Article 142

For Prelims: Pardoning Power of the President, Article 72, President, Governor

For Mains: Challenges in adoption of Complete justice by Supreme court (Article 142), Article 162

Why in News?

Recently, the Supreme Court has invoked its **extraordinary powers to do complete justice under Article 142 of the Constitution** and ordered the release of A.G. Perarivalan in former **Prime Minister Rajiv Gandhi assassination case.**

- The court protected federalism by holding that States had the power to aid and advice the Governor in case of pleas of pardon under **Article 161** made by convicts in murder cases.
- **Article 161 provides** that the **Governor of a State shall have the power to grant pardons**, reprieves, respites or remissions of punishment or to suspend, remit or commute the sentence of any person convicted of any offence against any law relating to a matter to which the executive power of the State extends.

What is the Supreme Court's Ruling?

- Tamil Nadu Council of Ministers' advice in 2018 to pardon Perarivalan was **binding on the Governor under** Article 161 (Governor's power of clemency) of the Constitution.
- The Governor's reluctance to **take a call on the pardon plea has compelled the court to employ its constitutional powers under Article 142** to do justice to Perarivalan.
- The Supreme Court used Article 142 of the Constitution that grants it extraordinary powers to do complete justice, to release Perarivalan.
- The court dismissed **the Centre's argument** that the President exclusively, and not the Governor, had the power to grant pardon in a case under **Section 302 (murder) of the** Indian Penal Code, saying **this contention would render Article 161 a "dead-letter" and create an extraordinary situation** whereby pardons granted by Governors in murder cases for the past 70 years would be rendered invalid.

What is Article 142?

- **Definition:** Article 142 provides **discretionary power to the Supreme Court** as it states that the Supreme Court in the exercise of its jurisdiction may pass such decree or make such order as is necessary for doing complete justice in any cause or matter pending before it.
- **Constructive Application:** In the early years of the evolution of Article 142, the general public and the lawyers both lauded the Supreme Court for its efforts to bring complete justice to various deprived sections of society or to protect the environment.
    - The **Cleansing of Taj Mahal and justice to many undertrials** is a result of the invocation of this article only.
- **In the Union Carbide case**, relating to the victims of the **Bhopal gas tragedy**, the Supreme Court placed itself above the laws made by the Parliament or the legislatures of the States by saying that, to do complete justice, it could even override the laws made by Parliament.

- However, in the **Supreme Court Bar Association v. Union of India**, the Supreme Court stated that Article 142 could not be used to supplant the existing law, but only to supplement the law.
  - **Cases of Judicial Overreach**: In recent years, there have been several judgments of the Supreme Court wherein it has been foraying into areas which had long been forbidden to the judiciary by reason of the **doctrine of 'separation of powers',** which is part of the **basic structure of the Constitution.** One such example is:
    - **The ban on the sale of alcohol along national and state highways:** While the notification by the central government prohibited liquor stores along National Highways only, the Supreme Court put in place a ban on a distance of 500 metres by invoking Article 142.
    - Additionally, and in the absence of any similar notification by any of the State governments, the court extended the ban to State highways as well.
    - Such judgments have created uncertainty about the discretion vested in the court to invoke Article 142 where even fundamental rights of individuals are being ignored.

Way Forward

- The Supreme Court needs to introspect on whether the use of Article 142 as an independent source of power **should be regulated by strict guidelines.**
- Another option is that all cases invoking Article 142 **should be referred to a Constitution Bench** of at least five judges so that this exercise of discretion may be the outcome of five independent judicial minds operating on matters having such far-reaching impact on the lives of people.
- In all cases where the court invokes Article 142, the government **should bring out a white paper to study the beneficial as well as the negative effects of the judgment** after a period of six months or so from its date.

What is Pardoning Power of President?

- **Article 72 empowers the President the power to grant pardons, reprieves, respites or remissions of punishment or to suspend, remit or commute the sentence** of any person convicted of any offence. The meaning of these terms is as follows:
  - **Pardon: It removes both the sentence and the conviction** and completely absolves the convict from all sentences, punishments, and disqualifications.
  - **Commutation:** It denotes the **substitution of one form of punishment** with a lighter form of punishment. For example, a death sentence may be commuted to rigorous imprisonment.
  - **Remission**: It implies **reducing the period of the sentence without changing its character.** For example, a sentence of rigorous imprisonment for five years may be remitted to rigorous imprisonment for one year.
  - **Respite**: It denotes **awarding a lesser sentence in place of one originally awarded due to some special fact**, such as the physical disability of a convict or the pregnancy of a woman offender.
  - **Reprieve:** It implies **a stay of the execution of a sentence (especially that of death)** for a temporary period. Its purpose is to enable the convict to have time to seek pardon or commutation from the President.

(a) The decisions taken by the Election Commission of India while discharging its duties cannot be challenged in any court of law.

(b) The Supreme Court of India is not constrained in the exercise of its powers by laws made by the Parliament.

(c) In the event of grave financial crisis in the country, the President of India can declare Financial Emergency without the counsel from the Cabinet.

(d) State Legislatures cannot make laws on certain matters without the concurrence of Union Legislature.

Ans: b

Exp:

- According to Article 142(1) of the Indian Constitution, the Supreme Court in the exercise of its jurisdiction may pass such decree or make such order as is necessary for doing complete justice in any cause or matter pending before it, and any decree so passed
or orders so made shall be enforceable throughout the territory of India in such manner as may be prescribed by or under any law made by Parliament and, until provision in that behalf is so made, in such manner as the President may by order prescribe.
- Thus, Article 142 supplements the powers already conferred upon the Supreme Court under the Constitution to guarantee that justice is done and in doing so the Court is not restrained by lack of jurisdiction or authority of law.
- **Therefore, option (b) is the correct answer**

Source: TH

UN Plans to Promote Renewable Energy

For Prelims: Renewable Energy, Pollution Control measure, United Nations, Greenhouse gasses

For Mains: Future prospect of the renewable energy plan and policy of the Indian government. Associated challenge and concern

Why in News?

Recently, The UN's weather agency **World Meteorological Organization** reported that greenhouse **gas concentrations**, **ocean heat**, **sea-level rise**, and **ocean acidification** all set new records last year.

- According to the **World Meteorological Organization** Extreme weather has resulted in fatalities, sickness, migration, and economic losses.
- The number of **extreme weather occurrences** has been **doubled by 2020**, according to the United Nations.
- The UN's chief launched a **five-point plan to jump-start broader use of renewable energies** in the hopes of reigniting global attention on **climate change**.

What did the United Nations Secretary General Urge?

- The **United Nations General Secretary** supported **technology transfer** along with lifting the protection on **intellectual property rights** regarding r**enewable technologies.**
- Supply chains for **renewable energy technology** **should be broadened** which are now concentrated in the hands of the few developed nations in the wake of high rise in the level of pollution and its consequences.
- The **United Nations Secretary-General** urges states to **restructure its energy demand and supply** in ways that favor renewable energy, such as speeding up **solar and wind projects.**
- **Subsidies to fossil fuels** should be removed by the states.
- **Investment** in the field of **renewable energy production** should be prompted to grow at least $4 trillion dollars a year.

Why should fossil fuel be avoided?

- **Burning of fossil fuels emits hazardous chemicals** such as sulfur dioxide and nitrogen oxides and other harmful gases are released in the atmosphere.
- **Sulfur dioxide and nitrogen oxides form acid rain:** Quick dissolution of the SO_2 and NO_2 in water resulted in acid rain.
- **Use of fossil fuel should be curtailed** and use of renewable sources of energy should be promoted to keep pollution in Control.
- **Fossil fuel intensifies global warming and climate change** which ultimately leads to extreme weather events.
- **Fossil fuel extraction devastated huge stretches of land** for establishment of infrastructure such as roads, pipelines, processing facilities, and waste storage in addition to the main extraction site.

What is the State of the Climate Report 2021?

- **About:**
  - **The State of the Climate Report for 2021** is published by the **World Meteorological Organisation.**
- **Key Features:**
  - The global mean temperature in 2021 was around 1.11 ± 0.13 °C above the 1850–1900 pre-industrial average.
  - The most recent seven years, 2015 to 2021, were the seven warmest years on record.
  - Global mean sea level reached a new record high in 2021, rising an average of 4.5 mm per year over the period 2013–2021.
  - The compounded effects of conflict, extreme weather events and economic shocks, further exacerbated by the **Covid-19 pandemic**, undermined decades of progress towards improving food security globally.
  - **Carbon dioxide concentration is increasing** in the atmosphere due to continuous growth in fossil fuel combustion.
- According to the report, extreme weather events globally are :
  - **Hurricane or cyclone:** Strong wind, heavy rain.
  - **Dust storm:** Strong winds, arid conditions.
  - **Flood:** Heavy rainfall.
  - **Hailstorm:** Cold or warm temperatures, rain, ice.
  - **Ice storm:** Freezing rain.
  - **Tornado:** Clouds, strong wind, rain, hail.
  - **Blizzard:** Heavy snow, ice, cold temperatures.
- **Risks and impacts:**
  - **Food Security Challenges:**
    - The number of undernourished people in the world significantly increased during the Covid-19 pandemic, from 650 million people in 2019 to 768 million people in 2020.
    - Global warming has exacerbated the issues of food insecurity in the less developed countries.
  - **Humanitarian Impacts and Population Displacement:**
    - Refugees, internally displaced people and stateless people are often among those

most vulnerable to climate and weather-related hazards.
- Many vulnerable individuals who are displaced end up settling in high-risk areas, where they are exposed to climate and weather hazards at a range of scales.
  - **Climate Impacts on Ecosystems:**
    - Ecosystems are degrading at an unprecedented rate, limiting their ability to support human well-being and harming their adaptive capacity to build resilience.
    - Climate change is also affecting climate sensitive species. There is evidence that temperature-sensitive plants are flowering and starting to produce leaves earlier in spring and dropping their leaves later in autumn.

