



12th WTO Ministerial Conference

For Prelims: WTO, Issue of agriculture in the WTO

For Mains: WTO reforms and its implication on the developing nations. India's suggestions on WTO reforms

Why in News?

Recently, the 12th Ministerial Conference of the [World Trade Organization \(WTO\)](#) concluded.

- The key areas of discussions were WTO's **response to the pandemic, Fisheries subsidies negotiations, Agriculture issues** including [Public Stockholding for Food security](#), [WTO Reforms](#) and [Moratorium on Custom Duties on Electronic Transmission](#).
- The **164-member World Trade Organization** held its first ministerial conference in nearly five years, following [Covid-19](#) postponements.

What are the Key Outcomes of the 12th Ministerial Conference?

- **WTO Reform:**
 - **Members reaffirmed the foundational principles of the WTO** and committed to an open and inclusive process to reform all its functions, from deliberation to negotiation to monitoring.
 - Notably, they committed to work towards having a **well-functioning dispute settlement system** accessible to all members by 2024.
- **Agreement on Curtailing Harmful Fishing Subsidies:**
 - It would **curb 'harmful' subsidies** on illegal, unreported and unregulated fishing for **the next four years**, to better protect global fish stocks.
 - Since 2001, member states have been negotiating the banning of subsidies that promote overfishing.
 - **India and other developing countries** were **able to win some concessions** in this agreement. They **successfully lobbied** to remove a section of the proposal that would threaten some subsidies which would assist **small-scale artisanal fishing Artisanal and traditional farmers would not face any restrictions under this agreement.**
- **Agreement on Global Food Security:**
 - Members agreed to a **binding decision to exempt food purchased by the UN's [World Food Programme \(WFP\)](#)** for humanitarian purposes, from any export restrictions.
 - In **light of the global food shortages and rising prices** caused by the [war between Ukraine and Russia](#), the group's members issued a declaration on the importance of trade in global food security and that they **would avoid bans on food exports.**
 - However, countries would be allowed to restrict food supplies to ensure domestic food security needs.
- **Agreement on E-commerce Transactions:**
 - From 2017-2020, developing countries lost a potential tariff revenue of around USD 50 billion on imports from only 49 digital products.
 - **WTO members had first agreed to not impose custom duties on electronic**

transmissions in 1998, when the internet was still relatively new. The moratorium has been periodically extended since then.

- However, **all members agreed to continue the long standing moratorium on custom duties on e-commerce transmissions until the subsequent Ministerial Conference or until 31st March 2024, depending on whichever comes first.**
- **Agreement on 'Covid-19' Vaccine Production:**
 - WTO members agreed to **temporarily waive intellectual property patents on Covid-19 vaccines without the consent of the patent holder for 5 years**, so that they can more easily manufacture them domestically.
 - This "will contribute to ongoing efforts to concentrate and diversify vaccine manufacturing capacity so that a crisis in one region does not leave others cut off."
 - The current agreement is a **watered down version** of the original **proposal made by India and South Africa in 2020**. They had wanted broader intellectual property waivers on vaccines, treatments and tests.
 - Rich pharmaceutical companies had strongly opposed this, arguing that IP's do not restrict access to Covid vaccines and that the removal of patent protections gives researchers that quickly produced life saving vaccines, a negative message.
 - The waiver agreed by the WTO was criticized by advocacy groups for being **narrow in scope, as it did not cover all medical tools like diagnostics and treatments**. "This agreement fails overall to offer an effective and meaningful solution to help increase people's access to needed medical tools during the pandemic as it does not adequately waive IP on all essential Covid-19 medical tools and it does not apply to all countries."

What are the Issues Raised by India?

- **On WTO Reforms:**
 - India believes that WTO reforms discussions must focus on strengthening its fundamental principles.
 - At this time, reserving **Special and Differential Treatment (S&DT)**, which includes consensus-based decision making, non-discrimination, and special and differential treatment, should not result in the preservation of inherited disparities or aggravate the imbalances.
 - India takes the initiative to suggest reforms for developing countries (**Developing countries reform paper "Strengthening the WTO to Promote Development and Inclusion"**).
 - India offered a proposal in which it took the lead in criticizing the **European Union** and Brazil's suggestions, both on the process and its goals. It was against an open-ended exercise on WTO amendments.
- **E-commerce Transactions:**
 - **India had asked the WTO to review the extension of the moratorium on custom duties on e-commerce transactions, which include digitally-traded goods and services.**
 - It argued that developing countries faced the brunt of the financial consequences of such a moratorium.
- **On Food Security:**
 - WTO **should renegotiate subsidy rules for government-backed food purchasing programs** aimed at feeding poor citizens in developing and poor countries.
 - India wants **assurances that its public stock-holding program**, which buys exclusively from the nation's farmers and has exported in the past, **cannot be challenged at the WTO as illegal.**

What are the Important Facts about the World Trade Organization?

- **About:**
 - It came into being in **1995**. The **WTO** is the successor to the **General Agreement on Tariffs and Trade (GATT)** established in the wake of the **Second World War**.
 - **Its objective is to help** trade flow smoothly, freely and predictably.
 - It has **164 members**, accounting for **98%** of world trade.
 - It was **developed through a series of trade negotiations**, or rounds, held under the

GATT.

- GATT is a **set of multilateral trade agreements** aimed at the abolition of quotas and the reduction of tariff duties among the contracting nations.
- The WTO's rules – the agreements – are the result of negotiations between the members.
 - The current set is largely the outcome of the 1986- 94 Uruguay Round negotiations, which included a major revision of the original GATT.
- The WTO Secretariat is based in **Geneva (Switzerland)**.
- **WTO Ministerial Conference:**
 - It is the WTO's **top decision-making body and usually meets every two years**.
 - All members of the WTO are involved in the MC and they can take decisions on all matters covered under any multilateral trade agreements

UPSC Civil Services, Previous Years Questions (PYQ)

Q. Consider the following statements: (2017)

1. India has ratified the Trade Facilitation Agreement (TFA) of WTO.
2. TFA is a part of WTO's Bali Ministerial Package of 2013.
3. TFA came into force in January 2016.

Which of the statements given above is/are correct?

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

Ans:(a)

Exp:

- Trade Facilitation Agreement (TFA) was negotiated at the 2013 Bali Ministerial Conference. **Hence, statement 2 is correct.**
- It entered into force on 22 February 2017 following its ratification by two-thirds of the WTO members. **Hence, statement 3 is not correct.**
- India had ratified TFA in 2016. **Hence, statement 1 is correct.**
- The TFA contains provisions for expediting the movement, release and clearance of goods, including goods in transit. It also sets out measures for effective cooperation between customs and other appropriate authorities on trade facilitation and customs compliance issues. It further contains provisions for technical assistance and capacity building in this area.
- **Therefore, option (a) is the correct answer.**

[Source: IE](#)

Listing of Terrorist under UNSC 1267 Committee

For Prelims: Foreign Terrorist Organisation, India-Centric Terror Organizations

For Mains: UNSC 1267 Committee and listing Procedure

Why in News?

India and the US jointly proposed to list **Makki, a top LeT (Lashkar-e-Taiba) Militant**, under the **UN Security Council's Al-Qaeda and ISIL (Islamic State of Iraq and the Levant) Sanctions Committee** which is also known as the [UNSC 1267 Committee](#).

- But, China, **placed a "technical hold" on the proposal** to list Makki and this measure can last for up to six months at a time.
- Islamic State in Iraq and the Levant (ISIL), also called **Islamic State in Iraq and Syria (ISIS)** is the **Islamic State**, transnational **Sunni insurgent group operating primarily in western Iraq and eastern Syria**.

What is United Nation Security Council?

- **About:**
 - The UNs **Charter established six main organs of the UN**, including the UNSC. Article 23 of the UN Charter concerns the composition of the UNSC.
 - The other **5 organs of the UN are**—the General Assembly, the Trusteeship Council, the Economic and Social Council, the International Court of Justice, and the Secretariat.
 - The UNSC **has been given primary responsibility for maintaining international peace and security** and may meet whenever peace is threatened.
- **Headquarter:**
 - The council is **headquartered at New York**.
- **Members:**
 - The UNSC is composed of **15 members, 5 permanent and 10 non-permanent**.
 - **Five Permanent Members:** China, France, the Russian Federation, the United Kingdom, and the United States.
 - **Ten Non-Permanent Members:** Elected for two-year terms by the General Assembly.
 - **India**, for the eighth time, **has entered the UNSC as a non-permanent member last year (2021)** and will stay on the council for two years i.e 2021-22.
- Each year, the **General Assembly elects five non-permanent members** (out of ten in total) for a two-year term. The ten non-permanent seats are distributed on a regional basis.

What is UNSC 1267 committee?

- **About:**
 - It was first set up in 1999, and strengthened after the September, 2001 attacks. It is now **known as the Da'esh and Al Qaeda Sanctions Committee**.
 - It comprises **all permanent and non-permanent members** of the [United Nations Security Council \(UNSC\)](#).
 - The 1267 list of terrorists **is a global list, with a UNSC stamp**. It is full of Pakistani nationals and residents.
 - It is one of the most important and active UN subsidiary bodies working on **efforts to combat terrorism, particularly in relation to Al Qaeda and the Islamic State** group.
 - It discusses UN efforts to limit the movement of terrorists, especially those related to travel bans, the freezing of assets and arms embargoes for terrorism.

- India has made **at least three attempts in the last decade** — in 2009, 2016 and 2017 — to list JeM chief as “global terrorist”. All attempts have been blocked by China at Pakistan’s behest.

▪ **Procedure of Listing:**

- Any member state can **submit a proposal for listing an individual, group, or entity.**
- The proposal **must include acts or activities indicating the proposed individual/group/entity had participated “in the financing, planning, facilitating, preparing, or perpetrating of acts or activities”** linked to “ISIL (Da’esh), Al-Qaida or any cell, affiliate, splinter group or derivative thereof”.
- Decisions on listing and de-listing are adopted by consensus. The proposal is sent to all the members, and if no member objects within five working days, the proposal is adopted.
 - An “objection” means curtains for the proposal.
- Any member of the **Committee may also put a “technical hold” on the proposal and ask for more information from the proposing member state.** During this time, other members may also place their own holds.
- The matter remains on the **“pending” list of the Committee until such time as the member state that has placed the hold decides to turn its decision into an “objection”,** or until all those who have placed holds remove them within a timeframe laid down by the Committee.
- Pending issues **must be resolved in six months,** but the member state that has placed the hold may ask for an additional three months. At the end of this period, if an objection is not placed, the matter is considered approved.

What is Foreign Terrorist Organisation?

- FTO are foreign **organizations that are designated by the Secretary of State US.**
- This plays a critical role in fight against terrorism and is an effective means of curtailing support for terrorist activities and pressuring groups to get out of the terrorism business.

Prominent India-Centric Terror Organizations in Pakistan

Name	Formation	FTO Designation	About	Status in India as per the Unlawful Activities (Prevention) Act, 1967
Lashkar-e-Taiba (LET)	Late 1980s	2001	<ul style="list-style-type: none"> ▪ It was responsible for major 2008 attacks in Mumbai, as well as numerous other high-profile attacks. 	Banned
Jaish-e-Mohammed (JEM)	2000	2001	<ul style="list-style-type: none"> ▪ Along with LET, it was responsible for the 2001 attack on the Indian parliament, among other attacks. JEM also has openly declared war on the United States. 	Banned
Harakat-ul	1980	2010	<ul style="list-style-type: none"> ▪ Initially it was formed to 	Banned

Jihad Islami (HUJI)			<p>fight the soviet army, however after 1989, it redirected its efforts toward India, although it did supply fighters to the Afghan Taliban.</p> <ul style="list-style-type: none"> HUJI today operates in Afghanistan, Pakistan, Bangladesh and India, and seeks annexation of Kashmir into Pakistan. 	
Harkat-ul-Mujahideen (HUM)	1985	1997	<ul style="list-style-type: none"> It operates mainly from Pak-Occupied Kashmir and from some Pakistani cities. 	Banned
Hizb-ul-Mujahideen	1989	2017	<ul style="list-style-type: none"> It is the militant wing of Pakistan's largest Islamist political party and is one of the largest and oldest militant groups operating in Jammu and Kashmir. 	Banned
Al Qaeda	1988	1999	<ul style="list-style-type: none"> It has operated primarily from the former Federally Administered Tribal Areas and in the megacity of Karachi, as well as in Afghanistan. 	Banned

[Source: HT](#)

Gaps in Post-2020 Global Biodiversity Framework

For Prelims: Chemical Pollutants, Climate Mitigation Goals

For Mains: Gaps in Post-2020 Global Biodiversity Framework and Recommendations

Why in News?

A group of environmental scientists, ecologists and policy experts have posited that the draft of the [Post-2020 Global Biodiversity Framework](#) fails to account for the totality of [chemical pollutants](#) that threaten ecosystems globally.

What are the Gaps in the Framework?

