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US-Taliban sign landmark agreementGS-II | 02 March, 2020

Syllabus subtopic: Effect of Policies and Politics of Developed and Developing Countries on India's interests, Indian Diaspora.

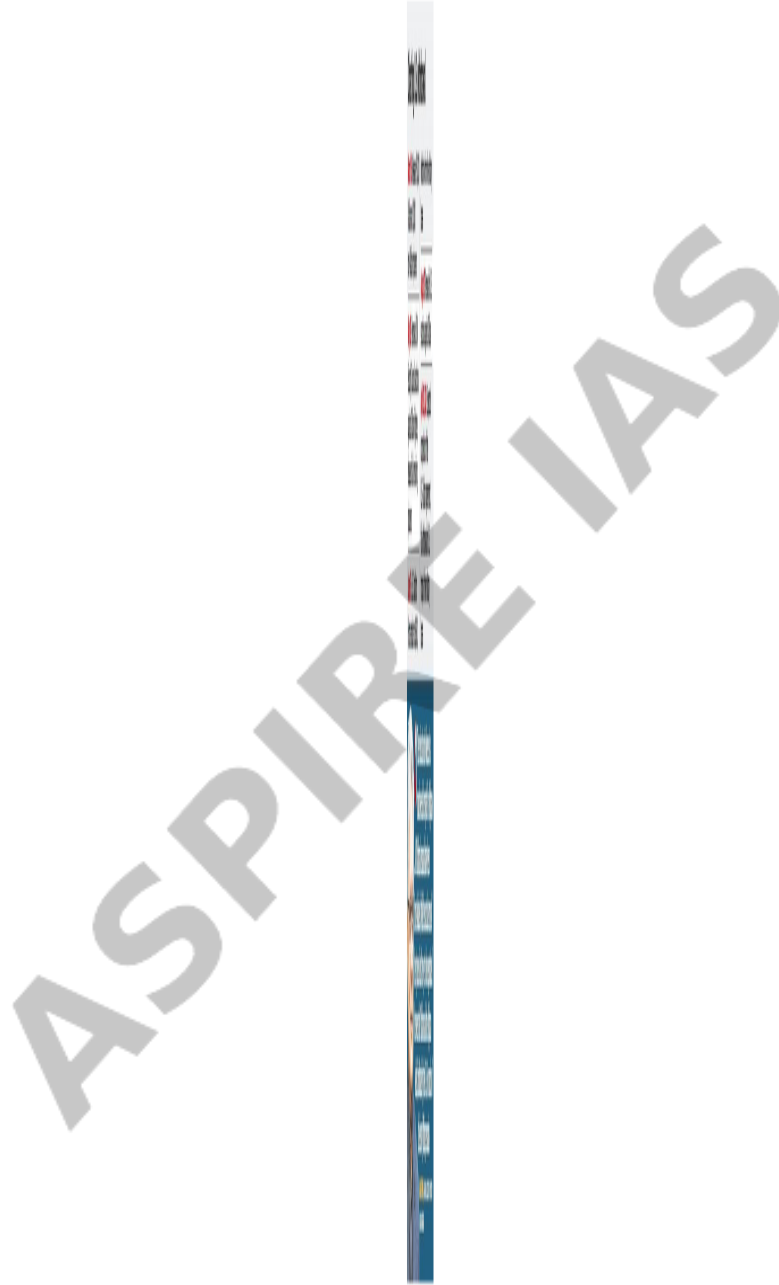
Prelims and Mains focus: about the agreement and its implications

News: India has signalled its acceptance of the **U.S.-Taliban and U.S.-Afghanistan peace agreements** in Doha and Kabul that **aim to end the 18-year war in Afghanistan**, by sending envoys to witness them.

What are the agreements called?

- 1. US-Taliban agreement:** "Agreement for Bringing Peace to Afghanistan between the Islamic Emirate of Afghanistan which is not recognised by the United States as a state and is known as the Taliban, and the United States of America."
- 2. US-Afghanistan agreement:** "Joint Declaration between the Islamic Republic of Afghanistan and the United States of America for Bringing Peace to Afghanistan."

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Aim of the agreements signed

The two agreements set out a **course for the next 14 months**, including the **pull-out of U.S. troops**, the **denial of space to foreign terrorist groups** and any **violence against the U.S. and allies**, and **intra-Afghan dialogue**.

What are the salient points of concern?

1. Does the term "U.S. and Allies" include India?

In the Doha agreement, the Taliban has guaranteed "enforcement mechanisms that will prevent the use of the soil of Afghanistan by any group or individual against the security of the United States and its allies". However, it is unclear whether India, which is not a U.S. ally, is included in this definition, and whether Pakistan-backed groups that threaten India, would still operate in Afghanistan. The Kabul declaration with the Ghani government more specifically commits to stopping "any international terrorist groups or individuals, including al-Qa'ida and ISIS-K, from using Afghan soil to threaten the security of the United States, its allies and other countries."

2. Impact of prisoner release and lifting sanctions

- Officials worry most about the "**mainstreaming of the Haqqani network**", which Lashkar-e-Taiba terrorists reportedly fight alongside and were **responsible for the 2008 bombing of the Indian embassy in Kabul**.
- According to the agreements, 5,000 Taliban prisoners will be released by March 10, 2020, the first day of intra-Afghan negotiations, and the remainder in another three months. Officials also point out that the U.S. has committed to taking Taliban leaders off the UN Security Council's sanctions list by May 29, 2020, which could considerably bring down the number of terrorists Pakistan is accused of harbouring, according to the **FATF grey-list**

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conditions. This might benefit Pakistan during the June 2020 FATF Plenary, when it faces a blacklist for not complying.

3. Handing powers to Taliban

- In the **Doha agreement**, the U.S. has committed to clearing five bases and bringing troop levels down to 8,600 in four and a half months, and even appears to submit to the possibility of a Taliban-led government, by extracting promises that the Taliban will not provide "visas, passports, travel documents or asylum" to those threatening the U.S. and its allies. This appears to **sideline the "Intra-Afghan" dialogue**, and India's support for the election process for leadership in Afghanistan.
- In the last section of the agreement, the U.S. and Taliban seek "positive relations with each other and expect that the relations between the United States and the new post-settlement Afghan Islamic government as determined by the intra-Afghan dialogue and negotiations will be positive".

4. Afghan govt. in peril?

This indicates that the **Ghani government**, which India has recognised as winner of the 2019 election, **will only serve for an interim period**. This also raises a **big question mark on the future of Afghanistan's government**, and **whether it will remain a democracy**.

5. Terms of agreement still nebulous

- All Taliban demands have been front-loaded, while the actual terms of the 'peace deal' are yet to be negotiated between the Taliban and the Afghan side, facilitated by the U.S. So, much of the heavy lifting remains.
- There is **no reference to the Constitution, rule of law, democracy and elections**.

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6. Impact on India

- After a closer look at the texts of the two agreements distributed to news agencies diplomatic and security experts say the **impact on India may be a cause for worry for the government.**
- Experts warned the Afghanistan-Pakistan dialogue facilitated by the U.S. on cross-border terrorism and mechanisms must not cut India out of the region's security architecture.

Source: The Hindu

Centre to review list of monuments under ASI

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Syllabus subtopic: Government Policies and Interventions for Development in various sectors and Issues arising out of their Design and Implementation.

Prelims and Mains focus: about the move and its significance; about Ancient Monuments and Archaeological Sites and Remains Act, 1958; about ASI

News: The **number of monuments under the Centre's protection could increase** as the government is planning a **review of those under the Archaeological Survey of India (ASI)** and the **ones protected by the State governments.**

Current scenario

- At present, 3,691 monuments nationwide are protected by the ASI, with the **highest number, 745, in Uttar Pradesh.**

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- The list of the Centrally protected monuments had not seen a substantial increase in many years, and important sites under the State governments could be added to the list. On the other hand, there were **some monuments that could be removed from the Central list and placed under the State governments.**

About the move

- The list of Centrally protected monuments can go up to 10,000. In Tamil Nadu alone, there are about 7,000 temples, many of which are hundreds of years old. On the other hand, there are some monuments under the ASI that can be shifted to the State list.
- There were some sites that could be moved from the Central list, **allowing development works in their vicinity.** There is a **ban on construction within 100 metres of a Centrally protected monument** and regulated construction within 100-200 metres under the **Ancient Monuments and Archaeological Sites and Remains Act, 1958.** The Act **protects monuments and sites that are over 100 years old.**

About Archaeological Survey of India (ASI)

- The Archaeological Survey of India (ASI) is the premier organization for the archaeological researches and protection of the cultural heritage of India. It was **established in 1861.** It works under **Ministry of culture.**
- The **major functions** of Archaeological Survey of India include maintenance of ancient monuments and archaeological sites and remains of national importance.
- Under the **Ancient Monuments and Archaeological Sites and Remains**

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Act of 1958, the ASI has declared 3656 monuments to be of national importance in the country.

- ASI has also undertaken major conservation works abroad besides carrying out excavations, explorations, images and other studies in countries like Afghanistan, Nepal, Cambodia and Egypt.

Source: The Hindu

Bill to amend Banking Regulation Act

GS-II | 02 March, 2020

Syllabus subtopic: Government Policies and Interventions for Development in various sectors and Issues arising out of their Design and Implementation.

Prelims and Mains focus: about the amendment and its significance; about steps taken in banking sector

News: The Parliament is likely to clear a Bill to amend Banking Regulation Act during the second leg of Budget session. The session ends on April 3.

Cooperative Banks in India

There are **1,540 co-operative banks** with a **depositor base of 86 million** having total savings of about Rs.5 lakh crore.

Objective of the amendment

- To **bring multi-state co-operative banks under effective regulation of RBI**, in order to **address weaknesses** in co-operative banking sector.

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- The proposed legislation will help prevent a repeat of Punjab and Maharashtra Cooperative Bank-like crisis.

Steps taken by the government in banking sector

In the last couple of years, the **Department of Financial Services** has taken **several steps** to **promote responsive and responsible banking**.

- As part of clean banking initiative, **project cash flows were ring-fenced**, enforcement of terms of loan agreements and prior validation of backward and forward linkages were made integral to lending processes.
- Besides, the number of banks in loan consortium was capped, **reducing borrowers' ability to play one lender off against another**.
- This was accompanied by **data driven risk scoring and scrutiny**, comprehensive diligence across data sources and strengthened credit assessment.
- To ensure financial health of public sector banks (PSBs), **recapitalization of Rs.4 lakh crore was undertaken in the last five years**. Provision coverage ratio reached a record high of 77 per cent. NPA and slippages are declining with improved asset quality.
- As a result of various initiatives taken by the government the **number of PSBs under Prompt Corrective Action (PCA) is down from 11 in 2017 to four**.
- As many as **12 out of 18 banks are in profit this year** as against 19 out of 21 in loss just two years ago with the help of record recovery and reduction in bad loans.

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Source: Livemint

Migratory species in India

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Syllabus subtopic: Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment.

Prelims and Mains focus: about the new list of migratory species; about CMS; about ZSI

News: With new additions to the wildlife list put out by the **Convention on the Conservation of Migratory Species (CMS)**, scientists say that the **total number of migratory fauna from India comes to 457 species. Birds comprise 83% (380 species)** of this figure.