What are the Shortcomings and Associated Lacunae?

- **Clean energy is not a cheap source of energy:** If we want to attain the goal of net zero emissions, we must first make renewable energ affordable to middle-income and poor countries.
- **Accelerated accumulation of the carbon dioxide** in regions such as the Amazon, Africa and southern Asia.
- **Carbon cutting commitment is not achieved by Nations:** Except India, other nations are not able to make carbon-cutting commitments taken at the **United Nations climate meeting** in Glasgow, Scotland.

Way Forward

- **Identification of Areas**: Renewable resources, especially wind cannot be set up everywhere, they require specific location.
  - Identification of these specific locations, integrating them with the main grid and distribution of powers. A combination of these three is what will take India forward.
- **Fossil fuel Subsidy:** Fossil fuel subsidy should be rectified in order to ensure that only the required amount of energy is consumed.
- Investment in **renewable energy generation** should be encouraged.

UPSC Civil Services Examination, Previous Year Questions

Q. With reference to the Indian Renewable Energy Development Agency Limited (IREDA), which of the following statements is/are correct? (2015)

1. It is a Public Limited Government Company.
2. It is a Non-Banking Financial Company.

Select the correct answer using the code given below:

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

Ans: C

Exp:

- Indian Renewable Energy Development Agency Limited (IREDA) is a Mini Ratna (category-I) GoI enterprise under the administrative control of Ministry of New and Renewable Energy (MNRE).
- It is a Public Limited Government Company established as a Non-Banking Financial Institution in 1987 engaged in promoting, developing and extending financial assistance for setting up projects relating to new and renewable sources of energy. **Hence, statements 1 and 2 are correct.**

Q. With reference to solar power production in India, consider the following statements: (2018)

1. India is the third largest in the world in the manufacture of silicon wafers used in photovoltaic units.
2. The solar power tariffs are determined by the Solar Energy Corporation of India.

Which of the statements given above is/are correct?

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

Ans: D

Exp:

- Silicon wafers are thin slices of semiconductor, such as a crystalline Silicon (c-Si), used for the fabrication of integrated circuits and, in photovoltaics, to manufacture solar cells. China is by far the world's largest producer of Silicon, followed by Russia, the United States, and Brazil. India does not figure among the top five producers of Silicon and Silicon wafers. **Hence, statement 1 is not correct.**
- Solar tariffs are determined by the Central Electricity Regulatory Commission and not by Solar Energy Corporation of India. **Hence, statement 2 is not correct.**

Source: TH

OBC Quota in Local Body Polls

For Prelims: OBC Reservation, Urban Local Bodies

For Mains: Significance of OBC Reservation in Local Body Elections

Why in News?

Recently, the **Supreme Court (SC)** permitted Madhya Pradesh to **provide reservation to** Other Backward Classes (OBC) **in** Local Body Elections**,** modifying an **earlier order that suspended the quotas** due to a lack of data.

- Currently, local bodies in Madhya Pradesh have quotas only for **Scheduled Castes**, **Scheduled Tribes** and women.
- This is the **first time that a state government has managed to clear the** triple test **formula mandated by the apex court** in the context of providing reservation for OBCs in local body polls.
- Earlier, the SC while hearing a plea by the Maharashtra government **decided to recall its December 2021 order**, which stayed 27% reservation for **Other Backward Classes (OBCs)** in local body elections.

What is the Background?

- In 2021, the SC **scrapped OBC quotas in local body polls in Maharashtra and Madhya Pradesh,** and the Odisha high court cancelled a similar move in the state because the exercise didn't pass the triple test.
- The **Triple-Test Formula, laid down by the Supreme Court in 2010** and later reiterated in March 2021, required the **states to appoint a commission, collect quantifiable data of the community, and allocate reservation to them in local bodies** in such a manner that the total reservation in each seat does not exceed 50%.

What is the Ruling?

- The SC directed the **state to notify the OBC seats, accepting a report of the three-member OBC commission formed by Madhya Pradesh in 2021.**
- This commission **quantified the population of OBCs in the state at 48% and permitted reservation** of varying quantum across each municipal seat, extending to a maximum of 35%.
- SC permitted the Madhya Pradesh State Election Commission **to notify the election programme for the respective local bodies** keeping in mind the **delimitation notifications** already issued by the state government.
- The order was passed on a petition filed by an individual who challenged in April 2022 the amendments to the Madhya Pradesh Municipal Act, 1956, Madhya Pradesh Panchayat Raj Avam Gram Swaraj Adhiniyam, 1993, and Madhya Pradesh Municipalities Act, 1961.
- By these amendments, **the state government authorized itself to determine the number and extent of wards in the local bodies concerned.**

What is the 2010 Supreme Court Judgement?

- The five-judge Constitution Bench decision in *K. Krishnamurthy (Dr.) v. Union of India (2010)* wherein the Supreme Court had **interpreted Article 243D(6) and Article 243T(6)**, which permit reservation by enactment of law for backward classes in panchayat and municipal bodies respectively, to hold that barriers to political participation are not the same as that of the barriers that limit access to education and employment.
- However, for creating a level playing field, reservation may be desirable as mandated by the aforementioned Articles which provide a separate constitutional basis for reservation, as distinct from what are conceived under **Article 15 (4) and Article 16 (4) which form the basis for reservation in education and employment.**
- Though reservation to local bodies is permissible, the top court declared that the same is subject to empirical finding of backwardness in relation to local bodies as fulfilled through the triple tests.

What is a Local Government?

- **Local Self Government** is the management of local affairs by such local bodies who have been elected by the local people.
- The local self-Government includes **both rural and urban government.**
- It is the **third level of the government.**
- There are **2 types of local government in operation – Panchayats** in rural areas and **Municipalities** in urban areas.

Ans: B

Exp:

- Democracy means decentralisation of power and giving more and more power to the people. Local self governments are looked upon as instruments of decentralisation and participatory democracy.
- To examine the working of the Community Development Programme (1952) and the National Extension Service (1953) and to suggest measures for their better working, the GoI appointed a committee in January, 1957 under the chairmanship of Balwant Rai G Mehta.
- The committee submitted its report in November, 1957 and recommended the establishment of the scheme of 'democratic decentralisation', which ultimately came to be known as Panchayati Raj or unit of Local Self Government.

Q. Consider the following statements: (2016)

1. The minimum age prescribed for any person to be a member of Panchayat is 25 years.
2. A Panchayat reconstituted after premature dissolution continues only for the remainder period.

Which of the statements given above is/are correct?

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

Ans: B

Exp:

- According to Article 243F of the Indian Constitution, the minimum age required to become a member of Gram Panchayat is 21 years. Hence, statement 1 is not correct.
- According to Art 243E(4) of the Indian Constitution, a Panchayat constituted upon the dissolution of a Panchayat before the expiration of its duration will continue only for the remainder of the period for which the dissolved Panchayat would have continued. Hence, statement 2 is correct.

[Source: IE](#)

Seoul Forest Declaration

For Prelims: Seoul Forest Declaration, World Forestry Congress, SOFO 2022, FAO

For Mains: State of Forest Resources in India and related concerns

Why in News?

Recently, the **Seoul Declaration** was adopted at the **XV World Forestry Congress,** held in Seoul, South Korea.

- The Declaration, **signed by 141 participant countries.**
- Earlier, the **State of the World's Forests 2022 (SOFO 2022)** was released by the **United Nations Food and Agriculture Organization (FAO)**.

What is the World Forestry Congress?

- **About:**
  - It is held **every six years.**
  - This year's event, hosted by the Republic of Korea and co-organized with FAO, was the second congress held in Asia.
    - Indonesia hosted the **first Congress in Asia in 1978.**
  - The Congress has been **providing a forum for inclusive discussion** on the key challenges and way forward for the forestry sector.
- **Theme for 2022**: Building a Green, Healthy and Resilient.
- **Aim:**
  - To build a new vision – a new way of thinking and acting – for the future of forests and forestry in sustainable development at all levels.
    - Investing in forests and forestry is **investment in people and their livelihoods**, especially the rural poor, youth and women.
    - In turn, **this is investment in sustainable development** and in achieving the **Sustainable Development Goals** by 2030.

What are the Highlights of the Declaration?

- **Urges for Shared Responsibility**:
  - The declaration urges that **responsibility for forests should be shared and integrated across institutions**, sectors and stakeholders.
  - It was Underlined that **forests transcend political, social and environmental boundaries** and are vital for biodiversity and the carbon, water and energy cycles at a planetary scale.
- **Investment in Forest:**
  - **Investment in forest and landscape restoration globally needs to triple by 2030** to meet internationally agreed commitments and targets on restoring degraded land.
- **Circular Bioeconomy and Climate Neutrality:**
  - One of the key takeaways from Congress was the **importance of moving towards a circular bioeconomy** and climate neutrality.
  - The **Declaration called for innovative green financing mechanisms** to upscale investment in forest conservation, restoration and sustainable use, and highlighted the potential of sustainably produced wood as a renewable, recyclable and versatile material.
- **Steps to Prevent Future Pandemics:**
  - **Healthy, productive forests must also be maintained** to reduce the risk of future **pandemics** and to provide other essential benefits for human physical and mental health.
- **Need for Innovative Technologies and Mechanisms:**
  - The Declaration urged the **continued development and use of emerging innovative technologies** and mechanisms to enable evidence-based forest and landscape decision-making.

What are the other Highlights of the XV World Forestry Congress?

- Other Initiatives undertaken at the Congress to boost international participation and cooperation.
  - **Assuring the Future of Forests with Integrated Risk Management (AFFIRM) Mechanism:**
    - AFFIRM aims to **develop integrated risk management plans** to use as examples for other countries to follow, creating a methodology that will enable countries to better conduct disturbance risk assessments and provide an improved understanding of forest hazards and forest-related risks.

- **Sustaining an Abundance of Forest Ecosystems (SAFE) Initiative**
- The **Platform for REDD+ Capacity Building:**
  - REDD+ is a framework created by the **United Nations Framework Convention on Climate Change (UNFCCC)** Conference of the Parties (COP) to guide activities in the forest sector that reduces emissions from deforestation and forest degradation, as well as the sustainable management of forests and the conservation and enhancement of forest carbon stocks in developing countries.

What are the Major Initiatives of India for Forests?

- **National Mission for a Green India:**
  - It is one of the eight Missions under the **National Action Plan on Climate Change (NAPCC).**
  - It was launched in February, 2014 with the **objective to safeguard the biological resources of our nation and associated livelihoods** against the peril of adverse climate change and to recognise the vital impact of forestry on ecological sustainability, biodiversity conservation and food-, water- and livelihood-security.
- **National Afforestation Programme (NAP):**
  - It has been implemented since 2000 for the afforestation of degraded forest lands.
  - It is being implemented by the **Ministry of Environment, Forest and Climate Change (MoEFCC).**
- **Compensatory Afforestation Fund Management and Planning Authority, (CAMPA Funds):**
  - Launched in 2016, **90% of the fund is to be given to the states** while 10% is to be retained by the Centre.
  - The funds can be **used for treatment of catchment areas, assisted natural generation, forest management, wildlife protection and management,** relocation of villages from protected areas, managing human-wildlife conflicts, training and awareness generation, supply of wood saving devices and allied activities.
- **National Action Programme to Combat Desertification:**
  - It was prepared in 2001 to address issues of increasing **desertification** and to take appropriate actions.
  - It is implemented by the MoEFCC.
- **Forest Fire Prevention & Management Scheme (FFPM):**
  - It is the only centrally funded program specifically dedicated to assist the states in dealing with forest fires.

UPSC Civil Services Examination, Previous Year Questions

Q. With reference to the 'New York Declaration on Forests', which of the following statements are correct?

1. It was first endorsed at the United Nations Climate Summit in 2014.
2. It endorses a global timeline to end the loss of forests.
3. It is a legally binding international declaration.
4. It is endorsed by governments, big companies and indigenous communities.
5. India was one of the signatories at its inception.

Select the correct answer using the code given below.

(a) 1, 2 and 4
(b) 1, 3 and 5
(c) 3 and 4
(d) 2 and 5

Ans: (a)

Exp:

- The New York Declaration on Forests is a voluntary and non-legally binding political declaration which grew out of dialogue among governments, companies and civil society, spurred by the United Nations Secretary-General's Climate Summit in 2014. **Hence, statement 1 is correct and statement 3 is not correct.**
- The declaration pledges to halve the rate of deforestation by 2020, to end it by 2030 and to restore hundreds of millions of acres of degraded land. **Hence, statement 2 is correct.**
- The declaration currently has over 200 endorsers including, national governments, sub-national governments, multinational companies, indigenous peoples and local community organizations, nongovernment organizations, and financial institutions. Hence, statement 4 is correct.
- India was not one of the signatories at the time of New York Declaration on Forests inception. **Hence, statement 5 is not correct. Therefore, option (a) is the correct answer.**

Source: DTE

Private Players in Space Sector

For Prelims: Indian Space Research Organisation (ISRO), National Space Transportation Policy (NSTP), IN-SPACE, NewSpace India Limited (NSIL), Indian Space Association (ISpA)

For Mains: Need of Space Revolution and related steps taken

Why in News?

Recently, the Minister of State for the Department of Space (DOS) informed the **Lok Sabha** that the **government was looking at opening the space sector to** Foreign Direct Investment.

How this Step will be Beneficial for ISRO?

- **Research and Development Activities:**
  - These reforms will allow **ISRO to focus more on new technologies,** exploration missions and **human spaceflight programme**.
    - Some of the planetary exploration missions will also be opened up to the private sector through an 'announcement of opportunity' mechanism.
- **Fruitful Dissemination of Space Technologies:**
  - Allowing industries and others like students, researchers or academic bodies greater access to space assets **would lead to a much better utilisation of India space resources.**
- **Global Technology Powerhouse:**
  - It will **enable Indian Industry to be an important player in the global space** economy.
    - With this, **there is an opportunity for large-scale employment** in the technology sector and India becoming a Global technology powerhouse.
- **Cost-effective:**
  - The operating costs of setting up base and launching space vehicles in India is

comparatively much less compared to its counterparts like **National Aeronautics and Space Administration (NASA).**
- ○ The FDI will also ensure that the newer technology makes it more effective in price as well as efficiency.
- ▪ **Exceptional Success Rate:**
  - ○ ISRO is the **6th largest space agency in the world** and holds an exceptional success rate.
    - • India has **made a name for itself by successful launch of about 342** (three hundred and forty-two) foreign satellites from over 34 (thirty-four) countries.

What are the Benefits for Foreign Investors?

- ▪ **Innovative Equipment:**
  - ○ ISRO holds the **cutting-edge equipment and is also in process of launching** SSLV (small satellite launch vehicle) in partnership with private companies.
  - ○ This will provide a greater benefit to foreign investors to form partnerships with the Indian space sector.
- ▪ **Liberalised Space Sector:**
  - ○ Over the years, **ISRO has forged strong relationships with numerous industrial ventures** that will be beneficial to foreign players who wish to set up base in India.

What is the Need for Reforms of Space Sector?

- ▪ **To increase the Scale of the Sector:**
  - ○ ISRO is **centrally funded and its annual budget is between Rs 14-15,000 crore**, which is a drop in the ocean and most of this is used in building rockets and satellites.
  - ○ To increase the scale of the sector, it is **imperative for private players to enter the market.**
  - ○ ISRO is **planning to share knowledge and technology**, such as manufacturing rockets and satellites, to all the private players.
    - • **The United States, Europe, Russia** — all have space industries with big players like Boeing, SpaceX, Air Bus, Virgin Galactic, etc.
- ▪ **Reforms in Private Players:**
  - ○ Private players can **bring in the innovation needed for developing space-based applications and services.**
  - ○ Additionally, the demand for these services is soaring worldwide and in India, with satellite data, imageries and space technology being used across most sectors.
    - • The **Private players can participate in setting up of ground stations** for space crafts which constitute 48% of the space sector budget and also in application of space technology which result in 45% of space economy.

What are the Related Initiatives taken?

- ▪ **IN-SPACE:**
  - ○ IN-SPACe was launched to **provide a level playing field for private companies** to use Indian space infrastructure.
  - ○ It acts **as a single-point interface** between Indian Space Research Organisation (ISRO), and everyone who wants to participate in space-related activities or use India's space resources.
- ▪ **NewSpace India Limited (NSIL):**
  - ○ Announced in Budget 2019, its aim is to **use research and development carried out by ISRO** over the years for commercial purposes through Indian industry partners.
- ▪ **Indian Space Association (ISpA):**
  - ○ ISpA **aspires to be the collective voice of the Indian Space industry.** ISpA will be represented by leading domestic and global corporations that have advanced capabilities in space and satellite technologies.

Way Forward

- With **India having one of the best space programs in the world**, the move to allow FDI in space will make India a bigger player in the global space economy.
- FDI in space will **allow foreign players with a window to venture into the India space domain**, this will contribute to Indian national and foreign reserves, promote technology transfer and research innovations.
- Further, the **introduction of the Indian Space Activities Bill will give greater clarity** to private players on how to be an integral part of the space sector.

UPSC Civil Services Examination, Previous Year Questions

Q. With reference to India's satellite launch vehicles, consider the following statements: (2018)

1. PSLVs launch the satellites useful for Earth resources monitoring whereas GSLVs are designed mainly to launch communication satellites.
2. Satellites launched by PSLV appear to remain permanently fixed in the same position in the sky, as viewed from a particular location on Earth.
3. GSLV Mk III is a four-staged launch vehicle with the first and third stages using solid rocket motors; and the second and fourth stages using liquid rocket engines.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 and 3
(c) 1 and 2
(d) 3 only

Ans: (a)

Exp:

- PSLV is the third generation launch vehicle of India. It is the first Indian launch vehicle to be equipped with liquid stages. It is used mainly for delivering various satellites in Low Earth Orbits, particularly the Indian Remote Sensing series of satellites. It can take up to 1,750 kg of payload to Sun-Synchronous Polar Orbits of 600 km altitude.
- GSLV is designed mainly to deliver Indian National Satellite System, or INSAT, which is a series of multipurpose geo-stationary satellites launched by ISRO to fulfil the needs of telecommunications, broadcasting, meteorology, and search and rescue operations. It places satellites to the highly elliptical Geosynchronous Transfer Orbit (GTO). Hence, statement 1 is correct.
- The satellites in the geosynchronous orbits appear to remain permanently fixed in the same position in the sky. Hence, statement 2 is not correct.
- GSLV-Mk III is a fourth generation, three stage launch vehicle with four liquid strap-ons. The indigenously developed Cryogenic Upper Stage (CUS), which is flight proven, forms the third stage of GSLV Mk III. It is capable to lift 4-5 tonne satellites into Geosynchronous Transfer Orbit (GTO). The rocket has three-stages with two solid motor strap-ons (S200), a liquid propellant core stage (L110) and a cryogenic stage (C-25). Hence, statement 3 is not correct. Therefore, option (a) is the correct answer.

Source: IE

Kanheri Caves

For Prelims: Kanheri Caves, Buddhism, Vajrayana, Satavahana, Hinayana and Mahayana

For Mains: Significance of the Buddhist architecture

Why in News?

Recently, the Ministry of Tourism has inaugurated the amenities in Kanheri Caves on the occasion of Buddha Purnima.

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What are the kanheri Caves?

- **About:**
  - The Kanheri Caves are a group of caves and rock-cut monuments located on the western outskirts of Mumbai. The caves are located within the forests of the **Sanjay Gandhi National Park.**
  - The name **Kanheri is derived from 'Kanhagiri' in Prakrit and occurs in the Nasik inscription** of the **Satavahana** ruler Vasisthiputra Pulumavi.
  - Kanheri was **mentioned in the travelogues of foreign travellers.**
    - The earliest reference of Kanheri is **ascribed to** Fa-Hein **who visited India during 399-411 CE and later by several other travellers.**
- **Excavations:**
  - The Kanheri caves comprise more than 110 different rock-cut monolithic excavations and is one of the largest single excavations in the country.
  - The scale and extent of excavations, with its numerous water cisterns, epigraphs, one of the oldest dams, a stupa burial gallery and excellent rainwater harvesting system, **indicate its popularity as a monastic and pilgrim centre.**
- **Architecture:**
  - These excavations were **primarily undertaken during the** Hinayana phase of Buddhism but also has several examples of the **Mahayana stylistic architecture** as well as few printings of the Vajrayana **order.**
- **Patronage:**
  - Kanheri flourished under the patronage of Satavahana, Traikutakas, Vakatakas and

Silaharas and through donations made by the wealthy merchants of the region.
- **Significance:**
  - Kanheri caves are part of our ancient heritage as they provide evidence of evolution and our past.
  - The architectural and engineering marvel of heritage sites like Kanheri caves or the **[Ajanta Ellora caves](#)** signify the **knowledge about art, engineering, management construction, patience and perseverance that people had back then.**
    - Many such monuments back then took **more than 100 years to be built.**
  - Its importance is **heightened by the fact that it is the only centre where a continuous progression of Buddhist faith and architecture is observed** as an unbroken legacy right from 2nd century CE to 9th century CE is observed here.

What is Hinayana and Mahayana?

- **Hinayan:**
  - Literally Lesser vehicle, also known as Abandoned Vehicle or Defective vehicle. It believes in the original teaching of Buddha or Doctrine of elders.
  - It does not believe in Idol worship and tries **to attain individual salvation** through **self discipline and meditation.**
  - Theravada is a part of Hinayana sect.
- **Mahayana:**
  - This sect of **Buddhism believes in the heavenliness of Buddha and believes in Idol Worship.**
  - It originated in northern India and Kashmir and then spread east into **Central Asia, East Asia and some areas of Southeast Asia.**
  - Mahayana **believes in Mantras.**
  - Its main **principles were based on the possibility of universal liberation from suffering for all beings**. That's why, **this sect is called Mahayana (The Great Vehicle).**
  - Its principles are **also based on the existence of Buddhas and Bodhisattvas embodying Buddha nature.** It allows salvation through having faith and committing oneself to Buddha.

UPSC Civil Services Examination, Previous Year Questions

Q. With reference to the religious history of India, consider the following statements: (2016)

1. The concept of Bodhisattva is central to Hinayana sect of Buddhism.
2. Bodhisattva is a compassionate one on his way to enlightenment
3. Bodhisattva delays achieving his own salvation to help all sentient beings on their path to it.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 and 3 only
(c) 2 only
(d) 1, 2 and 3

Ans: (b)

Exp:

- The term Bodhisattva is literally a living being (Sattva) who aspires to enlightenment (Bodhi) and carries out altruistic practices.
- Bodhisattva ideal is central to the Mahayana Buddhist tradition and is portrayed as the individual

who seeks enlightenment both for him or herself and for others. **Hence, statement 1 is not correct and statement 3 is correct.**

- Compassion, an empathetic sharing of the sufferings of others, is the Bodhisattva's greatest characteristic. **Hence, statement 2 is correct.**

Source: PIB

Child Online Safety Toolkit

For Prelims: SDGs, UNCRC, UNICEF, Artificial Intelligence

For Mains: Vulnerability of Children to internet, Issues Related to Children

Why in News?

Recently, the **child online safety toolkit** was launched in an attempt to make the online experience safe for children.

What does the Toolkit Provide?

- **About:**
  - It is a **hands-on, comprehensive guide to making the online world free** from harm for children.
  - It **builds on existing international agreements and best practices,** developed in consultation with international experts from a range of backgrounds.
  - It has **accessible worksheets and resources** both online and in print to help make child online safety a reality.
- **The toolkit** supports the implementation of the following important international agreements and frameworks:
  - The **Sustainable Development Goals (SDGs)**
  - The **United Nations Convention on the Rights of the Child (UNCRC) General comment No. 25 (2021)** on children's rights in the digital environment.
    - The objective of the General Comment is to **explain how States Parties should implement the Convention on the Right of the Child in relation to the digital environment.**
      - It also **provides guidance on relevant legislation, policy and other measures** designed to ensure full compliance with their obligations under the Convention.
  - The **WeProtect Global Alliance Model National Response.**
    - WeProtect Global Alliance is a **global movement of more than 200 governments, private sector companies** and civil society organisations working together to transform the global response to child sexual exploitation and abuse online.
  - The **International Telecommunication Union's Guidelines** on Child Online Protection.
    - It is a **comprehensive set of recommendations for children, parents and educators, industry and policymakers** on how to contribute to the development of a safe and empowering online environment for children and young people.
- It also tapped into **UNICEF's Draft Policy Guidance on** Artificial Intelligence (AI) for Children.

- The guidance is designed to promote children's rights in government and private sector AI (artificial intelligence) policies and practices, and to raise awareness of how AI systems can uphold or undermine these rights.

What is the Significance of the Toolkit?

- **Vulnerability:**
  - India has witnessed a **whopping 50% of internet penetration in 2020** as against 34.4% in 2019, predominantly as an after-effect of the pandemic.
  - The surge in online activity by children, therefore, becomes apparent as out of India's 749 million internet users, 232 million are children.
  - The internet serves as a **double-edged sword with enabling connectivity, access to knowledge,** and entertainment on one hand and **potential exposure to harmful and inappropriate content on the other.**
- **Addressing Child Sexual Exploitation:**
  - **Child sexual exploitation and abuse are also major concerns**, not only offline but also online.
    - In 2020, **65 million pieces of child sexual abuse material were reported** to the National Center for Missing and Exploited Children of the United States, while many more went undetected.
- **Building a Digital Environment:**
  - The toolkit argues that **guaranteeing online safety is not just about responding to risks and harms,** it means actively designing a digital environment that is safe for every child.
  - With **one in three people online under the age of 18**, the centrality of digital technology in children's lives means that it must be formed with their privacy, safety and rights by design and by default.

What are the Related Steps taken?

- **Online Complaint Management System:**
  - The National Commission of Protection of Child Rights (NCPCR) has **established an online complaint management system that enables a confidential platform for victims** (or their representatives) to report cases of child abuse and sexual assault.
- The Ministry of Home Affairs has sanctioned a **'Cyber Crime Prevention against Women and Children (CCPWC)' scheme** which comprises an online cybercrime reporting portal for cases of Child Pornography/ Child Sexual Abuse Material, rape/gang rape imageries or sexually explicit content.
- **Child Abuse Prevention and Investigation Unit:**
  - It probe offences covered under various provisions of the Indian Penal Code (IPC)**,** the **Protection of Children from Sexual Offences (POCSO) Act** and the **Information Technology (IT) Act**, apart from other relevant laws.

Way Forward

- There may be differences between national contexts, but it is **essential that laws and regulations are aligned to the greatest extent possible** and enhance cross-border cooperation and understanding.
  - In the end, it is up to nations or organisations within nations if they intend to use the toolkit to create a safe environment for children online, and if they intend to adhere to various international conventions they have ratified.
- The extensive and critical nature of online child safety demands regulations and mechanisms that protect children.
  - It is **imperative to ensure an adequate understanding of the issue**, promote the best interests of the child, and develop appropriate recovery services for victims of cybercrimes.
- **There is a need to spread awareness through alerts and advisories**, training of law enforcement agencies, improving cyber forensic facilities etc.

UPSC Civil Services Examination, Previous Year Questions

Q. Consider the following statements: (2016)

1. The Sustainable Development Goals were first proposed in 1972 by a global think tank called the 'Club of Rome'.
2. The Sustainable Development Goals have to be achieved by 2030.

Which of the statements given above is/are correct?

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

Ans: (b)

Exp:

- The 17 Sustainable Development Goals (SDGs), also known as the Global Goals, are a universal call for action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity.
- They are built upon the success of the Millennium Development Goals, including new areas such as climate change, economic inequality, innovation, sustainable consumption, peace and justice, among other priorities.
- The goals are interconnected – often the key to success on one will involve tackling issues more commonly associated with another.
- Adopted in 2015, SDGs came into effect in January 2016. They are meant to be achieved by 2030. Hence, statement 2 is correct.
- The SDGs were born at the United Nations Conference on Sustainable Development in Rio de Janeiro in 2012. The Club of Rome advocated resource conservation for the first time in a more systematic way in 1968. Hence, statement 1 is not correct. Therefore, option (b) is the correct answer.

Source: TH

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