- **Chemical Pollutants:** The draft agreement falls **short by limiting itself to nutrients, pesticides and plastics**, while many **chemicals of high concern and importance are left out** of the equation — including substances that are persistent and toxic, such as mercury and PFAS (per- and polyfluoroalkyl substances), as well as pharmaceuticals.
- **LNPP Inside Protected Areas:** Currently, LNPP (land where natural processes predominate) covers around 56% of terrestrial land, excluding permanent ice and rock. However, only 20% of this land is formally protected. This means that, excluding permanent ice and rock, only 11% of the world's land is covered by LNPP inside protected areas. The group feels that this is **a problem since the post-2020 framework proposes at least 30% of land be protected by 2030**.
 - LNPP refers to land where there is a low human disturbance and / or ecologically relatively intact vegetation, providing space and habitat for biodiversity to thrive.

What is Post 2020 Global Biodiversity Framework?

- **About:**
 - It is a new framework that will guide **actions worldwide through 2030**, to preserve and protect nature and its essential services to people.
 - It aims to **spur urgent and transformative action by Governments and all of society to contribute to the objectives of the [Convention on Biological Diversity](#)**, its Protocols, and other biodiversity related multilateral agreements, processes and instruments.
 - The framework is built around **a theory of change which recognizes that urgent policy action globally, regionally and nationally** is required to transform economic, social and financial models.
- **Goals and Targets:**
 - **Four goals to achieve by 2050:**
 - To **halt the extinction and decline** of biodiversity.
 - To **enhance and retain nature's services** to humans by conserving.
 - To ensure **fair and equitable benefits** to all from use of genetic resources.
 - To **close the gap between available financial and other means of implementation** and those necessary to achieve the 2050 Vision.
 - **2030 Action Targets:** The framework has **21 action-oriented targets for urgent action over the decade to 2030**, which includes:
 - To bring at **least 30% of land and sea under the world's protected areas**.
 - A **50% greater reduction in the rate of introduction of invasive alien species**, and controls or eradication of such species to eliminate or reduce their impacts.
 - **Reducing nutrients lost** to the environment by at least half, and pesticides by at least two thirds, and eliminating the discharge of plastic waste.
 - Nature-based contributions to global climate change mitigation efforts of **at least 10 GtCO₂e (gigatonnes of equivalent carbon dioxide) per year**, and that all mitigation and adaptation efforts avoid negative impacts on biodiversity.
 - Redirecting, repurposing, reforming or eliminating incentives harmful for biodiversity, **in a just and equitable way, reducing them by at least USD 500 billion per year**.

What are the Recommendations?

- There is need to target **a wider scope of chemical pollutants for strategies and action** to be implemented in the post-2020 global biodiversity framework.
 - Countries around the world recently **agreed to create an intergovernmental science-policy panel on chemicals and waste** to consolidate existing knowledge and inform policymakers.
- The irrefutable evidence of chemical pollutants found in every ecosystem of the world, including **remote Arctic, Antarctic and Himalayan ecosystems**, should compel negotiators of the new biodiversity framework to include these as threats to global biodiversity.
- Protecting biodiversity is crucial for availability of food, there should be **a net gain in the area, connectivity, and integrity of natural systems of at least 5% by 2030 and 15% by 2050 to support healthy and resilient populations** of all species.
- Shifting diets, increasing crop and livestock productivity, and limiting agricultural land expansion would help achieve global biodiversity, food security and **climate mitigation goals** by 2050.

What is the Convention on Biological Diversity?

- The **Convention on Biological Diversity (CBD)**, a **legally binding treaty** to conserve biodiversity has been in force since 1993. It has **3 main objectives**:
 - The conservation of biological diversity.
 - The sustainable use of the components of biological diversity.
 - The fair and equitable sharing of the benefits arising out of the utilization of genetic resources.
- Nearly all countries have ratified it (notably, the **US has signed but not ratified**).
- The **CBD Secretariat is based in Montreal, Canada** and it **operates under the United Nations Environment Programme**.
- The Parties (Countries) under Convention of Biodiversity (CBD), meet at regular intervals and these meetings are called **Conference of Parties (COP)**.
- In 2000, a supplementary agreement to the Convention known as the **Cartagena Protocol on Biosafety** was adopted. It came into force on 11th September 2003.
 - The Protocol seeks to protect biological diversity from the potential risks posed by living modified organisms resulting from modern biotechnology.
- The **Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (ABS)** was adopted in 2010 in Nagoya, Japan at COP10. It entered into force on 12th October 2014.
 - It not only applies to genetic resources that are covered by the CBD, and to the benefits arising from their utilization but also covers traditional knowledge (TK) associated with genetic resources that are covered by the CBD and the benefits arising from its utilization.
- Along with the Nagoya Protocol on Genetic Resources, the COP-10 also adopted a ten-year framework for action by all countries to save biodiversity.
- Officially known as **“Strategic Plan for Biodiversity 2011-2020”**, it provided a set of 20 ambitious yet achievable targets collectively known as the **Aichi Targets for biodiversity**.
- India **enacted Biological Diversity Act in 2002** for giving effect to the provisions of the CBD.

Source: DTE

Banning Single-Use Plastic

For Prelims: Single- Use Plastic, Plastic Waste Management Rules 2016, CPCB, Environment protection Act 1986

Why in News?

Recently, the Centre has defined a list of single-use plastic items that will be banned from 1st July 2022.

- The manufacture, import, stocking, distribution, sale and use of notified single-use plastic, including polystyrene and expanded polystyrene, commodities shall be prohibited with effect from the 1st July, 2022.

⌘ Cleaning up

Plastic items completely banned from July 1, 2022

Ear buds with plastic sticks, plastic sticks for balloons, plastic flags, polystyrene (thermocool) for decoration, plates, cups, glasses, cutlery such as forks, spoons, knives, straw, trays, wrapping or packing films, cigarette packets

Plastic bags to be thicker

From September 30 this year, thickness of plastic carry bags has been increased from 50 microns to 75. From December 31, 2022, the thickness will increase to 120 microns

What is single-use plastic?

- **About:**
 - It refers to plastic items that are used once and discarded.
- **Highest Shares of Plastic Manufactured and Used:**
 - **Single-use plastic** has among the **highest shares of plastic manufactured and used** — from packaging of items, to bottles (shampoo, detergents, cosmetics), polythene bags, face masks, coffee cups, cling film, trash bags, food packaging etc.
- **Accounts for a Third of all Plastic Produced Globally:**
 - According to a 2021 report of the Minderoo Foundation, an Australian philanthropic organization, single-use plastics account for **a third of all plastic produced globally**, with **98% manufactured from fossil fuels**.
- **The Majority of Plastic Discarded:**
 - Single-use plastic also accounts for the majority of plastic discarded – **130 million metric tonnes globally in 2019** — all of which is **burned, buried** in landfills or **discarded** directly into the environment.
- **Contribution to Greenhouse Gas Emissions:**
 - On the current trajectory of production, it has been projected that single-use plastic could account for **5-10% of greenhouse gas emissions by 2050**.
- **Data for India:**

- The report found that **India features in the top 100 countries** of single-use plastic waste generation – **at rank 94** (the top three being **Singapore, Australia and Oman**).
- With domestic production of 11.8 million metric tonnes annually, and import of 2.9 MMT, **India's net generation of single-use plastic waste is 5.6 MMT, and per capita generation is 4 kg.**

Why these items?

- The choice for the first set of single-use plastic items for the ban was based on **the difficulty of collection, and therefore recycling.**
- **When plastic remains** in the environment for **long periods of time** and **does not decay**, it **turns into [microplastics](#)** – first entering our food sources and then the human body, and this is extremely harmful.
- The largest share of single-use plastic is that of packaging – with as much as **95% of single use belonging to this category** – from toothpaste to shaving cream to frozen foods.
- The items chosen are of low value and of low turnover and are unlikely to have a big economic impact, which could be a contributing reason.

How will the ban be enforced?

- **Monitored by:**
 - The ban will be **monitored** by the **CPCB from the Centre**, and by **the State Pollution Control Boards (SPCBs)** that **will report to the Centre regularly.**
- **Directions Issued:**
 - Directions have been **issued at national, state and local levels** — for example, to all petrochemical industries — to **not supply raw materials to industries engaged in the banned items.**
 - Directions have also been issued to **SPCBs and Pollution Control Committees** to modify or **revoke consent to operate issued under the Air/Water Act** to industries engaged in single-use plastic items.
 - **Local authorities** have been directed to issue **fresh commercial licenses** with the condition that **SUP items will not be sold on their premises, and existing commercial licences** will be cancelled if they are found to be selling these items.
- **Promoting Compostable and Biodegradable Plastics :**
 - The **CPCB issued one-time certificates to 200 manufacturers of compostable plastic** and the **BIS passed standards for [biodegradable plastic](#).**
- **Penalty:**
 - Those found violating the ban can be penalised under the **[Environment Protection Act 1986](#)** – which allows for **imprisonment up to 5 years, or a penalty up to Rs 1 lakh, or both.**
 - Violators can also be asked to pay Environmental Damage Compensation by the SPCB.
 - There are municipal laws on plastic waste, with their own penal codes.

How are other countries dealing with single-use plastic?

- **Sign Resolution:**
 - In 2022, **124 countries**, parties to the **[United Nations Environment Assembly](#)**, **including India, signed a resolution** to draw up an agreement which will in the future make it **legally binding for the signatories to address the full life of plastics** from production to disposal, to end plastic pollution.
 - As of July 2019, 68 countries have plastic bag bans with varying degrees of enforcement.
- **Countries which Ban Plastic:**
 - **Bangladesh:**
 - **Bangladesh** became the **first country to ban thin plastic bags** in 2002.
 - **New Zealand:**
 - New Zealand became the latest country to ban plastic bags in July 2019.
 - **China:**
 - China issued a ban on plastic bags in 2020 with phased implementation.

- **US:**
 - Eight states in the US have banned single-use plastic bags, beginning with California in 2014. Seattle became the first major US city to ban plastic straws in 2018.
- **European Union:**
 - In July, 2021, the Directive on **Single-Use Plastics** took effect in the European Union (EU).
 - The directive bans certain **single-use plastics for which alternatives are available**, single-use plastic plates, cutlery, straws, balloon sticks and cotton buds cannot be placed on the markets of the EU member states.
 - The same measure applies to cups, food and beverage containers made of expanded polystyrene, and all products made of oxo-degradable plastic.

UPSC Civil Services Examination, Previous Year Question (PYQ)

Q. Why is there a great concern about the 'microbeads' that are released into environment? (2019)

- (a) They are considered harmful to marine ecosystems.
 (b) They are considered to cause skin cancer in children.
 (c) They are small enough to be absorbed by crop plants in irrigated fields.
 (d) They are often found to be used as food adulterants.

Ans: (a)

- Microbeads are small, solid, manufactured plastic particles that are less than 5mm and do not degrade or dissolve in water.
- Mainly made of polyethylene, microbeads can also be prepared from petrochemical plastics such as polystyrene and polypropylene. They may be added to a range of products, including rinse-off cosmetics, personal care and cleaning products.
- Because of their small size, microbeads pass unfiltered through the sewage treatment system and reach the water bodies. The untreated microbeads in the waterbodies are taken up by the marine animals, thus producing toxicity and causing harm to the marine ecosystem.
- In 2014, Netherland became the first country to ban cosmetics microbeads.
- **Therefore, option (a) is the correct answer.**

[Source: IE](#)

Cyber Safety and National Security

For Prelims: Cyber Security, Indian Cyber Crime Coordination Centre, CERT-In

For Mains: Cyber Safety threat, Government Initiatives for Cyber Safety

Why in News?

Recently, the **National Conference on Cyber Safety and National Security** concluded in New Delhi.

- The conference is **part of the efforts to create mass awareness** for the prevention of cybercrimes in the country.
- It is also part of the [Azadi Ka Amrit Mahotsav](#) to celebrate India's progress and achievements in the 75th year of India's Independence.

What is Cyber Safety?

- **About:**
 - A set of activities and other measures intended to **protect cyberspace networks, related hardware and devices software, and the information they contain and communicate**, including software and data from all threats **including threats to national security**.
- **Relation with National Security:**
 - Since **Cyber-armies** have been formed to launch cyberattacks against India, **cyber security** is closely connected to national security.
 - A **cyber-army** is a **group of soldiers highly skilled in information technology** with cyber skills.

What's upping India's Cyber Safety threat?

- **Digital India Vision:**
 - India is one of the fastest-growing markets for digital technologies fuelling the government's push towards actualising its [Digital India mission](#).
 - Whether creating broadband highways or rolling out services such as [Digi Locker](#) and [e-governance](#) schemes like the **Jan Dhan Yojana**, the government has pushed for as much digital adoption as possible.
 - Under [Pradhan Mantri Jan Dhan Yojana](#) 45 crore new accounts have been opened and 32 crore RuPay Debit Cards have been distributed in the last 8 years.
 - [BharatNet](#) is also developing very fast, 5.75 lakh km of fiber cable has been laid and work has been done to connect 1.80 lakh villages in the last 8 years which was less than 10,000 8 years ago.
- **Increasing footprint of Digital activities:**
 - **India now has over 1.15 billion phones and more than 700 million internet users** and makes it a large pool of digitally vulnerable targets.
 - In January 2020, India had the **second largest Internet user base with over 550 million Internet users**.
 - In 2021, **40% of the total global digital payments took place in India**.
 - Digital Inclusion increases the potential of digital threats leading to cyber-attacks and crimes.

What distinguishes Cybercrime from Traditional Criminal Activity?

- **Cybercrime**, also called **computer crime**, the use of a computer as an instrument to further illegal ends, such as committing fraud, trafficking in child pornography and [intellectual property](#) stealing identities or violating privacy.
 - Most **cybercrime is an attack on information about individuals, corporations, or governments**.
 - Although the attacks **do not take place on a physical body as traditional criminal activity, they do take place on the personal or corporate virtual body**, which is the set of informational attributes that define people and institutions on the Internet.

What are the challenges behind Cyber Safety?

- **Service Providers:**
 - Rush towards digitisation in almost every sector has led to increased collaborations with application service providers. This is done **to provide customers with the best apps and services in the shortest possible time**.
 - Hardware and software being of foreign origin or the terabytes of data that is parked on

servers outside India serve a potential threat to National Cyber space.

▪ **Wide Coverage:**

- India has now more than 700 million internet users and makes it a large pool of digitally vulnerable targets. Considering our nation's size and scale, it serves as a challenge to monitor and suspect digital threats.

What are the Present Government Initiatives for Cyber Safety?

▪ **Cybercrime portal:**

- It aims to enable citizens to report online content pertaining to **Child Pornography/ Child Sexual Abuse Material or sexually explicit content such as Rape/Gang Rape (CP/RGR)**.

▪ **Indian Cyber Crime Coordination Centre (I4C):**

- The prevention of cybercrimes is being handled through seven pillars under **I4C and CIS Division of Ministry of Home Affairs -**
- **National Cyber Crime Threat Analytics Unit**
- **National Cyber Crime Reporting Portal**
- **National Cyber Crime Training Centre**
- **National Cyber Crime Research and Innovation Centre**
- **Joint Cyber Crime Coordination**
- **National Cyber Crime Ecosystem Management Unit**
- **National Cyber Crime Forensic Laboratory**

▪ **CERT-In:**

- India's national agency for cybersecurity, **The Indian Computer Emergency Response Team (CERT-In)**, has led to a reduction in cyber-attacks on government networks due to its advancements in tackling the nation's cybersecurity.

▪ **Cyber Surakshit Bharat:**

- It is an initiative from the **Ministry of Electronics and Information Technology (MeitY)** that aims at creating a robust cybersecurity ecosystem in India. This aligns with the government's vision for a **'Digital India'**. **The National E-Government Division (NeGD) sponsored this program.**

▪ **Cyber Swachhta Kendra:**

- It is an installation under the **Ministry of Electronics and Information Technology (MeitY)** aims to create secure cyberspace for Indian users by detecting botnet infections and enabling end-users to clean their systems and secure their systems thereafter to prevent further infections.

▪ **Personal Data Protection Bill:**

- Worldwide data breaches served a threat to personal security for Indian citizens, the PDP Bill was approved by the union government **to protect them from global breaches, focusing on localised data.**

Way Forward

- To achieve the goal of **cyber-secure nation**, India will require a robust **cybersecurity strategy** that safeguards government systems, citizens, and the business ecosystem. This will not only help protect citizens from cyber-threats, but also boost investor confidence in the economy.
 - The **university and school curriculum** must also emphasise **cybersecurity as a high-decibel awareness** subject.
 - Pressure also needs to be put on officials in the public domain to carry out **regular vulnerability assessments** and **create necessary awareness** of the growing cyber threat.
 - A dedicated industry forum for cyber security should be set up to develop trusted **indigenous solutions to check cyber-attacks.**

Source: PIB

Summer Solstice: 21st June

For Prelims: Summer Solstice, Winter Solstice, Equinox

For Mains: Summer Solstice, Geography behind Solstice, Physical Geography, Important Geophysical Phenomena

Why in News?

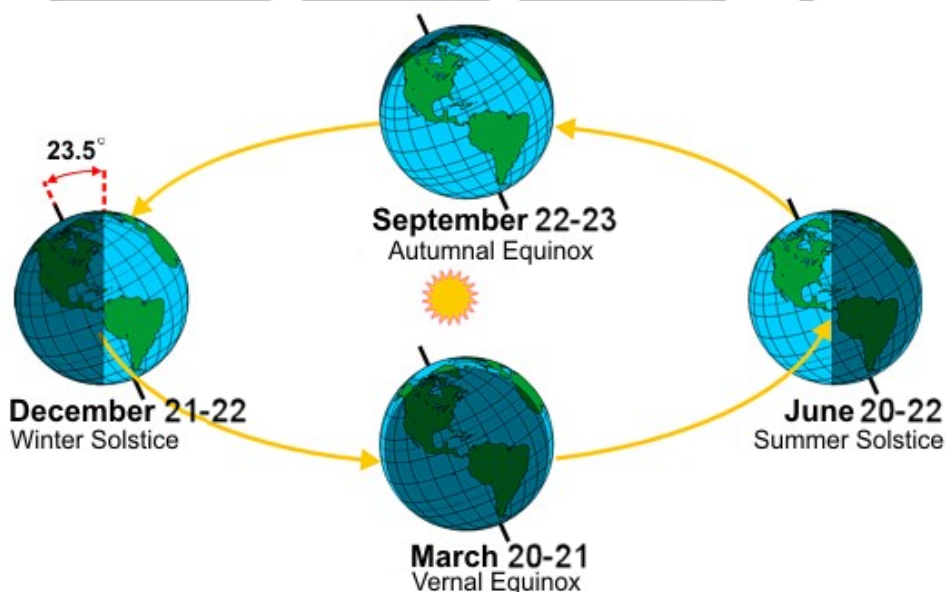
21st June is the day of the **Summer Solstice** in the northern hemisphere.

- The day is observed as the [International Day of Yoga](#).

What is the Summer Solstice?

▪ About:

- **Solstice** is a **Latin word that means 'stalled sun'**. It is a natural **phenomenon that occurs twice every year**, once in the summer and again during winter, in each hemisphere of the earth - Summer and [Winter Solstice](#).
- It is the **longest day and shortest night of the year in the Northern Hemisphere**.
- During this, **countries in the Northern Hemisphere are nearest to the Sun** and the Sun shines overhead on the Tropic of Cancer (23.5° North).
 - At latitudes of 23.5° are the Tropics of Cancer and Capricorn, north and south of the Equator.
 - At 66.5° are the Arctic and Antarctic Circles, to the north and south.
 - Latitudes are a measure of a location's distance from the Equator.
- During the solstice, **the Earth's axis — around which the planet spins, completing one turn each day — is tilted in a way that the North Pole is tipped towards the sun and the South Pole is away from it**.
- Typically, this imaginary axis passes right through the middle of the Earth from top to bottom and is always tilted at 23.5 degrees with respect to the sun.



▪ Greater Amount of Energy:

- This day is characterised by a greater amount of energy received from the sun. According

to [NASA \(National Aeronautics and Space Administration\)](#), the amount of incoming energy the Earth received from the sun on this day is 30% higher at the North Pole than at the Equator.

- The **maximum amount of sunlight received by the Northern Hemisphere during this time is usually on June 20, 21 or 22**. In contrast, the Southern Hemisphere receives most sunlight on December 21, 22 or 23 when the northern hemisphere has its longest nights- or the winter solstice.

What is the Geography Behind the Solstice?

- The reason behind it is the **changing lengths of the days is the Earth's tilt**.
- The Earth's **axis of rotation is tilted at an angle of 23.5°** to its orbital plane. This tilt, combined with factors such as Earth's spin and orbit, leads to variations in the duration of sunlight, due to which any location on the planet receives different lengths of days.
 - The Northern **Hemisphere spends half the year tilted in the direction of the Sun**, getting direct sunlight during long summer days. During the other half of the year, it tilts away from the Sun, and the days are shorter.
- The tilt is **also responsible for the different seasons on Earth**. This phenomenon causes the movement of the Sun from the northern to the southern hemisphere and vice versa bringing in seasonal changes in the year.

What is the Equinox?

- Twice each year, **during the equinoxes ("equal nights")**, Earth's axis is not pointed toward our Sun, but is perpendicular to the incoming rays.
- It results in a **"nearly" equal amount of daylight and darkness** at all latitudes.
- The vernal or spring equinox occurs in the northern hemisphere on March 20 or 21. September 22 or 23 marks the northern hemisphere **autumnal or fall equinox**.

UPSC Civil Services, Previous Years Questions (PYQ)

Q. On 21st June, the Sun (2019)

- (a) does not set below the horizon at the Arctic Circle
- (b) does not set below the horizon at Antarctic Circle
- (c) shines vertically overhead at noon on the Equator
- (d) shines vertically overhead at the Tropic of Capricorn

Ans: (a)

Exp:

- During 'Summer Solstice', on 21st June, the Northern Hemisphere witnesses its longest day of the year, while the Southern Hemisphere sees its shortest day. During this time, the Earth's North Pole is at its maximum tilt towards the Sun and the Sun appears directly overhead at 23.5° north latitude, i.e. along the Tropic of Cancer.
- As the Arctic Circle falls in the Northern Hemisphere, the **Sun does not set below the horizon during Summer Solstice**, because here the sunrise and sunset start to converge in the northern sky. In contrast, the same event happens in the Antarctic Circle during Winter Solstice, 22nd December. Therefore, option (a) is the correct answer.

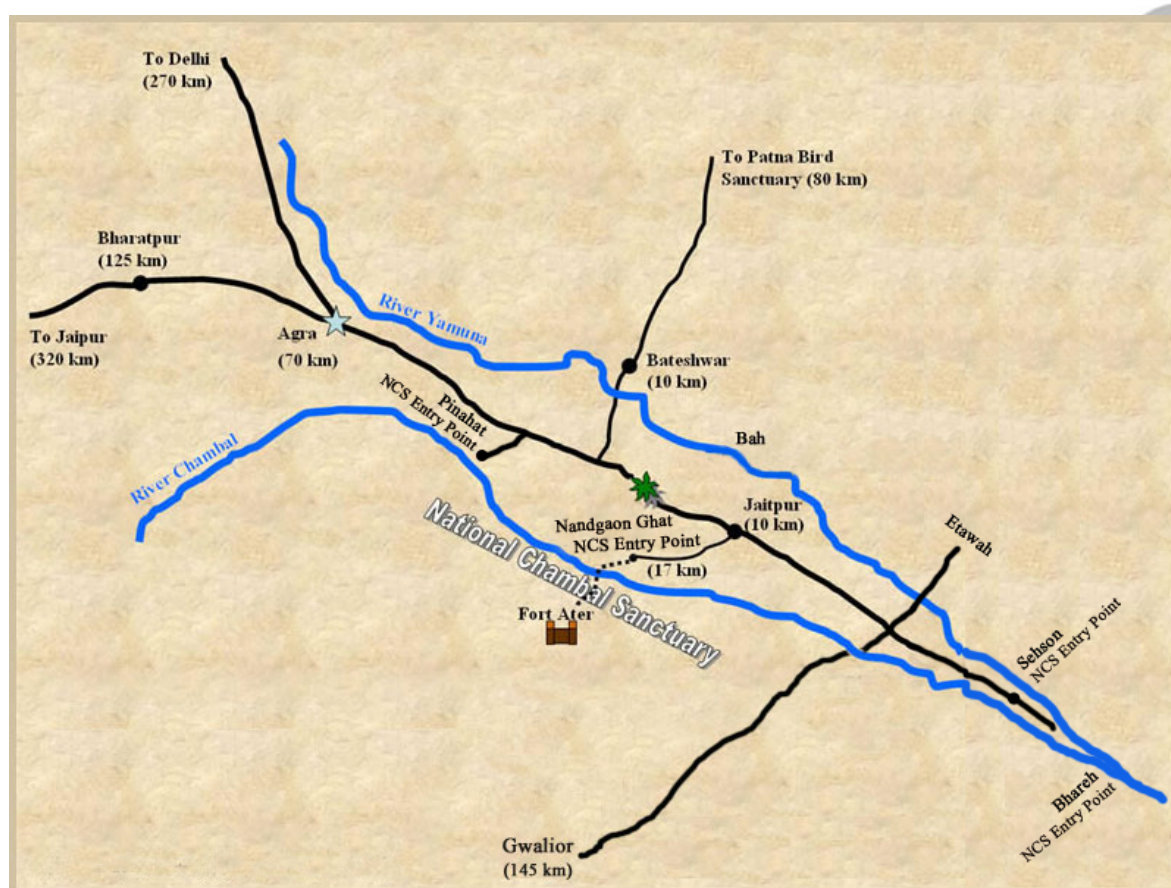
Source: IE

National Chambal Sanctuary

Why in News?

Recently, the Madhya Pradesh government has proposed to open 292 hectares for mining in five stretches on **Chambal and its tributary Parvati rivers**.

- The step is taken to free its forest department from devoting too much time, resources, and efforts in fighting illegal mining in the **National Chambal Sanctuary**.
- Sand mining has been banned in the sanctuary since 2006.



Where is National Chambal Sanctuary?

- **About:**
 - It was set up in 1979 as a riverine sanctuary along an approximately 425 km length of the Chambal River.
 - Its ravines stretches over 2-6 km wide along the **Chambal River** near the **tri-point of Rajasthan, Madhya Pradesh and Uttar Pradesh**.
 - The National Chambal Sanctuary is listed as an **Important Bird Area (IBA)** and is a proposed **Ramsar site**.

What are Important Bird Areas (IBAs)?

- **Birds are excellent indicators of ecosystem health.**
- The **IBA programme of Birdlife International** aims to identify, monitor and protect a global network of IBAs for **conservation of the world's birds and associated biodiversity**.

- The **Bombay Natural History Society and Birdlife International** have identified **554 IBAs in India**.
- 40% of these IBAs fall outside the Protected Area network and thus form an important tool for landscape-level conservation planning.
- According to Birdlife International, designation of IBAs is based on standardized criteria, namely:
 - **A: Global**
 - **A1: Species of Global Conservation Concern:**
 - The site regularly holds significant numbers of a **globally threatened species**, or other species of global conservation concern.
 - **A3: Biome-Restricted Species:**
 - The site is known or thought to hold a significant assemblage of the species whose breeding distributions are largely or wholly **confined to one biome**.
 - **A4: Congregations**
 - The site is known or thought to hold, on a regular basis, **≥ 1% of the biogeographic population of a congregatory waterbird species**.
 - The site is known or thought to hold, on a regular basis, **≥ 1% of the global population of a congregatory seabird or terrestrial species**.
 - The site is known or thought to hold, on a regular basis, **≥ 20,000 waterbirds or ≥10,000 pairs of seabird of one or more species**.
- **Ecological Significance:**
 - The National Chambal Sanctuary is **home to critically endangered [Gharial \(small crocodiles\)](#), the [red-crowned roof turtle](#) and the endangered [Ganges River dolphin](#)**.
 - Chambal supports the largest population of Gharials in the wild.
 - Only known place where nesting of [Indian Skimmers](#) is recorded in large numbers.
 - Chambal supports **8 rare turtle species** out of the 26 found in the country.
 - Chambal is one of the **cleanest rivers in the country**.
 - Chambal supports more than **320 resident and [migrant birds](#)**.
- **Economic Support:**
 - Locals directly depended on various resources of the Sanctuary. They **farm along the river**, extract river water for [irrigation](#), practice **sustenance and commercial fishing, and quarry sand**.

What are the Other Sanctuaries and National Parks of Madhya Pradesh?

- Madhya Pradesh has **9 National Parks and 25 Sanctuaries** spread over an area of 10,862 square km constituting 11.40% of the total forest area and 3.52% of the geographical area of the state.
- At present, the state has **5 Project Tiger** areas in the state namely -
 - [Kanha National Park](#)
 - [Panna National Park](#)
 - [Bandhavgarh National Park](#)
 - [Pench National Park](#)
 - [Satpura National Park](#)
- It is also known as the '**Tiger State**' as it occupies around 19% of India's Tiger Population and 10% of the world's tiger population.

Chambal River

- It is one of the most **pollution-free rivers** of India.
- It's a 960 km. long river that originates at the **Singar Chouri peak** in the northern slopes of the **Vindhya** mountains (Indore, Madhya Pradesh). From there, it flows in **North direction** in Madhya Pradesh for a length of about 346 km and then follows a **north-easterly direction** for a length of 225 km through Rajasthan.
- It enters U.P. and flows for about 32 km before joining the **Yamuna River** in Etawah District.
- It is a **rainfed river** and its basin is bounded by the **Vindhyan** mountain ranges and the Aravallis. The Chambal and its tributaries drain the **Malwa region** of northwestern Madhya Pradesh.
- **Tributaries:** Banas, Kali Sindh, Parbati.

- **Main Power Projects/ Dam:** Gandhi Sagar Dam, Rana Pratap Sagar Dam, Jawahar Sagar Dam, and Kota Barrage.
- The **National Chambal Sanctuary** is located along river Chambal on the tri-junction of Rajasthan, Madhya Pradesh and Uttar Pradesh. It is known for **critically endangered gharial, the red-crowned roof turtle, and the endangered Ganges river dolphin.**



UPSC Civil Services Examination, Previous Year Question (PYQ)

Q. Consider the following pairs: (2010)

	Protected area	Well-known for
1.	Bhiterkanika, Orissa	Salt Water Crocodile
2.	Desert National Park, Rajasthan	Great Indian Bustard
3.	Eravikulam, Kerala	Hoolak Gibbon

Which of the pairs given above is/are correctly matched?

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

Ans: (b)

Exp:

- **Bhitarkanika National Park is the core area of the Bhitarkanika Wildlife Sanctuary located in the Kendrapara district** in the state of Odisha. It was designated as national park in 1998 and as a Ramsar site by the state of Odisha in 2002. The national park is home to **saltwater crocodile (Crocodylus porosus)**, Indian python, king cobra, black ibis, darters and many other species of flora and fauna. It hosts a large number of mangrove species. The national park and wildlife sanctuary are inundated by the rivers Brahmani, Baitarani, Dhamra, Pathsala. Hence, pair 1 is correctly matched.
- **Desert National Park is located in the Thar Desert** and is situated near Jaisalmer. The major wildlife found in the park are chinkara, desert fox, blackbuck, Bengal fox, spiny-tail lizard, sandfish, desert monitors, chameleons, etc. The main attraction of the national park is the **Great Indian Bustard** which is a critically endangered bird species. Hence, pair 2 is correctly matched.

- **Eravikulam National Park**, located in Kerala, holds the largest viable population of the endangered Nilgiri Tahr and is a famous habitat of Neelakurinji, which blooms once in 12 years. Apart from Tahr, the park is an abode of other little known fauna such as nilgiri marten (endemic), ruddy mongoose, small clawed otter, dusky striped squirrel etc.
- **Hoolock Gibbons are found in several states of North- East** including Assam, Arunachal Pradesh, Manipur, Meghalaya, Tripura and Nagaland. They are also spotted in the Kaziranga National Park, Manas Wildlife Sanctuary and Namdhapha National Park. Hence, pair 3 is not correctly matched.
- **Therefore, option (b) is the correct answer.**

[Source: IE](#)

Operation Sankalp

Why in News?

Indian Navy's stealth Frigate, **INS Talwar** is presently deployed for Op-Sankalp commemorating the 3rd continuous year of Indian Navy's presence in the Gulf.

What is Operation-Sankalp?

- **About:**
 - The **Indian Navy** has launched '**Operation Sankalp**' in the **Persian Gulf** and the **Gulf of Oman** as a measure **to assure the safety and security of the Indian vessels.**
- **Background:**
 - After the attacks on merchant ships in the **Gulf of Oman** in June 2019, Indian Navy had commenced **Maritime Security Operations**, code named **Op-Sankalp**, in the Gulf Region to ensure safe passage of Indian Flag Vessels transiting through the **Strait of Hormuz.**



- **Deployment:**

- Twenty-three warships have been deployed till date for this operation and on an average 16 Indian-flagged merchant vessels are being provided safe passage each day in the Gulf region
- Indian Navy's stealth Frigate, **INS Talwar** is presently deployed in the Gulf region.
- **Significance:**
 - India is dependent for about 85% of its demand for oil on imports. In 2019-2020, around 62% of India's oil imports valued at approximately 66 billion USD came from the Gulf region.
 - Due to the prevailing security situation in the Persian Gulf, it is required to provide security to Indian-flagged merchant vessels transiting through the region.

INS Talwar

- **INS Talwar (F40)** is the lead ship of the Talwar-class frigates of the Indian Navy. Its name means "**Sword**" in Hindi.
- Built in Russia, commissioned into the Indian Navy in June 2003.
- **Features:**
 - Anti-air operations
 - Anti-ship/Land-attack missiles
 - Anti-submarine warfare

The Persian Gulf

- Also called the **Arabian Gulf**, it is a shallow marginal sea of the Indian Ocean that lies between the Arabian Peninsula and the southwestern Iran.
- Its length is around 990 km and its width varies from a maximum of around 340 km to a minimum of 55 km in the **Strait of Hormuz**.
- The area has approximately two-thirds of the world's estimated proven oil reserves and one-third of the world's estimated proven natural gas reserves.
- A considerable amount of sea trade passes through the gulf, leading to heavy traffic of large tankers that carry oil from the large marine terminals situated in Iran, Kuwait, Saudi Arabia, Bahrain, United Arab Emirates and other locations to all parts of the world.

The Gulf of Oman

- The Gulf of Oman, northwest arm of the Arabian Sea, **lies between the eastern portion of the Arabian Peninsula (Oman) and Iran**.
- It is 560 km long and **connects with the Persian Gulf** through the **Strait of Hormuz**.
- It is a shipping route for the oil-producing area around the Persian Gulf.
- It offers the **only entrance from the Arabian Sea and the Indian Ocean** into the Persian Gulf. Thus, the world's major oil exporters and importers have a joint interest in its security.

[Source: PIB](#)

Burmagomphus Chaukulensis

Why in News?

Recently, a rare dragonfly, **Burmagomphus chaukulensis** was spotted in Kerala.

- Earlier, a new species of dragonfly '*Platygomphus benritarum*' was discovered in Assam.

What are the Findings?

- This is a dragonfly of genus *Burmagomphus*, which is represented by **three species - B. Cauvericus, B. Pyramidalis and B. Laidlawi.**



- While **B. laidlawi** is found throughout the Western Ghats,
- *B. cauvericus* is **more restricted in its distribution.**
- *B. pyramidalis* is found in the Western Ghats as well as in Peninsular India.
- All **other species of the genus are found in the Western and Eastern Himalayas.**
- The new species **can be separated from its congeners by the markings on the lateral thorax and peculiar shape** of anal appendages.
- This species is known to be **endemic to the [Western Ghats.](#)**

What are Dragonflies?

- **About:**
 - It is an **aerial predator insect most commonly found near freshwater habitats** throughout most of the world.
 - Their distinctive **colors make them look beautiful.** This makes them valuable subjects for research on insect behavior, both for ecology and art.
- **Habitat:**
 - Most species of dragonflies live in the **tropics and particularly in the rainforests.**
- **Significance:**
 - Dragonflies act as **important bio-indicators of the ecological health of an area.** As they feed on mosquitoes and other insects that are vectors to life-threatening diseases like Malaria and Dengue.
- **Threats:**
 - The rapid destruction of their habitat poses a direct threat to their survival making their conservation urgent.

UPSC Civil Services Examination, Previous Year Question

Q. The word 'Denisovan' is sometimes mentioned in media in reference to (2019)

- (a) fossils of a kind of dinosaurs
- (b) an early human species
- (c) a cave system found in North-East India
- (d) a geological period in the history of Indian subcontinent

Ans: (b)

Exp:

- Denisovans are an extinct species of hominid and were close relatives of Neanderthals. They are another population of early human who lived in Asia.
- The Denisovans are a much more recent addition to the human family tree. Paleoanthropologists unearthed a 40,000-year-old adult tooth and an exquisitely preserved fossilized little finger bone that had belonged to a young girl who was between five and seven years old when she died. Studies reflects that the girl was closely related to Neanderthals, yet distinct enough to be classified as a new species of archaic humans, which scientists named “Denisovan” after the cave where the bone was found. The Denisovan genome also suggests the young girl had brown hair, eyes, and skin. Therefore, option (b) is the correct answer.

[Source: TH](#)

44th Chess Olympiad

Why in News?

The **44th Chess Olympiad will be held in Chennai** in 2022.

- The prestigious competition, which has been organized **since 1927**, is being **hosted in India for the first time and in Asia after 30 years**.
- With 189 countries participating, this will be the largest participation in any Chess Olympiad.

What is FIDE?

- The **International Chess Federation (FIDE)** is the **governing body of the sport of chess**, and it **regulates all international chess competitions**.
 - It's constituted as a non-governmental institution.
- It was recognized by the International Olympic Committee as a Global Sporting Organization in 1999.
- FIDE currently has its **headquarters in Lausanne (Switzerland)**, but it was initially **founded in 1924** in Paris under the motto “Gens Una Sumus” (Latin for “We are one Family”).
- It was one of the very first International Sports Federations, alongside the governing bodies of the sports of Football, Cricket, Swimming, and Auto Racing. It is now one of the largest, encompassing 199 countries as affiliate members, in the form of National Chess Federations.

[Source: PIB](#)