Background

- The **Zoological Survey of India (ZSI)** had for the first time compiled the list of migratory species of India under the CMS before the Conference of Parties (COP 13) held in Gujarat recently. It had put the number at 451. Six species were added later. They are the Asian elephant, great Indian bustard, Bengal florican, oceanic white-tip shark, urial and smooth hammerhead shark.
- COP 13 of CMS has **focussed on transboundary species and corridor conservation.**

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About the CMS list

- Globally, more than 650 species are listed under the CMS appendices and India, with over 450 species, plays a very important role in their conservation.
- The ZSI had compiled a list of the 451 species of migratory animals found in India. With the addition of new species to the CMS Appendices, **the number is now 457.**

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- The **birds make up the bulk of migratory species**. Before COP 13, the number of migratory bird species stood at 378 and now it has reached 380. The **bird family Muscicapidae** has the **highest number of migratory species**. The next highest group of migratory birds is raptors or birds of prey, such as eagles, owls, vultures and kites which are from the family Accipitridae.
- **India has three flyways** (flight paths used by birds): the **Central Asian flyway**, **East Asian** flyway and **East Asian–Australasian** flyway. Another group of birds that migrate in large numbers are waders or shore birds. In India, their migratory species number 41, followed by ducks (38) belonging to the family Anatidae.
- The estimate of 44 migratory mammal species in India has risen to 46 after COP 13. The Asian elephant was added to Appendix I and the ural to Appendix II of the CMS.
- The **largest group of mammals is definitely bats** belonging to the family Vespertilionidae. **Dolphins are the second highest group of mammals** with nine migratory species of dolphins listed.
- **Fishes make up another important group** of migratory species. Before COP 13, the ZSI had compiled 22 species, including 12 sharks and 10 ray fish. The oceanic white-tip shark and smooth hammerhead shark were then added. The **total number of migratory fish species from India under CMS now stands at 24**.
- **Seven reptiles**, which include **five species of turtles** and the **Indian gharial** and **salt water crocodile**, are among the CMS species found in India. There was **no addition to the reptiles list**.

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Source: The Hindu

Water crisis in Himalayan regions

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Syllabus subtopic: Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment.

Prelims and Mains focus: about the study and its key findings

News: A survey regarding water situation in Himalayan regions was recently published in the latest edition of the journal **Water Policy**.

About the survey

The researchers surveyed **13 towns across Bangladesh, Nepal, India and Pakistan** to understand the **challenges of the urban denizens** of these regions.

Key findings of the survey

- Eight towns in the Himalayan region of Bangladesh, Nepal, India and Pakistan were nearly 20%-70% deficient in their water supply.
- **Unplanned urbanisation** and **climate change** are the key factors responsible for the state of affairs, the study underlines.
- The **places surveyed are extremely dependent on springs** (ranging between 50% and 100%) for their water, and three-fourths were in urban areas. Under current trends, the **demand-supply gap may double by 2050**, the researchers warn.

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- Communities were **coping through short-term strategies** such as **groundwater extraction**, which is **proving to be unsustainable**. A **holistic water management approach** that includes springshed management and **planned adaptation is therefore paramount**.
- Across the region, the **encroachment and degradation of natural water bodies** (springs, ponds, lakes, canals, and rivers) and the growing **disappearance of traditional water systems** (stone spouts, wells, and local water tanks) are evident.
- Although only 3% of the total **Hindu Kush Himalayan** population lives in larger cities and 8% in smaller towns, projections show that over 50% of the population will be living in cities by 2050, placing "tremendous stress" on water availability.
- **Rural areas** have typically garnered much of the attention in terms of development and issues surrounding urban environments have been "sidelined".

Source: The Hindu

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Long-term Repo Operations (LTRO)

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Syllabus subtopic: Indian Economy and issues relating to Planning, Mobilization of Resources, Growth, Development and Employment.

Prelims and Mains focus: about LTRO: features and significance

News: The Reserve Bank of India had received Rs.1.71 lakh crore in the third long-term repo operation (LTRO) conducted for an amount of Rs.25,000 crore. The central bank received 66 bids in the three-year tenor LTRO, which has reversal date on March 1, 2023.

Background

- It has already conducted two LTROs for Rs.25,000 crore each on February 17 and February 24.
- In the February 17 LTRO for the three-year tenor, it received bids amounting to Rs.1.944 lakh crore.

What is long-term repo operation (LTRO)?

- The LTRO is a tool under which the **central bank provides one-year to three-year money to banks** at the **prevailing repo rate**, accepting government securities with matching or higher tenure as the collateral.
- While the RBI's current windows of **liquidity adjustment facility (LAF)** and **marginal standing facility (MSF)** offer banks money for their immediate needs ranging from 1-28 days, the **LTRO supplies them with liquidity for their 1- to 3-year needs**.

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LTRO operations are **intended to prevent short-term interest rates** in the market **from drifting a long way away from the policy rate**, which is the repo rate.

Why is it important?

- Ever since the economic slowdown hit India and the IL&FS fiasco triggered a spike in borrowing costs, the RBI has been trying to stimulate the economy through **easy-money policies**. Since January 2019, the **repo rate (the rate at which banks borrows quick money from RBI)** has been cut by 139 basis points. But **only a part of these rate cuts have as yet been passed on to borrowers** by banks and other lenders.
- When charged with this **slow transmission of rate cuts**, bankers complained that repo loans constituted only a miniscule portion of their overall funds, making it difficult for them to cut lending rates. Under the LAF, banks could only bid up to a maximum of 0.75 per cent of their net demand and time liabilities.
- The **LTRO bidding system**, taken with the removal of the 0.75 per cent limit on LAF borrowings, is **expected to remove these constraints**. The RBI believes that offering banks durable longer-term liquidity at the repo rate (5.15 per cent), can help them lower the rates they charge on retail and industrial loans, while maintaining their margins. The encouraging response to the first auction indicates the banks' high appetite for cheap funds — bids were received for more than 7.7 times the amount auctioned (Rs.25,000 crore). The LTRO will also help bring down the yields for shorter-term securities (in the 1-3-year tenor) in the bond market.

Features of Long-Term Repo Operations (LTRO)

- **Maturity period (tenor):** One-year and three-year tenors
 - **Total funds to be injected:** Up to Rs 1,00,000 crores
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- Interest rate: at the prevailing policy rate (Repo rate).
- Method of fund injection: **CBS (E-KUBER) platform**. The operations would be conducted at a fixed rate.
- Banks would be required to place their requests for the amount sought under LTRO during the window timing at the prevailing policy repo rate. Bids below or above policy rate will be rejected.
- If there is over-subscription of the notified amount, the allotment will be done on pro-rata basis. RBI will, however, reserve the right to inject marginally higher amount than the notified amount due to rounding effects.
- The minimum bid amount would be Rs. 1 crore and multiples thereof. There will be no restriction on the maximum amount of bidding by individual bidders.
- The eligible collateral and the applicable haircuts for LTRO will remain the same as applicable for LAF.
- All other terms and conditions as applicable to LAF operations for the LTRO.

Source: The Hindu

State Funding of Elections

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Syllabus subtopic: Salient Features of the Representation of People's Act.

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Prelims and Mains focus: about the issue and various committees related to it

News: The **Election Commission** has informed the Government that it is **not in favour of state funding of elections**.

Why?

- The Election commission is of the view that **it would not be able to prohibit or check candidates' expenditure** over and above the state's provision.

Background

- The state funding of polls was recommended by **the Indrajit Gupta Committee in 1998**.
- The committee had suggested that state funding **would ensure a level playing field for poorer political parties** and argued that such a move would be in public interest.
- The committee had recommended **some limitations**, saying that state funds should **only be given to recognised national and State parties** and that **funding should be given in kind**, including free facilities provided to these parties and their candidates. The panel admitted that the economic situation of the country **only suited partial and not full state funding** of elections

About the issue

State funding of elections has been suggested in the past in response to the high cost of elections. A few government reports have looked at state funding of elections in the past, including:

1. Indrajit Gupta Committee on State Funding of Elections (1998)
2. Law Commission Report on Reform of the Electoral Laws (1999)

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3. National Commission to Review the Working of the Constitution (2001)
4. Second Administrative Reforms Commission (2008)

- The **Indrajit Gupta Committee (1998)** endorsed state funding of elections.
- The **1999 Law Commission of India report** concluded that total state funding of elections is "desirable" so long as political parties are prohibited from taking funds from other sources. The **Commission concurred with the Indrajit Gupta Committee** that only partial state funding was possible given the economic conditions of the country at that time. Additionally, **it strongly recommended that the appropriate regulatory framework be put in place** with regard to political parties (provisions ensuring internal democracy, internal structures and maintenance of accounts, their auditing and submission to Election Commission) before state funding of elections is attempted.
- "**Ethics in Governance**", a report of the **Second Administrative Reforms Commission (2008)** also **recommended partial state funding of elections** for the purpose of reducing "illegitimate and unnecessary funding" of elections expenses.
- The **National Commission to Review the Working of the Constitution, 2001**, **did not endorse state funding of elections** but **concurred with the 1999 Law Commission report** that the **appropriate framework for regulation of political parties** would need to be implemented before state funding is considered.

Source: The Hindu

KrOOK vulnerability

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Syllabus subtopic: Basics of Cyber Security

Prelims and Mains focus: about Kr00k and its threat

News: At the **RSA 2020 security conference in San Francisco**, security researchers from **Slovak antivirus company ESET** will present details about a **new vulnerability that impacts WiFi communications**.

What is it?

- Named **Kr00k**, this bug can be exploited by an attacker to intercept and decrypt some type of WiFi network traffic (relying on WPA2 connections).
- According to ESET, **Kr00k affects all WiFi-capable devices** running on **Broadcom and Cypress Wi-Fi chips**. These are **two of the world's most popular WiFi chipsets**, and they are **included in almost everything, from laptops to smartphones**, and from access points to smart speakers and other IoT devices.
- ESET researchers said they personally tested and confirmed that Kr00k impacts devices from Amazon (Echo, Kindle), Apple (iPhone, iPad, MacBook), Google (Nexus), Samsung (Galaxy), Raspberry (Pi 3) and Xiaomi (Redmi), but also access points from Asus and Huawei.
- ESET said it believes that more than a billion devices are vulnerable to Kr00k, and they consider this number "a conservative estimate."

What's Kr00K and how does it work?

- At the technical level, **Kr00k is just a bug**, like many other bugs that are being discovered on a daily basis in the software that we all use.

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- The difference is that Kr00k impacts the encryption used to secure data packets sent over a WiFi connection.
- Typically, these packets are encrypted with a unique key that depends on the **user's WiFi password**. However, ESET researchers say that for Broadcom and Cypress Wi-Fi chips, this key gets reset to an all-zero value during a process called "**disassociation**."
- **Disassociation** is something that occurs naturally in a WiFi connection. It refers to a temporary disconnection that usually happens due to a low WiFi signal.
- WiFi devices enter into disassociated states many times a day, and they're **automatically configured to re-connect to the previously used network when this happens**.
- ESET researchers say that **attackers can force devices into a prolonged disassociated state**, receive WiFi packets meant for the attacked device, and then use the Kr00k bug to decrypt WiFi traffic using the all-zero key.
- This attack scenario **allows hackers to actively intercept and decrypt WiFi packets, normally considered to be secure**.
- The **good news** is that the **Kr00k bug only impacts WiFi connections that use WPA2-Personal** or WPA2-Enterprise WiFi security protocols, with AES-CCMP encryption.
- This means that if you use a device with a Broadcom or Cypress WiFi chipset, you can protect yourself against attacks by using the newer WPA3 WiFi authentication protocol.

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Not as bad as KRACK

- All in all, the Kr00k vulnerability should be **easier to protect against than KRACK** -- a major vulnerability that impacted the WPA2 WiFi protocol and **forced most device vendors to switch to using WPA3 by default.**
- A **new KRACK attack, named Dragonblood**, was later discovered to impact even some newer WPA3 connections, but this newer attack didn't impact the entire WiFi ecosystem as the original KRACK attack did.
- ESET researchers said they discovered Kr00k while looking into the devastating effects of the KRACK attack; however, the two -- **KRACK and Kr00K** -- **should not be considered the same.**



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Source: The Hindu

Call drops need an infra fix

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Syllabus subtopic: Statutory, Regulatory and various Quasi-judicial Bodies.

Prelims and Mains focus: about the issue of call drops and its remedy; about TRAI

News: Telecom Regulatory Authority of India (TRAI) chairman has rubbished telecom operators' claim that free voice calls are to blame for the poor quality of voice calls.

What is a call drop and why does it occur?

- In any mobile network, the **capacity of each tower and, therefore, the network is limited** by the **availability of spectrum** that can be used to carry traffic. Moreover, the **customer usage pattern** in terms of location and time of use is **not static**.
- The **gap between the spectrum resources available and the spectrum resources required leads to overloading**, which **results in call drops**. The lack of mobile towers across locations causes "**coverage holes**", where the absence of radio signals results in the inability to make calls or in calls getting dropped when users are in such areas.

Has the problem become worse?

Four years ago, Reliance Jio entered the telecom sector with rock-bottom data tariffs and free voice calls. This exploded consumption on mobile networks, both for voice and data. It also led to a lot of voice traffic originating from Jio, but

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terminating at rival networks. The drastic cut in tariffs shrunk the revenue streams of operators, thereby reducing their appetite to invest in upgrading networks. Financial stress on the balance sheets of operators is a significant factor for poor quality networks. India has three private operators—Reliance Jio, Vodafone Idea and Bharti Airtel. Of these, only Jio is profitable.



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Who is responsible for improving call quality?

- Call quality comes under **Telecom Regulatory Authority of India (TRAI)**, which issues regulations covering subjects including tariff, interconnection and quality of service.
- In 2017, Trai moved to assessing dropped call rates at the mobile tower level instead of at the telecom circle level. In 2018, it tightened rules to check instances of call muting **over VoLTE (voice over long-term evolution) networks**.

What do operators say about this menace?

Operators say that in order to offer seamless network coverage without call drops they **need to take their network closer to customers**. This is possible only if hurdles are not created in the installation of towers, they say. Telcos complain that states and municipalities have not devised bylaws and right-of-way guidelines that could address the problem. They argue that **mobile tariffs in India are among the world's lowest**. Lower tariffs imply more consumption per user and also less resources for telcos to invest.

What is the way to resolve this issue?

Installation of in-building solutions can offer customers some relief from the disruption caused by call drops. Last-mile telecom infrastructure needs to be erected to ensure people get faster connectivity in their high-rise complexes. **Unlike developed nations, in India there is heavy dependence on wireless networks**. India must invest in creating a robust optical fibre network to carry more traffic. A few operators have also launched **voice-over-WiFi calling** that users can activate on high-end smartphones.

About Telecom Regulatory Authority of India (TRAI)

- TRAI is a **statutory body** set up by the Government of India under **section 3**

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of the Telecom Regulatory Authority of India Act, 1997.

- It is the **regulator** of the **telecommunications sector** in India.
- It **consists of a Chairperson** and **not more than two full-time members** and **not more than two part-time members**.
- The TRAI Act was amended by an ordinance, effective from 24 January 2000, establishing a **Telecom Disputes Settlement and Appellate Tribunal (TDSAT)** to take over the **adjudicatory and disputes functions** from TRAI.

Source: Livemint

New business model for Railways

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Syllabus subtopic:

- Government Policies and Interventions for Development in various sectors and Issues arising out of their Design and Implementation
- Infrastructure: Energy, Ports, Roads, Airports, Railways etc.

Prelims and Mains focus: about the move and its significance; reforms in the railways sector

News: The government has decided to **delink the cost of energy consumed by the private trains from the overall haulage charges** payable to Railways.

Aim of the move : To make the **business of running trains more viable for private operators** in the future.

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A new business model for the Railways

The government is on course to bring in private sector into the business of running passenger trains. The idea is that when **Dedicated Freight Corridors take away at least 70 per cent of freight trains**, a lot of capacity will open up in the **conventional network**. To **meet the huge demand for more trains without spending on investments**, the idea is to get **private sector to share some of that burden**. More routes will eventually be opened, The current exercise is to try and present a **lucrative business proposition for the private players to enter the segment and invest for the long term**.

Details of the move

- It has been decided that if the private players – who will be running 150 trains on 100 identified routes – bring in modern trains that are in vogue across the world that display the actual amount of energy consumed – a feature not reliably available in Indian train systems – the haulage charge will come down to around Rs 512 per km, much below the Rs 668 per km that has been set for the private companies. The Rs-668 per km figure includes the energy cost as well.
- However, policymakers have decided that **delinking energy cost leaves a leeway** for the private player to **bring in energy-efficient train sets**. And it could be different for each player depending on the type of rolling stock being used.
- In addition, the Empowered Group of Secretaries under **NITI Aayog CEO** has decided to **"define" item-wise what non-fare revenue would include for the private players**.

What are haulage charges?

Haulage charge is the **money private players will have to pay to Railways**, on a **per-km basis**, for using its infrastructure in operating the trains – track,

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signaling, associated manpower and the like.

Significance of the move

- This makes the business model even more **lucrative for private players due to enter the new business traditionally held by Railways as a monopoly.**
- This is because in the new business model being developed, private players will be bidding based on how much of their gross revenue they are willing to share with Railways – over and above the haulage charge payable to operate the trains.
- As per the latest round of discussions, **everything that the private train operator can make money from — seat preference, luggage space, parcel, branding of all kinds, onboard facilities like wifi and entertainment — will be part of the gross revenue** the operator will have to share with Railways. This is in addition to the money made from ticket sales.
- **Since revenue share in this shape and form does not have a pre-existing model in India and is being tried for the first time in the rail sector,** policymakers want to make the contract watertight from the point of view of Railways. The private consultant advising the Railways on this project has been asked to draw up the nitty-gritty of the **inclusions of non-fare revenue to be made part of the Request for Qualification (RFQ) document.**
- The effort is on to issue the RFQ before the end of this financial year. As per the timeline, the **winning bidders will get about two years to roll out the first set of trains after trials on Indian track conditions.**

So far, big names from industry like Tata Realty, Adani Ports and SEZ, the Essel

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Group and others, and PSU IRCTC have shown interest in bidding for the routes.

Source: Indian Express

Institutions of Eminence (IoEs) Scheme

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Syllabus subtopic: Government Policies and Interventions for Development in various sectors and Issues arising out of their Design and Implementation.

Prelims and Mains focus: about the scheme: features; eligibility criteria and significance

News: A least two private higher education institutes, Kalinga Institute of Industrial Technology (KIIT) in Odisha and Vellore Institute of Technology (VIT) in Tamil Nadu, which were declared 'Institutions of Eminence' (IoEs) on August 2, 2019, are **ineligible** for the coveted status. It was found that the two institutes **do not meet the eligibility criterion on the net worth of the sponsoring organisation members.**

What is the eligibility criteria to get IoE status?

- According to the **University Grants Commission's** regulations on the IoE scheme, the sponsoring organisation is a "charitable or a not-for-profit Society or a public Trust or a Company incorporated under Section 8 of the Companies Act, 2013" applying to upgrade an existing private institution or a new one to an IoE.
- The eligibility criterion states the **collective net worth** of the members of the sponsoring organisation should be **Rs 3,000 crore for existing institutions** and **Rs 5,000 crore for new ones.**

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Background

- The above eligibility clause was at the source of a lot of heartburn among many private higher education institutions as it had left them out of the application process. This issue was also raised at a workshop organised by the HRD Ministry on October 27, 2017, for "sensitising potential applicants under private sector" for the IoE scheme.
- In a clarification issued by the ministry on November 17, 2017, on the request made by private institutions to reduce the eligibility net worth of Rs 3,000 crore, among other things, the government wrote, "The reduction in eligibility net worth cannot be considered."

About IoE scheme

- The IoE scheme, a pet project of the Prime Minister's Office launched under the NDA-II government, is aimed at **creating an enabling architecture for 10 public and 10 private institutions to emerge as world-class institutions.**
- The IoEs are proposed to **have greater autonomy**, including on deciding the fee, and course duration and structure. Their **academic collaboration with foreign institutions will also be exempt from approvals.** The 10 government institutions, in addition to autonomy, will **get Rs 1,000 crore each from the HRD Ministry.**
- Implemented under the Union human resource development (HRD) ministry.
- Aims to project Indian institutes to global recognition.
- The selected institutes will enjoy **complete academic and administrative autonomy.** They will receive special funding.

UPSC "PT" DNA (Daily News Analysis)

- The **selection shall be made through challenge method** mode by the Empowered Expert Committee constituted for the purpose.
- **Eligibility:** Only higher education institutions currently placed in the top 500 of global rankings or top 50 of the **National Institutional Ranking Framework (NIRF)** are eligible to apply for the eminence tag.
- The private Institutions of Eminence can also come up as greenfield ventures provided the sponsoring organisation submits a convincing perspective plan for 15 years.
- Under the scheme, Public Institutions of Eminence are eligible for a grant of Rs.1,000 crore from the government and **no funds will be given to Private Institutions of Eminence.**

Other benefits include the freedom to:

1. to recruit faculty from outside India (limit of 25% of its faculty strength for public institution).
2. to enter into academic collaborations with other Institutions within the country.
3. to admit additionally foreign students on merit subject to a maximum of 30% of the strength of admitted domestic students.
4. to fix and charge fees from foreign students without restriction.
5. To fix curriculum and syllabus, with no UGC mandated curriculum structure.
6. to offer online courses as part of their programmes with a restriction that not more than 20% of the programme should be in online mode.
7. UGC Inspection shall not apply to Institutions of Eminence

Controversy with the scheme

The scheme first ran into controversy in July 2018, with the **selection of Reliance Foundation's non-existent Jio Institute among India's first six IoEs** (three public and three private). The announcement of the second and final tranche of

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IoEs was in August last year, in which seven private and seven public institutions were awarded the status. VIT, KIIT, Amrita Vishwa Vidyapeetham in Bangalore, Jamia Hamdard in New Delhi, OP Jindal University in Haryana, Shiv Nadar University and Satya Bharti Foundation's proposed institute were among the seven private IoEs announced last year.

Source: Indian Express

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Black Carbon

GS-III | 04 March, 2020

Syllabus subtopic: Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment.

Prelims and Mains focus: about the study and its findings; about black carbon

News: A study by scientists at the Wadia Institute of Himalayan Geology (WIHG) was recently released.

About the study

The team of scientists from WIHG measured **variations of black carbon concentration at Chirbasa, near the Gangotri glacier** in the Indian Himalaya, and located at an altitude of 3,600 metres, during the year 2016.

Key findings of the study

- **Black carbon concentrations** near the **Gangotri glacier rose 400 times** in summer **due to forest fires** and **stubble burning** from agricultural waste, and triggered glacial melt.
- The **monthly mean concentration of EBC (equivalent black carbon)** was found to be **minimum in August and maximum in the month of May**. The observed seasonal mean concentrations of EBC indicated a pristine glacial source and an absence of EBC sources in the locality.
- The concentration varied from a minimum of 0.01 g/cubic metre in winter to 4.62 g/cubic metre during summer. Being a pristine zone far from sources of pollution, the measurements are critical to establishing a baseline for pollution loads and estimating the contribution of various sources to pollution.

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About Black Carbon

- Black carbon results from the **incomplete combustion of fossil fuels and biomass**. The fine particles **absorb light** and about a **million times more energy than carbon dioxide**. It is said to be the **second largest contributor to climate change after CO₂**.
- But unlike CO₂, which can stay in the atmosphere for years together, black carbon is short-lived and **remains in the atmosphere only for days to weeks** before it descends as rain or snow.
- Black carbon **absorbs solar energy and warms the atmosphere**. When it falls to earth with precipitation, it **darkens the surface of snow and ice, reducing their albedo** (the reflecting power of a surface), warming the snow, and **hastening melting**.
- **India is the second largest emitter of black carbon in the world**, with emissions expected to increase dramatically in the coming decades, says an **April 2019 study in the journal Atmospheric Research**, with the **Indo Gangetic plains** said to be the largest contributor.

Source: The Hindu

National Interlinking of Rivers Authority (NIRA)

GS-II | 04 March, 2020

Syllabus subtopic: Government Policies and Interventions for Development in various sectors and Issues arising out of their Design and Implementation.

Prelims and Mains focus: about the new body and its significance; about issues related to ILR

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News: The Central government is working on the establishment of an **exclusive body** to **implement projects for linking rivers**.

Background

The proposal for an apex body on river linking has been under discussion for the past 18 months. As of now, no specific timeline has been determined for the constitution of the Authority. Also, the earlier idea of framing a Bill, envisaging the creation of the NIRA, is not being pursued now.

About the proposed body

- To be called the **National Interlinking of Rivers Authority (NIRA)**, the proposed body is **expected to take up both inter-State and intra-State projects**.
- It will also make arrangements for **generating up funds**, internally and externally.
- The subject of establishment of the Authority was discussed at the last meeting of the Special Committee on Inter-Linking of Rivers (ILR) in New Delhi. Headed by Union Minister of Jal Shakti, the panel includes Irrigation or Water Resources Ministers and Secretaries of States. Since its formation, the Committee has held 17 meetings.
- It is being assisted by a Task Force for ILR, which is a committee of experts essentially drawn from the Jal Shakti Ministry, Central Water Commission and the National Water Development Agency (NWDA).

What's next?

- An updated draft Cabinet note has been circulated to other Ministries in the
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Central government. On receipt of comments, the note will be finalised by the **Ministry of Jal Shakti** and sent to the Union Cabinet for approval.

- Once approved, the projects will be pursued as national projects, wherein the Centre will absorb 90% of the cost and the States concerned the rest.

Note: National Water Development Agency (NWDA) is responsible for the formulation of proposals of the linking of rivers.

Present Scenario

- As of now, **six ILR** (inter-linking of rivers) projects — the **Ken-Betwa, Damanganga- Pinjal, Par-Tapi-Narmada, Manas-Sankosh-Teesta-Ganga, Mahanadi-Godavari** and **Godavari-Cauvery (Grand Anicut)** — have been under examination of the authorities.
- With regard to the **peninsular rivers**, the Centre has chosen to focus on the Godavari-Cauvery link than the earlier proposal to link the Mahanadi-Godavari-Krishna-Pennar-Cauvery rivers. The latter has eluded consensus given reservations from Odisha.

Concerns

- The Centre has not yet shared with States details regarding the new body though it has conveyed to them that it is planning to have an implementation agency for ILR projects.
- In view of Tamil Nadu's not-so-happy experience with its neighbours in getting its due share of water, it has been particular that either the Centre or any of its agencies execute the Godavari-Cauvery link project and look after operation.

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Source: The Hindu

Limited Liability Partnerships (LLPs)

GS-III | 04 March, 2020

Syllabus subtopic: Indian Economy and issues relating to Planning, Mobilization of Resources, Growth, Development and Employment.

Prelims and Mains focus: about the scheme and its benefits; about LLPs and their advantages

News: The government is set to introduce an **amnesty scheme** for **Limited Liability Partnership (LLP) firms** for **delays in mandatory filings** which could benefit 20-25 per cent of the 1.25 lakh LLPs registered in the country.

Aim: The move is aimed at **bringing non-compliant LLPs into the legal fold**.

Background

The government had in January extended a provision in the Companies Act to LLPs allowing it to condone delays in filing of documents. LLPs are a lower cost and lower compliance business structure relative to companies.

About the amnesty scheme

- Under the scheme, LLPs will be given a **three-month window** to complete overdue filings of four forms through which LLPs provide details of the LLP agreement, partners as well as statement of accounts and annual returns.
- The scheme which is set to be run for 90 days from March 16 to June 13 will allow LLPs to file these forms for a delay fee of Rs 10 per day with a

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maximum of Rs 5,000 per form. Under the LLP act, the charge for delayed filing is Rs 100 per day with no upper limit.

Non-compliance by LLPs

- Over 11,000 LLPs had not yet filed forms 3 and 4 which provide details of the LLP agreement and partners.
- In cases where these forms have not been filed for 10 years, a stakeholder may have to pay over Rs 3.5 lakh (under the LLP Act). They are presently not completing filings because it is too expensive.

Benefit of the move

Experts say the move would **improve compliance** and may even prompt some LLPs to **re-initiate business activity**.

Concept of "limited liability partnership" (LLPs)

- LLP is an **alternative corporate business** firm that gives the **benefits of limited liability of a company** and the **flexibility of a partnership**.
- The LLP can **continue its existence irrespective of changes in partners**. It is capable of entering into contracts and holding property in its **own name**.
- The LLP is a separate legal entity, is liable to the full extent of its assets but **liability of the partners is limited to their agreed contribution** in the LLP.
- Further, **no partner is liable on account of the independent or unauthorized actions of other partners**, thus individual partners are shielded from joint liability created by another partner's wrongful business decisions or misconduct.

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- Mutual rights and duties of the partners within a LLP are governed by an agreement between the partners or between the partners and the LLP as the case may be. The LLP, however, is not relieved of the liability for its other obligations as a separate entity.
- Since LLP contains elements of both 'a corporate structure' as well as 'a partnership firm structure' LLP is called a **hybrid between a company and a partnership**.

Advantages

LLP form is a form of business model which:

- i. is organized and operates on the basis of an agreement.
- ii. **provides flexibility** without imposing detailed legal and procedural requirements
- iii. enables professional/technical expertise and initiative to combine with financial risk taking capacity in an innovative and efficient manner.

Difference between LLP & "traditional partnership firm"

- Under "traditional partnership firm", **every partner is liable**, jointly with all the other partners and also severally for all acts of the firm done while he is a partner.
- Under LLP structure, liability of the partner is limited to his agreed contribution. Further, no partner is liable on account of the independent or unauthorized acts of other partners, thus allowing individual partners to be shielded from joint liability created by another partner's wrongful acts or misconduct.

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Difference between LLP & a Company

- A basic difference between an LLP and a joint stock company lies in that the internal governance structure of a company is regulated by statute (i.e. Companies Act, 1956) whereas for an LLP it would be by a contractual agreement between partners.
- The management-ownership divide inherent in a company is not there in a limited liability partnership.
- LLP will have more flexibility as compared to a company.
- LLP will have lesser compliance requirements as compared to a company.

Source: Indian Express

New Technical Committee for APIs

GS-II | 04 March, 2020

Syllabus subtopic: Issues Relating to Development and Management of Social Sector/Services relating to Health, Education, Human Resources.

Prelims and Mains focus: about the new committee and its functions; about COVID-19 outbreak and its implications; about API

News: The government has decided to set up a **10-member technical committee** to **revive India's lost capacity to make certain crucial drug ingredients**.

Significance of the move

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The development holds significance as it comes in the backdrop of a steady **escalation of Covid-19 cases** in India as well as a **continued shutdown of operations in a major Chinese province that exports these key ingredients** to the country.

Background

- The development comes over a month after the **Department of Pharmaceuticals (DoP) formed an expert committee** to monitor the potential impact of the novel coronavirus outbreak in China on its supply of active pharmaceutical ingredients (APIs) to India.
- Around **58 such ingredients had been identified** by the committee set up last month, including **amoxicillin, vitamin C, neomycin, acyclovir and tetracycline**. Exports of some of these ingredients, imported from **China's Hubei province** that is currently under lockdown, have been restricted by the Directorate General of Foreign Trade (DGFT).
- The committee, **chaired by CDSCO Joint Drug Controller**, had **recommended the formation of this technical committee**, which is expected to suggest ways to **revive India's API segment**, especially its **fermentation-based APIs**.
- The committee had also **recommended that the government establish a "Drug Security Authority" to make India "self-sufficient"** and a "global leader" in APIs and other key intermediates domestically as well as an exporter, according to a person aware of its recommendations.

What are APIs?

APIs are the key ingredients that give a drug its therapeutic effect.

Need for a technical committee

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DoP has constituted the new technical committee because it was receiving varied estimates from industry members of how much more expensive it was to make these APIs in India as compared to China.

Mandate of the proposed technical committee

- Look into the **cost of setting up fresh API manufacturing capacities — greenfield projects** — to wean India off its **dependency on imports** for these products.
- Examine the latest “viable” technologies to make these products, “including backward integration”.
- Examine a proposal to **restart manufacturing of some of these APIs** by government undertaking Hindustan Antibiotics Limited (HAL).
- Look into other existing facilities along with their capacities to make these ingredients.

API manufacturing plants in India: Challenges

- Between the 1960s to 1980s, India had set up 7-8 manufacturing plants to make as many as 20 crucial fermentation-based ingredients, including penicillin G, erythromycin, citric acid and vitamin B12. However, in the last three decades, these manufacturing plans were **shut down due to “cheaper” alternatives from China**.
- This was because **Chinese API manufacturers managed to scale up production with government support like cheaper land** during that time. Their **products became 20-25 per cent cheaper than domestic firms** (even with import duties), making Indian API manufacturers less competitive.

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- India **relies on China for nearly 70 per cent of its total API imports**, leaving the country in a vulnerable state during the current outbreak of the deadly respiratory coronavirus.
- According to DoP, the present stock of APIs may be sufficient for 2-3 months to make formulations.

Source: Indian Express

United Nations Human Rights Council (UNHRC)

GS-II | 04 March, 2020

Syllabus subtopic: Important International Institutions, agencies and fora - their Structure, Mandate.

Prelims and Mains focus: about the issue; about CAA; about UNHRC and OHCHR: mandate and objectives

News: In an unprecedented departure, the **office of the UN High Commissioner for Human Rights (OHCHR)**, has informed India's Permanent Mission at the UN in Geneva that it "intends to file" an intervention application in the Supreme Court on the **Citizenship (Amendment) Act**.

Reason given by OHCHR

- An examination of the CAA in the present case raises important issues with respect to **international human rights law** and its **application to migrants, including refugees**.
- Through the application, the UN High Commissioner seeks to intervene as

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amicus curiae (third-party) in this case, by virtue of its mandate to inter alia protect and promote all human rights and to conduct necessary advocacy in that regard, established pursuant to the **United Nations General Assembly resolution 48/141**.

Background

- The Supreme Court is hearing a batch of pleas challenging the Citizenship (Amendment) Act (CAA).
- There is no **known precedent of the UN moving the Supreme Court in India** in the recent past. A Special Rapporteur of the United Nations had filed an intervention application before the Supreme Court, seeking to assist the Court in the matter concerning deportation of **Rohingyas** from India. In the case of foreign governments, the Italian envoy was made a party at the **Italian marines case**.

India's reaction

India reacted sharply and underlined that the CAA was an "**internal matter of India**" and "**no foreign party has any locus standi**" on issues pertaining to its sovereignty.

Core international human rights treaties to which India is a State party

1. International Covenant on Civil and Political Rights (ICCPR)
2. International Covenant on Economic Social, and Cultural Rights (ICESCR),
3. International Covenant on the Elimination of Racial Discrimination (ICERD),
4. Convention on the Rights of the Child (CRC)
5. Convention on the Elimination of Discrimination against Women (CEDAW).

About United Nations Human Rights Council (UNHRC)

- The UNHRC is a United Nations body whose **mission is to promote and protect human rights around the world**.

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- The UNHRC was **established by the UN General Assembly on March 15, 2006** (by resolution A/RES/60/251) to **replace the UN Commission on Human Rights (UNCHR)** that had been **strongly criticised** for allowing countries with poor human rights records to be members.
- The UNHRC has **47 members** elected for **three-year terms** on a **regional group basis**.
- The **headquarters** of UNHRC is in **Geneva, Switzerland**.
- The UNHRC works closely with the Office of the High Commissioner for Human Rights (OHCHR) and engages the UN's special procedures.

Mandate

The UNHRC **investigates allegations of breaches of human rights in UN member states**, and addresses important thematic human rights issues such as freedom of association and assembly, freedom of expression, freedom of belief and religion, women's rights, LGBT rights, and the rights of racial and ethnic minorities.

Criticism

UN Secretaries General Kofi Annan and Ban Ki-moon, former president of the council Doru Costea, the European Union, Canada, and the United States have accused the UNHRC of focusing disproportionately on the **Israeli–Palestinian conflict**, and many allege an **anti-Israel bias** – the Council has resolved more resolutions condemning Israel than the rest of the world combined.

Office of the United Nations High Commissioner for Human Rights (OHCHR)

- OHCHR or the UN Human Rights Office, is a department of the Secretariat of

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the United Nations that works to promote and protect the human rights that are guaranteed under international law and stipulated in the **Universal Declaration of Human Rights of 1948**.

- The office was **established** by the UN General Assembly on **20 December 1993** in the **wake of the 1993 World Conference on Human Rights**.
- The office is **headed by the High Commissioner for Human Rights** (with the rank of Under-Secretary-General), who co-ordinates human rights activities throughout the UN System and **acts as the secretariat of the Human Rights Council in Geneva, Switzerland**.
- It is an ex officio member of the Committee of the United Nations Development Group.
- **Headquarters:** Geneva, Switzerland; New York City, United States

Mandate

- The mandate of OHCHR derives from **Articles 1, 13 and 55 of the Charter of the United Nations**, the **Vienna Declaration and Programme of Action and General Assembly resolution 48/141** of 20 December 1993, by which the Assembly established the post of United Nations High Commissioner for Human Rights.
- In connection with the programme for reform of the United Nations (A/51/950, para. 79), the OHCHR and the Centre for Human Rights were consolidated into a single OHCHR on 15 September 1997.

The **objectives** of OHCHR are to:

1. Promote universal enjoyment of all human rights by giving practical effect to the will and resolve of the world community as expressed by the United

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Nations

2. Play the leading role on human rights issues and emphasize the importance of human rights at the international and national levels
3. Promote international cooperation for human rights
4. Stimulate and coordinate action for human rights throughout the United Nations system
5. Promote universal ratification and implementation of international standards
6. Assist in the development of new norms
7. Support human rights organs and treaty monitoring bodies
8. Respond to serious violations of human rights
9. Undertake preventive human rights action
10. Promote the establishment of national human rights infrastructures
11. Undertake human rights field activities and operations
12. Provide education, information advisory services and technical assistance in the field of human rights

Source: Indian Express

G-7 (Group of Seven) bloc

GS-II | 04 March, 2020

Syllabus subtopic: Important International Institutions, agencies and fora - their Structure, Mandate.

Prelims and Mains focus: about the COVID-19 outbreak; about G-7 and its working

News: The Group of Seven (G-7) finance chiefs said they're ready to act to shelter their economies from the spreading coronavirus, though they stopped short of spelling out what specific measures they would put into place.

About G-7 (Group of Seven)

- The G7, originally G8, was **set up in 1975** as an informal forum bringing

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together the leaders of the world's leading industrial nations

- The Group of Seven (G7) is an international intergovernmental **economic organization** consisting of the **seven (International Monetary Fund) IMF-advanced economies** in the world: **Canada, France, Germany, Italy, Japan, the United Kingdom and the United States.**
- As of 2018, the seven countries involved **represent 58% of the global net wealth (\$317 trillion) and more than 46% of the global gross domestic product (GDP)** based on nominal values, and more than 32% of the global GDP based on purchasing power parity. **The European Union is an invitee to G7.**



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Working

- Since 1975, the **group meets annually** on summit site to discuss economic policies; since 1987, the **G7 Finance Ministers have met at least semi-annually**, up to **four times a year** at stand-alone meetings.
- The annual G7 leaders summit is attended by the heads of government. The member country holding the G7 presidency is responsible for organizing and hosting the year's summit. Generally every country hosts the summit once every 7 years
- G7 is capable of setting the global agenda because decisions taken by these major economic powers have a real impact. Thus, **decisions taken at the G7 are not legally binding**, but **exert strong political influence**.

Criticisms

1. G7 gatherings tend to attract thousands of protesters, and it is protested by thousands every year.
2. Many protesters claim the G7 – which has **no representative from any African, Russian or Middle Eastern nation** – is completely outdated.
3. Protest groups also use the worldwide platform as a stage to lobby and campaign on issues that are important to them.
4. G7 leaders are creating a wide gap between the 'haves' and the 'have-nots' both in their countries as well as across the globe, according to a report published by non-profit Oxfam International. As a result, they are making the fight against alleviating poverty more difficult, claimed the report.

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Source: Livemint

India-Iran relations

GS-II | 04 March, 2020

Syllabus subtopic: Bilateral, Regional and Global Groupings and Agreements involving India and/or affecting India's interests.

Prelims and Mains focus: about the issue; about India-Iran relations

News: India summoned Iranian ambassador to the foreign office to protest remarks made by Iran's foreign minister on the recent riots in the national capital.

Background

- In a rare rebuke to India, Iran's foreign minister slammed the government for the riots in the national capital, which have claimed over 40 lives.
- **India has drawn criticism for the violent clashes** in the national capital but Iran's comments were unexpected given that **Tehran generally avoids public criticism of matters seen as internal to India.**
- Following the **revocation of Article 370**, which had granted special status to Kashmir, Tehran had limited its reaction to expressing concerns over the "condition of people" in the Valley and urging New Delhi to adopt "a fair policy" towards the people of the region.
- Tehran has **also avoided taking Islamabad's side** whenever tension between India and Pakistan have escalated in recent years.

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India-Iran ties

- India and Iran **established diplomatic links on March 15, 1950**. In addition to the Embassy in Tehran, India has two Consulates in Iran, one in Bandar Abbas and other in Zahedan.
 - The ties between India and Iran have been on an upswing over the last few years notwithstanding **US sanctions against the Shia majority country**. India has been maintaining **cordial ties with Tehran** and has been actively involved in the development of the strategically located **Chabahar port** in the Gulf nation.
 - Since the 1990s, India and Iran have cultivated fairly close ties. It was then Iranian President Ali Akbar Hashemi Rafsanjani's visit to India in 1994 that ended India's isolation in the Islamic world over the **demolition of the Babri Masjid in 1992**.
 - In 1994, **Iran had helped kill an anti-India human rights resolution on Kashmir that was brought in by Pakistan at the UN Human Rights Commission in Geneva**.
 - Some years later, **India and Iran joined hands with Russia to back Afghanistan's anti-Taliban Northern Alliance**, which was headed by Tajik leader Ahmad Shah Masood till his assassination in September 2001.
 - In 2003, India and Iran agreed to develop the Chabahar port but the project is yet to be completed as a result of **India pursuing a civil nuclear deal with the US** and also because of delays associated with India's own decision making processes, according to analysts.
 - In recent years, **India has had to reduce its oil imports from the Shia majority country** despite the fact that New Delhi acknowledges that Iran is
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an energy source that is situated geographically close to India. One reason that is given for New Delhi stopping oil imports from Tehran is the re-imposition of sanctions on Iran by the US after it pulled out of the 2015 Iran nuclear deal.

- The **Indian community in Iran** comprises of around 4000 Indian nationals. (This includes 80- 100 families in Tehran and 13-15 families in Zahedan. There are approx. 2800 Indian nationals in Qom, Esfahan and Mashhad consisting of Indian students undergoing theological studies and their family members. There are also around 200 Indian nationals working in private companies in Iran). There is an **Indian school in Tehran** run by the **Kendriya Vidyalaya Sangathan (KVS)** under the aegis of Embassy of India

Source: Livemint

UPSC "PT" DNA (Daily News Analysis)

SC lifts curbs on cryptocurrencies

GS-III | 05 March, 2020

Syllabus subtopic: Awareness in the fields of IT, Space, Computers, Robotics, Nano-technology, Bio-technology and issues relating to Intellectual Property Rights.

Prelims and Mains focus: about cryptocurrencies: merits and demerits

News: In April 2018, the Reserve Bank of India (RBI) had barred regulated entities such as banks from dealing in bitcoins and other virtual currencies. The Supreme Court has now lifted the restriction.

What exactly are cryptocurrencies?

- Cryptocurrencies are **internet-based mediums of exchange**. They are **digital currencies** that can be exchanged between parties **without the need of a third entity, like a bank**.
- Many of them use a **decentralized blockchain**—an **encrypted ledger** for storing information.
- Over 3,000 crypto assets have entered the digital currency market since 2008. They are **decentralized** rather than being under the control of any nation or company. This can often lower transaction costs for global payments compared to **financial messaging systems such as SWIFT** (Society for Worldwide Interbank Financial Telecommunication), used for making transactions in different currencies.

Do cryptocurrencies carry a lot of risk?

- Cryptocurrencies are **vulnerable to cyber hacking** and **data privacy breaches** and **increase the risk of money laundering**. They do not have

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any fundamental value as **they are not legal tender**, and are **not backed by governments**, central banks or a pool of assets. This **reduces trust in them**, which is necessary for a credible medium of exchange.

- They are a **poor medium of exchange** also because their **valuation tends to be excessively volatile and susceptible to manipulation**. They are seen as instruments of speculation and transactions that are below the radar of regulators and law enforcement agencies.

Are state-backed digital coins a better option?

Yes, as state-backed digital coins can combine the positives of digital and sovereign currencies. **RBI has no plans to introduce digital coins**, but **China is likely to launch** the Digital Currency Electronic Payment and Central Bank Digital Currency. **Russia has been working on a state-backed cryptoruble**. **Sweden has its e-krona project**.

Why is RBI worried about cryptos?

- Since 2013, **RBI has been warning about the risks** associated with virtual currencies. In the case of cryptocurrencies, it is not clear who is the lender of last resort, or who people should turn to if there is fraud or abuse of monopoly power.
- If **cash issued by central banks or fiat currencies** and retail deposits held with banks get shifted on a large scale to digital currencies, the **effectiveness of monetary policy can erode**. It may also **trigger rupee depreciation**. If they lead to capital flight, financial stability could be at risk.

What is the future of such currencies?

- Central banks may begin to **strictly regulate** virtual currencies. **Dominance of the US dollar** in the international trade and monetary system **will weaken**. Instead of accepting dollars as the settlement currency for trade, users may

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choose from a variety of currencies.

- **Sovereign currencies may coexist with cryptocurrencies**, digital currencies issued by central banks and private dollar-centric digital ones launched by private parties such as **Facebook's Libra**.



UPSC "PT" DNA (Daily News Analysis)

Source: Livemint

Amendments to Companies Act

GS-II | 05 March, 2020

Syllabus subtopic: Government Policies and Interventions for Development in various sectors and Issues arising out of their Design and Implementation.

Prelims and Mains focus: about the amendments and their significance; about CSR

News: The Union Cabinet approved the proposal to **amend 65 sections** of the **Companies Act**.

Background

The amendments are **based on the recommendations of a high-level panel** set up in September 2019. If passed by Parliament, these would be the **second set of amendments** to the Act over the last year, as the law was already amended last July 2019.

Objective of the amendment:

- To **decriminalise a number of offences**: recategorise 23 offences so that they can be dealt with through an in-house adjudication framework, while five types of offences will be dealt with under different alternative frameworks. Another seven will be omitted altogether. Most of these are procedural or technical defaults that lack the element of fraud or do not affect larger public interest. For 11 kinds of offences, the provision of imprisonment will be removed, limiting punishment to fines only. Six offences that had already

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been decriminalised earlier will see a further reduction in the quantum of penalties.

- **Enable the listing of Indian companies** on stock exchanges in **foreign jurisdictions**. This is expected to give Indian firms greater access to capital, a broader investor base and better valuations.
- **Ease corporate social responsibility (CSR)** requirements, especially for **smaller companies**: ensure that companies which have an obligation to spend Rs.50 lakh per annum or less on Corporate Social Responsibility (CSR) are **no longer required to have a CSR committee**. Companies that spend more than the mandatory 2% on CSR in a particular year can carry it forward as credit for fulfilment of CSR obligations for the next few years as well.

Significance of the amendments

The changes are expected to **significantly enhance the confidence of Indian corporates** in the government's resolve to provide greater ease of doing business and accord **highest respect to honest wealth creators** in the country and **reduce the burden on the justice system**.

What is Corporate Social Responsibility (CSR)?

- Corporate social responsibility (CSR) is a **self-regulating business model** that helps a **company be socially accountable**—to itself, its stakeholders, and the public. By practicing corporate social responsibility, **also called corporate citizenship**, companies can be **conscious of the kind of impact they are having on all aspects of society, including economic, social, and environmental**.
- To engage in CSR means that, in the ordinary course of business, a company is operating in ways that **enhance society and the environment, instead of contributing negatively to them**.

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Corporate Social Responsibility in India

- India is the **first country in the world to make corporate social responsibility (CSR) mandatory**, following an **amendment to the Companies Act, 2013 in April 2014**. Businesses can invest their profits in areas such as education, poverty, gender equality, and hunger as part of any CSR compliance.
- The amendment notified in the Companies Act, 2013 requires companies with a net worth of INR 500 crore (US \$70 million) or more, or an annual turnover of INR 1000 crore (US \$140 million) or more, or net profit of INR 5 crore (US \$699,125) or more, to spend 2 percent of their average net profits of three years on CSR.
- Prior to that, the CSR clause was voluntary for companies, though it was mandatory to disclose their CSR spending to shareholders

The methodology of CSR

CSR is the procedure for **assessing an organization's impact on society and evaluating their responsibilities**. It begins with an assessment of the following aspects of each business:

1. Customers;
2. Suppliers;
3. Environment;
4. Communities; and,
5. Employees.

- The most effective CSR plans ensure that **while organizations comply with legislation, their investments also respect the growth and development of marginalized communities and the environment**. CSR should also be sustainable – involving activities that an organization can uphold without negatively affecting their business goals.

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- Organizations in India have been quite sensible in taking up CSR initiatives and integrating them into their business processes.
- It has become progressively projected in the Indian corporate setting because organizations have recognized that **besides growing their businesses, it is also important to shape responsible and supportable relationships with the community at large.**
- Companies now have specific departments and teams that develop specific policies, strategies, and goals for their CSR programs and set separate budgets to support them.
- Most of the time, these programs are based on well-defined social beliefs or are carefully aligned with the companies' business domain.

Source: The Hindu

Internet Shutdowns in India

GS-III | 05 March, 2020

Syllabus subtopic: Challenges to Internal Security through Communication Networks, Role of Media and Social Networking Sites in Internal Security Challenges,

Prelims and Mains focus: about the study and its key findings; trends in internet shutdowns in India

News: Data on internet shutdowns in India which is available in public domain and compiled by Software Freedom Law Centre (SFLC).

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Key findings

- The number of **preventive internet shutdowns** enforced by the central and the state governments in India saw a **major spike between 2017 and 2019**, and as many as **95 of these lasted for more than 24 hours**.
- There were at least 147 instances over these three years for which there is no data on the duration of the shutdowns as there is lack of any form of communication on these blockades.
- In **most of these instances, there was no formal order** being issued to the telecom operators.
- The **Union Territory of Jammu and Kashmir**, where the internet had remained suspended until March 4 for 213 days, has seen since 2012 at least 60 instances of connectivity being snapped for more than 24 hours without any official order.

Difference between Preventive and Reactive internet shutdown

- Preventive shutdowns are defined as **internet blockade by the state in anticipation of violence, unrest or disturbance**, whereas **reactive shutdowns are enforced to prevent further escalation of violence**.
- Despite a rising number of preventive internet shutdowns, the number of reactive shutdowns, however, remained low over the three years, according to the data.

What are the rules regarding internet shutdown?

- Under the **Indian Telegraph Act of 1885**, only the **Home Secretary of the central or the state government can pass orders** to enforce an internet shutdown in any area.

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- The order must **include the detailed reasons** for the shutdown and must be **sent to a review committee** the next day.
- The committee shall, **within five days, submit its report** and only if the shutdown is justified even after that will the communications blockade continue.

Are the Telegraph rules being followed?

- The Telegraph rules lay down many checks and balances, but that does not happen. It is the first reaction. One good example is Rajasthan, where there has been a regime change, but **number of shutdowns is on the rise**. Rajasthan, however, is also the **only state that provides a formal order for nearly all internet shutdowns it enforces**.
- **In 2017**, for instance, of the 79 instances of internet shutdown across the country, there were 51 where the authorities cut connectivity to mobile phone, while there were seven instances where connections to both mobiles and landlines were severed. Similarly, in 2018, authorities suspended mobile phone connectivity 126 times, and 100 times in 2019.
- 93 of the 381 internet shutdowns between 2012 and January 2020 lasted less than 24 hours, 74 lasted between 24 and 72 hours, 41 lasted for over 72 hours, while no information was available on the respective duration of the remaining 208 internet shutdowns.

Misuse of Section 144 of CrPC

- Another rising trend was to **use Section 144 of the Code Of Criminal Procedure to justify the communications blockade** and the continuance of it. That cannot be done. The **use of 144 does not pass any muster under law**. However, it is **seldom challenged**.

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A colonial era law, Section 144 gives a **magistrate the powers to enforce a general shutdown of the area**, if he or she believes that there could be violence in the area, arising from a certain tension between two or more groups of people.

How is the internet shutdown executed?

- Most of the internet shutdowns are done **using the 'kill switch'** individual tower-wise in respective areas. Following instructions from the authorities, the local unit of the **telcos switches off power to the tower in that area, following which mobile phones in the area latch on to the next nearest tower.**
- What happens then is that **one tower has too many calls and data volume being placed on it**, due to which **very few calls get through**. So that also serves the purpose. Then that tower is also switched off and so on.
- While reports estimate that **India loses around Rs 6,000 crore per year due to internet shutdowns**, the government had told the Rajya Sabha in February that it did not keep a track of how much losses were incurred by the states or the individuals owing to the internet shutdowns.

Source: Indian Express

European Union's Green Deal

GS-II | 05 March, 2020

Syllabus subtopic: Important International Institutions, agencies and fora - their Structure, Mandate.

Prelims and Mains focus: about the proposed law and its objective; about EU's

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Green deal and its significance

News: Amid fierce criticism from environmental activists, the **European Commission** (EU's executive arm) is unveiling plans for **its first ever climate law** — the basis of the **European Union's Green Deal** aimed at **making the 27-country bloc climate neutral by 2050**.

Objective of the proposed law

With its proposals, the EU's executive arm wants to make its **ambition of cutting greenhouse gas emissions to zero by mid-century irreversible**, and **legally-binding for all member states**.

About the draft law

According to a leaked draft of the proposals establishing the 2050 goal, the European Commission is proposing a **mechanism for regularly raising the EU's emissions reduction target** over the next three decades.

Criticism

- However, there is **no plan for an increase of the bloc's overall emissions goal for 2030**. This particular point has been **harshly criticized by climate activists**, who claim that **delaying the upgraded 2030 target is detrimental to the bloc's credibility in the fight against climate change**.
- In the draft, the European Commission only said it would review the EU's current target of a 40% greenhouse gas reduction by September and "explore options for a new 2030 target of 50% to 55% emission reductions compared with 1990 levels."
- **Environmental group Greenpeace** said that because of the absence of a 2030 goal, EU governments will "find it extremely difficult to agree a new

UPSC "PT" DNA (Daily News Analysis)

target" before the U.N climate talks that will be held in Glasgow in November.

- In an open letter signed by 34 youth climate activists, the group stressed that **instead of setting long-term goals, the EU should focus on the "CO2 budget which applies for today."**
- Such **CO2 budgets** are used to measure the additional emissions that can enter the atmosphere without global warming exceeding a certain level. World leaders **agreed five years ago in Paris** to keep global warming below 2 degrees Celsius (3.6 Fahrenheit), ideally no more than 1.5 C (2.7 F) by the end of the century. But scientists say **countries will miss both of those goals** by a wide margin unless drastic steps are taken to begin cutting greenhouse gas emissions this year.
- Greenpeace also insists a **55% reduction target for 2030** wouldn't be **sufficient** to limit global heating to 2 degrees Celsius.

About European Green Deal

- The European Green Deal is a **set of policy initiatives** brought forward by the European Commission with the **overarching aim of making Europe climate neutral in 2050.**
- An impact assessed plan will also be presented to **increase the EU's greenhouse gas emission reductions target** for 2030 to at least 50% and towards 55% compared with 1990 levels.
- The plan is to **review each existing law on its climate merits**, and also **introduce new legislation** on the circular economy, building renovation, biodiversity, farming and innovation.
- The plan includes **potential carbon tariffs** for countries that don't curtail their

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greenhouse gas pollution at the same rate.

It also includes:

1. a **circular economy** action plan,
2. a **review and possible revision** (where needed) of the all relevant climate-related policy instruments, including the Emissions Trading System,
3. a **Farm to Fork strategy** along with a focus shift from compliance to performance (which will reward farmers for managing and storing carbon in the soil, improved nutrient management, reducing emissions, ...),
4. a **revision of the Energy Taxation Directive** which is looking closely at fossil fuel subsidies and tax exemptions (aviation, shipping),
5. a **sustainable and smart mobility strategy** and an EU forest strategy. The latter will have as its key objectives effective afforestation, and forest preservation and restoration in Europe.

It also leans on **Horizon Europe**, to play a pivotal role in leveraging national public and private investments. Through partnerships with industry and member States, it will support research and innovation on transport technologies, including batteries, clean hydrogen, low-carbon steel making, circular bio-based sectors and the built environment.

About Horizon Europe

- Horizon Europe is a planned 7-year European Union **scientific research initiative** meant to succeed the current Horizon 2020 program. The European Commission drafted and approved a plan for the Horizon Europe to **raise EU science spending levels by 50% over the years 2021-2027.**

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- The proposal calls for **€100 billion in research and innovation** spending for years 2021-2027. Of that sum **€2.4 billion is earmarked for the Euratom nuclear research program** and €3.6 billion is put away for an **umbrella investment fund, called InvestEU**. After accounting for 2% annual inflation, in 2018 euros the funding for Horizon Europe amounts to €86.6 billion

Source: Indian Express

NRIs permitted to own 100% stake in Air India

GS-III | 05 March, 2020

Syllabus subtopic: Effects of Liberalization on the Economy, Changes in Industrial Policy and their Effects on Industrial Growth.

Prelims and Mains focus: about the move to privatize Air India and its significance; about Air India

News: The Union cabinet approved a proposal to **let non-resident Indians (NRIs) own up to a 100% stake in Air India Ltd** as the government attempts to make a success of its **second attempt to completely privatize the debt-laden airline**.

Background

The government, which **aims to divest its entire stake in Air India**, in February began the stake sale process by inviting offers from potential investors after a costly turnaround plan and an **earlier effort to sell a controlling stake in the flag carrier failed**. To sweeten the deal, the Centre has also reduced Air India's debt from about Rs.56,334 crore to about Rs.23,287 crore.

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About the move

The cabinet, headed by Prime Minister, has approved an **amendment to the foreign direct investment (FDI) policy** to permit FDI in Air India by NRIs up to 100% under the automatic route.

Significance of the move

The cabinet decision will give the government **more flexibility to receive bids for Air India**.

Investment rules for NRIs

- Under the existing policy, **NRIs/ OCIs (Overseas Citizens of India)** are **permitted to invest under automatic route up to 100%** in scheduled air transport services.
- The investment limit including NRIs, in Air India **was restricted to 49%**, which has now been aligned with the existing policy for investment by NRI in the civil aviation sector.

About Air India

- Air India is the flag carrier airline of India, headquartered at New Delhi.
 - The airline was **founded by J. R. D. Tata as Tata Airlines in 1932**; Tata himself flew its first single-engine de Havilland Puss Moth, carrying air mail from Karachi to Bombay's Juhu aerodrome and later continuing to Madras (currently Chennai).
 - **After World War II, it became a public limited company** and was **renamed as Air India**. On 21 February 1960, it took delivery of its first Boeing 707 named Gauri Shankar and became the first Asian airline to induct a jet aircraft in its fleet.
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UPSC "PT" DNA (Daily News Analysis)

- In 2000–01, attempts were made to privatise Air India and from 2006 onwards, it suffered losses after its merger with Indian Airlines.
- Air India has 128 aircraft in its fleet, according to its website, while its subsidiaries Air India Express and Alliance Air have 25 and 19 planes, respectively.
- The airline has 9,426 permanent workers, 4,201 contract employees, and 2,867 employees on deputation.

Source: Livemint

UPSC "PT" DNA (Daily News Analysis)

Freedom in the World 2020 report

GS-II | 06 March, 2020

Syllabus subtopic: Important International Institutions, agencies and fora - their Structure, Mandate.

Prelims and Mains focus: about the key highlights of the report and India's performance

News: Freedom in the World 2020 report, a **yearly survey and report** by the **U.S.-based non-governmental organization 'Freedom House'** that measures the degree of civil liberties and political rights in every nation and significant related and disputed territories around the world, was recently released.

About the report

- The report derives its methodology from the **Universal Declaration of Human Rights**, adopted by the United Nations General Assembly in 1948.
- It **covers 195 countries**, awarding **scores based on political rights indicators** such as the electoral process, political pluralism and participation and government functioning, as well as civil liberties indicators related to freedom of expression and belief associational and organisational rights, the rule of law and personal autonomy and individual rights.

Key highlights of the report

- The report **ranks India at the 83rd position**, along with Timor-Leste and Senegal. This is **near the bottom** of the pile **among the countries categorised as "Free"**, with only Tunisia receiving a lower score.
- India's score **fell by four points** to 71, the **worst decline among the world's 25 largest democracies** this year.

UPSC "PT" DNA (Daily News Analysis)

- India scored 34 out of 40 points in the political rights category, but only 37 out of 60 in the civil liberties category, for a total score of 71, a drop from last year's score of 75.
- The report **treats "Indian Kashmir" as a separate territory**, which saw its total score drop precipitously from 49 to 28 this year, moving it **from a status of "Partly Free" to "Not Free"**.



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Reasons given in the report for India's dismal performance

- The annulment of autonomy and the subsequent shutdown of Kashmir, the **National Register of Citizens** and the **Citizenship (Amendment) Act**, as well as the **crackdown on mass protests** have been listed as the **main signs of declining freedom** in the report.
- The report noted that India has long been seen as a democratic counterweight to China and hence a strategic partner for the United States in the region. However, that view is changing, with India attracting criticism similar to that levied against China.
- The report slammed the internet blackout in Kashmir, terming it the longest shutdown ever imposed by a democracy. It said freedom of expression was under threat in India, with journalists, academics and others facing harassment and intimidation when addressing politically sensitive topics.

Source: The Hindu

Employees' Provident Fund Organisation (EPFO)

GS-II | 06 March, 2020

Syllabus subtopic: Statutory, Regulatory and various Quasi-judicial Bodies.

Prelims and Mains focus: about the move and its significance; about EPFO

News: Salaried employees are set to get 0.15% less in interest on provident fund deposits for 2019-2020, with the **Central Board of Trustees of the Employees' Provident Fund** reducing the interest rate from 8.65% to 8.5%.

UPSC "PT" DNA (Daily News Analysis)

Other measures taken

- The Board also ratified the **restoration of normal pension after 15 years from the date of commutation** — a move that will benefit about 6.3 lakh pensioners who had opted for commutation on or before September 25, 2008.
- It also approved a proposal to **empanel the Jammu and Kashmir Bank as one of the banks for the collection of EPF dues in J&K.**

About EPFO

The Constitution of India under "**Directive Principles of State Policy**" provides that the State shall within the limits of its economic capacity make effective provision for securing the right to work, to education and to public assistance in cases of unemployment, old-age, sickness & disablement and undeserved want. The EPF & MP Act, 1952 was enacted by the Parliament of India and came into force with effect from 4 March 1952 as part of a series of legislative interventions made in this direction.

- EPFO is **one of the World's largest Social Security Organisations** in terms of clientele and the volume of financial transactions undertaken. At present it maintains 19.34 crore accounts (Annual Report 2016-17) pertaining to its members.
- The Employees' Provident Fund came into existence with the promulgation of the [Employees' Provident Funds Ordinance](#) on the 15th November, 1951. It was replaced by the **Employees' Provident Funds Act, 1952**. [The Employees' Provident Funds Bill](#) was introduced in the Parliament as Bill Number 15 of the year 1952 as a Bill to provide for the institution of provident funds for employees in factories and other establishments. **The Act is now referred as the [Employees' Provident Funds & Miscellaneous Provisions Act, 1952](#) which extends to the whole of India.** The Act and Schemes

UPSC "PT" DNA (Daily News Analysis)

framed there under are administered by a tri-partite Board known as the **Central Board of Trustees**, Employees' Provident Fund, consisting of representatives of Government (Both Central and State), Employers, and Employees.

- [The Central Board of Trustees](#) administers a contributory provident fund, pension scheme and an insurance scheme for the workforce engaged in the organized sector in India. The **Board is assisted by the Employees' PF Organization (EPFO)**, consisting of offices at 135 locations across the country. The Organization has a well equipped training set up where officers and employees of the Organization as well as Representatives of the Employers and Employees attend sessions for trainings and seminars. The **EPFO is under the administrative control of Ministry of Labour and Employment**, Government of India.
- The Board **operates three schemes** - EPF Scheme 1952, Pension Scheme 1995 (EPS) and Insurance Scheme 1976 (EDLI).

Source: The Hindu

Suspension of MPs

GS-II | 06 March, 2020

Syllabus subtopic: Parliament and State Legislatures—Structure, Functioning, Conduct of Business, Powers & Privileges and Issues Arising out of these.

Prelims and Mains focus: about the issue of suspension of MPs and the rules and procedure regarding it

News: Seven Congress members were suspended on March 5 for **unruly behaviour** in the Lok Sabha. The motion was passed by a voice vote.

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What is the reason for suspending an MP?

- The general principle is that it is the **role and duty of the Speaker of Lok Sabha** to maintain order so that the House can function smoothly. This is a daunting task even at the best of times
- In order to ensure that proceedings are conducted in the proper manner, the **Speaker is empowered to force a Member to withdraw from the House (for the remaining part of the day), or to place him/her under suspension.**

What are the rules under which the Speaker acts?

- **Rule Number 373 of the Rules of Procedure and Conduct of Business** says: "The Speaker, if is of the opinion that the conduct of any Member is grossly disorderly, may direct such Member to withdraw immediately from the House, and any Member so ordered to withdraw shall do so forthwith and shall remain absent during the remainder of the day's sitting."
- To deal with more recalcitrant Members, the Speaker may take recourse to **Rules 374 and 374A**. Rule 374 says:

"(1) The Speaker may, if deems it necessary, name a Member who disregards the authority of the Chair or abuses the rules of the House by persistently and wilfully obstructing the business thereof.

"(2) If a Member is so named by the Speaker, the Speaker shall, on a motion being made forthwith put the question that the Member (naming such Member) be suspended from the service of the House for a period not exceeding the remainder of the session: Provided that the House may, at any time, on a motion being made, resolve that such suspension be terminated.

"(3) A member suspended under this rule shall forthwith **withdraw from the**

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precincts of the House."

And what does rule 374A say?

- This clause was incorporated in the Rule Book on December 5, 2001. The intention was to **skirt around the necessity of moving and adopting a motion for suspension.**
- According to Rule 374A:

"(1) Notwithstanding anything contained in rules 373 and 374, in the event of grave disorder occasioned by a Member coming into the well of the House or abusing the Rules of the House persistently and wilfully obstructing its business by shouting slogans or otherwise, **such Member shall, on being named by the Speaker, stand automatically suspended from the service of the House for five consecutive sittings or the remainder of the session, whichever is less:** Provided that the House may, at any time, on a motion being made, resolve that such suspension be terminated.

"(2) On the Speaker announcing the suspension under this rule, the Member shall forthwith withdraw from the precincts of the House."

What is the procedure for revocation of a Member's suspension?

While the Speaker is empowered to place a Member under suspension, the **authority for revocation of this order is not vested in her.** It is for the House, if it so desires, to resolve on a motion to revoke the suspension.

What is the procedure in Rajya Sabha?

- Like the Speaker in Lok Sabha, the **Chairman of the Rajya Sabha is empowered under Rule Number 255** of its Rule Book to "direct any Member whose conduct is in his opinion grossly disorderly to withdraw

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immediately" from the House.

- "...Any Member so ordered to withdraw shall do so forthwith and shall absent himself during the remainder of the day's meeting."
- The Chairman may "name a Member who disregards the authority of the Chair or abuses the rules of the Council by persistently and wilfully obstructing" business. In such a situation, the **House may adopt a motion suspending the Member** from the service of the House for a **period not exceeding the remainder of the session.**
- The House may, however, **by another motion, terminate the suspension.**
- **Unlike the Speaker, however, the Rajya Sabha Chairman does not have the power to suspend a Member.**

Is suspending an MP a common practice in Parliament?

- In November 2019, Speaker suspended two Congress Members. And in January 2019, the Speaker suspended a total 45 Members belonging to the TDP and AIADMK after they continuously disrupted proceedings for days.
- On February 13, 2014, then Speaker suspended 18 MPs from (undivided) Andhra Pradesh following pandemonium in the House. The suspended MPs were either supporting or opposing the creation of the separate state of Telangana.
- Before that, on September 2, 2014, nine Members were suspended for five days.
- On August 23, 2013, 12 Members were suspended for five days. And on April 24, 2012, eight Members were suspended for four days.

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- On March 15, 1989, when Rajiv Gandhi was Prime Minister, as many as 63 Members were suspended from the Lok Sabha for three days.

Isn't the barring of an elected representative of the people an extreme step to take in order to curb unruly behaviour?

- A balance has to be struck. There can be no question that the enforcement of the supreme authority of the Speaker is essential for smooth conduct of proceedings. However, it must be remembered that her job is to run the House, not to lord over it.
- The **solution to unruly behaviour has to be long-term and consistent with democratic values**. A previous Speaker had ordered that television cameras be focussed on the demonstrating members, so that people could see for themselves how their representatives were behaving in the House.
- A step in that same direction could be to **discontinue the practice of herding people out of the visitors' gallery when the House witnesses chaos**. It has been suggested that it may perhaps be a good idea to let them be — and to also reserve a few blocks in the gallery for schoolchildren, who could see for themselves the conduct of Members.
- What cannot, however, be denied is that **Speakers' actions are often dictated more by expediency and the stand of the party** that they belong to, rather than by the Rules and principles.
- So, the **ruling party of the day invariably insists on the maintenance of discipline, just as the Opposition insists on its right to protest**. And their positions change when their roles flip.

Source: Indian Express

UPSC "PT" DNA (Daily News Analysis)

Common Electricity Market for India's neighbourhood

GS-II | 06 March, 2020

Syllabus subtopic: India and its Neighborhood- Relations.

Prelims and Mains focus: about the move and its significance

News: The Union government plans to set up a **regional grid** that will be leveraged to create a **common electricity market for nations in India's neighbourhood**, according to the power and new and renewable energy minister.

About the move

- The proposed market, which will **include Myanmar, Sri Lanka, Nepal, Bhutan and Bangladesh**, could **aid regional peace** and **improve utilization of generation assets**—including the stranded assets in India —and efficient price discovery.
- While **India has been procuring hydropower from Bhutan**, it is also **supplying electricity to Bangladesh and Nepal**. The plans now include the option of an **overhead electricity link with Sri Lanka**. An overhead line is being considered after the **earlier proposal to set up an undersea power transmission link to supply power to the island nation turned out to be prohibitively expensive**. India has notified cross-border trading regulations.

India's energy diplomacy

- India's energy diplomacy initiatives range from cross-border electricity trade to supplying petroleum products and setting up liquefied natural gas terminals.

UPSC "PT" DNA (Daily News Analysis)

- Cross-border energy trade is a key part of PM Modi's **South Asia-focused neighbourhood-first policy**, with the electricity link attempting to **negate the growing influence of strategic rival China** in the region.

Source: Livemint

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Indian Ocean Commission (IOC)

GS-II | 07 March, 2020

Syllabus subtopic: Bilateral, Regional and Global Groupings and Agreements involving India and/or affecting India's interests.

Prelims and Mains focus: about the move and its significance; about IOC

News: India has joined as an observer of the Indian Ocean Commission.

About the move

With this, India joins China, which was made an observer in 2016, as well as the "International Organisation of the Francophonie" or the 54-nation French-speaking collective, the European Union (EU) and Malta, which were all admitted in 2017.

Background

- The decision to join the IOC marks a part of the government's push for greater salience in the whole **Indian Ocean Region (IOR)**, including what is called the Western or African Indian Ocean.
- In December 2019, the Ministry of External Affairs decided to include Madagascar, Comoros and Reunion as part of the IOR desk along with Sri Lanka, Maldives, Mauritius, and Seychelles.
- Subsequently, they have been incorporated into one single division under the additional Secretary (Indo-Pacific).

Significance of the move

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- The **Western Indian Ocean (WIO)** is a **strategic sub-theatre of the Indian Ocean** linking the Southeastern coast of Africa to the wider Indian Ocean and beyond. It is home to one of the key chokepoints in the Indian Ocean- the **Mozambique Channel**.
- This move has strategic importance as the Commission is an important regional institution in the **Western Indian Ocean**. It facilitates collective engagement with the islands in Western Indian Ocean that are becoming strategically significant. It boosts cooperation with France that has strong presence in the Western Indian Ocean and lends depth to **India's SAGAR policy** of PM Modi 2015.
- The move also **strengthens western flank of the Indo-Pacific** and is a stepping stone to **security cooperation with East Africa**.
- While Comoros sits at the northern mouth of the **Mozambique Channel**, Madagascar borders the channel to its west. While the channel lost its significance post the opening of the Suez Canal, the recent **hostilities near the Strait of Hormuz brought the channel back into focus as the original route for bigger commercial vessels (especially for oil tankers)**.
- Additionally, the **growing importance of Africa in Indo-Pacific engagements** combined with **potential natural gas reserves in the Mozambique Channel** will only continue to raise the significance of this region in wider maritime security. Keeping in mind the importance of geography for maritime power projection and naval dominance, there is little doubt about the rising significance of the islands in a new geo-political environment in the Indian Ocean.

About IOC

- The Indian Ocean Commission is an **inter-governmental organisation** that **coordinates maritime governance** in the **south-western Indian Ocean**.

UPSC "PT" DNA (Daily News Analysis)

- It was created in 1982 at Port Louis, Mauritius and institutionalized in 1984 by the Victoria Agreement in Seychelles.
- The COI is **composed of five African Indian Ocean nations**: Comoros, Madagascar, Mauritius, Réunion (an overseas region of France), and Seychelles.
- Notwithstanding their different characteristics (Reunion as a French overseas region; Mauritius and Seychelles as Middle-Income Countries whereas Comoros and Madagascar are amongst the Least-Developed Countries), the five islands share geographic proximity, historical and demographic relationships, natural resources and common development issues.

The COI works on four pillars which have been adopted in 2005 by the Summit of Heads of States:

- Political and diplomatic cooperation,
- Economic and commercial cooperation
- Sustainable development in a globalisation context, cooperation in the field of agriculture, maritime fishing, and the conservation of resources and ecosystems
- Strengthening of the regional cultural identity, cooperation in cultural, scientific, technical, educational and judicial fields.

Source: The Hindu

Mines and Mineral Laws (Amendment) Bill, 2020

GS-II | 07 March, 2020

Syllabus subtopic: Government Policies and Interventions for Development in various sectors and Issues arising out of their Design and Implementation.

UPSC "PT" DNA (Daily News Analysis)

Prelims and Mains focus: about the key features of the bill

News: The Lok Sabha passed the Mines and Mineral Laws (Amendment) Bill amid sloganeering by Opposition members over the Delhi violence and other issues.

Key features of the Bill

- The Bill amends the Mines and Minerals (Development and Regulation) Act, 1957 (MMDR Act) and the Coal Mines (Special Provisions) Act, 2015 (CMSP Act).
- **Removal of restriction on end-use of coal:** Currently, companies acquiring Schedule II and Schedule III coal mines through auctions can use the coal produced only for specified end-uses such as power generation and steel production. The **Bill removes this restriction** on the use of coal mined by such companies. Companies will be **allowed to carry on coal mining operation for own consumption, sale or for any other purposes**, as may be specified by the central government.
- **Eligibility for auction of coal and lignite blocks:** The Bill clarifies that the companies **need not possess any prior coal mining experience** in India in order to participate in the auction of coal and lignite blocks. Further, the competitive bidding process for auction of coal and lignite blocks will not apply to mines considered for allotment to: **(i)** a government company or its joint venture for own consumption, sale or any other specified purpose; and **(ii)** a company that has been awarded a power project on the basis of a competitive bid for tariff.
- **Composite license for prospecting and mining:** Currently, separate licenses are provided for prospecting and mining of coal and lignite, called prospecting license, and mining lease, respectively. Prospecting includes exploring, locating, or finding mineral deposit. The **Bill adds a new type of**

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license, called prospecting license-cum-mining lease. This will be a composite license providing for both prospecting and mining activities.

- **Non-exclusive reconnaissance permit holders to get other licenses:** Currently, the holders of non-exclusive reconnaissance permit for exploration of certain specified minerals are not entitled to obtain a prospecting license or mining lease. **Reconnaissance means preliminary prospecting of a mineral through certain surveys.** The Bill provides that the holders of such permits may apply for a prospecting license-cum-mining lease or mining lease. This will apply to certain licensees as prescribed in the Bill.
- **Transfer of statutory clearances to new bidders:** Currently, upon expiry, mining leases for specified minerals (minerals other than coal, lignite, and atomic minerals) can be transferred to new persons through auction. This new lessee is required to obtain statutory clearances before starting mining operations. The Bill provides that the **various approvals, licenses, and clearances given to the previous lessee will be extended to the successful bidder for a period of two years.** During this period, the new lessee will be allowed to continue mining operations. However, the new lessee must obtain all the required clearances within this two-year period.
- **Reallocation after termination of the allocations:** The CMSP Act provides for the termination of allotment orders of coal mines in certain cases. The Bill adds that such mines may be reallocated through auction or allotment as may be determined by the central government. The central government will appoint a **designated custodian to manage these mines** until they are reallocated.
- **Prior approval from the central government:** Under the MMDR Act, state governments require prior approval of the central government for granting reconnaissance permit, prospecting license, or mining lease for coal and lignite. The **Bill provides that prior approval of the central government will not be required in granting these licenses for coal and lignite, in**

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certain cases. These include cases where: (i) the allocation has been done by the central government, and (ii) the mining block has been reserved to conserve a mineral.

- **Advance action for auction:** Under the MMDR Act, mining leases for specified minerals (minerals other than coal, lignite, and atomic minerals) are auctioned on the expiry of the lease period. The Bill provides that **state governments can take advance action for auction of a mining lease before its expiry.**

Source: The Hindu

Vacancies in govt. ministries/departments

GS-II | 07 March, 2020

Syllabus subtopic: Important Aspects of Governance, Transparency and Accountability

Prelims and Mains focus: about the issue and recommendations of the committee

News: The parliamentary panel on Personnel, Public Grievances, Law and Justice has pulled up the government for “dismal implementation” of the reservation policy.

About the issue

- In six key ministries, over 7,000 posts reserved for Scheduled Castes, over 6,000 for Scheduled Tribes and over 10,000 for Other Backward Classes remain unfilled.

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- The standing committee, said the statistics point to a serious malaise afflicting the entire recruitment system as a whole," the report states.
- The panel has **directed the Centre to hold special recruitment drives** to fill the vacancies without further delay.
- The **top six ministries** that the committee has highlighted are the Departments of Posts, Atomic Energy, Defence, Railways, Housing & Urban Affairs and Home. The **highest backlog of unfilled posts in reserved category is in the Home Ministry**, where 5,850 posts for SCs, 5,383 posts for STs and 6,260 posts for OBCs remain vacant.
- The **Central Bureau of Investigation has 1,281 vacancies**, the Committee noted, which could **increase pendency, hamper quality of investigations and reduce the efficiency of the agency**. Of the total, 789 posts in the executive ranks, 77 posts of law officers and 415 posts of technical officers and staff are vacant.

Recommendations

- The Committee has recommended that there **should be no random posting of the IAS officers** suggesting instead that they should be categorised according to their skill set, aptitude and interest. **Clusters like rural, social, financial should be made.**
- "Once assigned to a particular sector, the civil servant will spend the rest of his career within the sector concerned. This system will enable civil servants to acquire skills, expertise and professional excellence in a particular domain. The Committee thinks that this administrative reform can usher in Good governance," the committee said.

Source: The Hindu

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Currency swap agreement

GS-III | 07 March, 2020

Syllabus subtopic: Effects of Liberalization on the Economy, Changes in Industrial Policy and their Effects on Industrial Growth.

Prelims and Mains focus: about the currency swap agreement and its significance

News: Reserve Bank of India (RBI) governor made a case for international multilateral agencies like the **International Monetary Fund (IMF)** launching **currency swaps for countries affected by the spread of COVID-19**, also known as coronavirus.

Need

A swap line was critical from the point of view of preserving global financial stability. The global economy has been hit hard by COVID-19. According to IMF projections, the **outbreak's impact on the global economy will be 0.1 per cent and 0.4 per cent on the Chinese economy.**

What is the benefit?

A coordinated swap line **would act as a second line of defence** to bolster national reserves across nations.

What is a currency swap agreement?

- The word **swap means exchange**. A currency swap between two countries is an agreement or contract to **exchange currencies (of the two countries or any hard currency)** with predetermined terms and conditions.

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- Often the popular form of currency swap is between two central banks. Here, the **main purpose** of currency swap by a central bank like the RBI is **to get the foreign currency from the issuing foreign central bank at the predetermined conditions** (like exchange rate and the volume of currency) for the swap. **Besides supporting the domestic currency and foreign exchange market, another main purpose of currency swap is to keep the value of the foreign exchange reserves kept with the central bank.**

What is the purpose of currency swap?

- As mentioned, the main purpose of currency swaps is **to avoid turbulence and other risks in the foreign exchange market and exchange rate**. Central banks and governments engage in currency swaps with foreign counterparts **to ensure adequate foreign currency during the time of foreign currency scarcity**. