the huge gap in patents-filing between India and other countries and attributed it to the low expenditure on research and development (R&D).
- The R&D spends in India were a mere 0.7% of the country's GDP in 2020.
- According to the Survey, the average time taken for a decision to grant patents in India in 2020 was 42 months, compared to 52 months (2019) and 64 months (2017).
- Many global tech majors have some of their R&D bases in India. Yet, to fast-track their patent filings, many of them register their patent filings outside of India.
- By bringing awareness and literacy about intellectual property rights at the middle and high school level, we can generate more awareness.
- Hopefully, it can use the philosophy of trust-based governance that was announced in the Union Budget FY23, and bring reforms to fast-track the patent process.

The influence of artificial intelligence brings out changes in the social structure of the country in various ways. Discuss

KEY POINTS

- AI is the technology that can think and act like humans, think rationally, or act rationally or the technology that simulates or imitates human intelligence, but with super-charged processing power.
- Machine learning finds key relevance in fraud detection and surveillance which may include pedestrian detection and traffic light control, automatic license plate reading for access control, for public safety.
- The concept of workplace may also be redefined with the advent of AI with the definition of workplace incorporating global platform with 24/7 concept, work at home as also freelancers.
- The financial implications on the other hand may be the emergence of new frameworks of taxation skewed towards company tax with less individual taxes.
- The implications of AI on education sector may lead to its revamp with programmes such as 'Skills future' developed in Singapore in this context, wherein its concept vis-a-vis reality may be interesting.
- The protection of personal data in the AI environment may be a serious challenge wherein there may be trade-off between privacy and prosperity.
- However, the major challenge for the society may be the changing values, with requirement of more "human" values such as love and compassion, co-existing with AI.

13. ENVIRONMENT

Explain the various strategies that are required to expand the total forest cover of the country.

KEY POINTS

- The recently released India State of Forest Report (ISFR) 2021 shows the total forest and tree cover in India is 80.9 million hectares, which is 24.62 per cent of the geographical area of the country.
- The assessment of forest cover is done based on the interpretation of satellite data, which basically identifies umbrella-shaped canopies from the sky.
- The forest cover is also estimated from field inventory data, which corroborates the figures of forest cover obtained from the satellite-based interpretation.
- In the present scenario, the possibility of a sizeable increase in forest cover is limited due to the inelasticity of forest land
- The provisions in draft NFP 2021 include substantially increasing the tree cover outside forests by incentivising and promoting agro-forestry and farm forestry;
- managing and expanding green spaces in urban and peri-urban areas to enhance citizens' well-being; plantation of trees outside forests in partnership with local communities, land-owning agencies, and private enterprises;
- creation, sustainable management and promotion of urban forests (woodlands, gardens, avenue plantations, herbal gardens, etc.) as an integral component of urban habitat planning and development;
- afforestation/reforestation in public-private partnership (PPP) mode; promotion of urban forests, which include woodlands, wetlands, parks, tree groves, tree garden, plantations in institutional areas, on avenues and around water bodies, etc.

Carbon Capture Utilization and Storage technology must be perceived as a part of the existing technologies which needs to be deployed effectively. Explain

KEY POINTS

- With specific reference to the goals of reducing projected carbon emissions by one billion tonnes by 2030 and turning net zero 2070, the role of Carbon Capture, Utilization and Storage (CCUS) becomes pronounced.
- It involves capturing CO₂ from point sources and recycling it for producing oils, chemicals, fertilisers, construction material etc. or permanently storing the captured CO₂ in geological formations.
- The first course of action with regard to storage of sequestered carbon should be to identify and map out possible storage sites.
- The next step would involve ascertaining these sites fulfil the basic minimum requirements of possessing adequate capacity and injectivity rates, requisite cap rock containment capacity, sufficient depth, favourable geothermal characteristics, exposure to low seismic activity, etc.
- According to a report by the IEA (2020), these processes alone can take up close to ten years to complete, thereby underlining the need for swift action.
- The costs incurred for transporting CO₂ via onshore pipelines in the US varies between \$2-14 per tonne
- CCUS must not be disregarded solely on the basis of current high costs. Being the only technology option that can help reduce as well as remove unavoidable emissions from the atmosphere, it would perhaps be misguided to overlook its potential contribution in the Indian scenario.

Discuss the steps that are required to make India a global leader in green hydrogen production.

KEY POINTS

- The cost of power constitutes anywhere between 50% and 70% of the total cost of green hydrogen depending on the location of production and the source of renewable energy, whether wind or solar.
- The open-access charge in turn is a significant portion of the cost of power. According to analysis by the Council on Energy, Environment and Water (CEEW), the cost of green hydrogen production could drop by 17% in a state such as Uttar Pradesh (UP) due to the waiving of the central transmission charges for states importing renewable power.
- The story is slightly different when renewable energy is produced in the same state as green hydrogen production. Inter-state transmission charges would not apply in such cases.
- For example, according to CEEW analysis, if intra-state charges were waived off in Gujarat and power also wheeled from within the state, the cost of green hydrogen production would drop by 12%.
- Under RPO mandates specific end users are required to purchase a minimum level of renewable power out of their total power consumption, which differs by the type of end user and state.
- Hence, the inter-state transmission charge waiver should be extended beyond 2025 and up to 2030, post which green hydrogen would become commercially viable due to scale of production.
- Adopting these recommendations would make green hydrogen production significantly competitive both domestically and in the export markets.

The idea of river inter-linking projects can address the issue of water scarcity and food security in the country. Critically analyse

KEY POINTS

One of the biggest announcements made in Budget 2022-23 is the implementation of the Ken-Betwa Link Project with an estimated cost of Rs 44,605 crore.

The benefits

- The RLP involves the process of diverting surplus river water through a network of canals to water-starved areas either within or outside a State.
- The RLP will balance the uneven water flow in different river basins, which otherwise flows wastefully into sea.
- The diversion of water from surplus to water-starved area will ensure food security, resulting in poverty reduction.
- The National River Linking Project (NRLP) proposes to transfer the excess flood water from the States to the water scarce regions.
- It claims to provide additional irrigation to about 35 million hectares in the water scarce western and peninsular regions.

The concerns

- RLP can do irreversible damage; the large network of dams and canals will alter the natural drainage leading to flooding.
- surplus water should not be diverted from a river on a large scale as the excess water is necessary to keep river basins healthy as it percolates down to the soil, recharges groundwater, etc.
- RLP appears to be an effective solution for addressing the problems of water scarcity, poverty and flood.
- There may be a concern over the sharing of a scarce resource; this could also be one of the main reasons for States not willing to share their surplus water with other States.

Green space and other nature-based solutions are an essential component for the development of sustainable, resilient and inclusive cities. Explain

KEY POINTS

- As the UN World Cities report highlights, expect the present population of urban areas to increase from 55% to 68% by 2050.
- Green spaces in cities and towns besides providing various ecosystem services and public health benefits also offer services of psychological relaxation, stress reduction.
- The ever-increasing pace of urbanisation will make this condition even worse. There have been various international meetings, conferences and agreements to improve access to fair green space to achieve the objectives of sustainable urban policies.
- Ensuring environmental sustainability is one of the three interlinked principles of the New Urban Agenda adopted at the United Nations Conference on Housing and Sustainable Urban Development (Habitat III) in 2016.
- The importance of green space has also been highlighted in Self Development Goal 11 dealing with sustainable cities and communities to make cities and human settlements inclusive, safe, resilient and sustainable.
- To ensure a delicate balance between development and the environment, the activities aimed at a reduction in negative environmental externalities and their impact on natural resources and environmental services as an important aspect of green growth have become essential for city planners and managers.

The problem of plastic pollution, being a negative externality to the Indian economy, must be addressed comprehensively. Discuss

KEY POINTS

- A report released by the United Nations Environment Programme (UNEP) last year estimated that emissions of plastic waste into the aquatic ecosystems may triple by 2040.
- Plastic products in the form of bags, bottles, etc. are convenient, but take a very long time to decompose. Increasing global consumption and low participation in recycling programmes have led to more plastic waste.
- Plastics represent an example of a consumption externality, which involves many people, rather than a production externality, which involves one or multiple firms.
- But it also causes inconvenience for consumers, increases substitution cost, and creates unemployment shocks as it affects the production of plastics, leading to less economic activity.

- A tax rate, in particular, needs to be carefully determined and should work as a deterrent. In general, the rate of tax on plastics should be higher than the cost of compliance.
- Thus, comprehensive policy measures against plastics may generally involve three complementary activities: the removal of existing taxes and subsidies that have a negative environmental impact, taking into account the different types or grades of plastics, and restructuring existing taxes in an environmentally friendly manner.

SHANKAR IAS ACADEMY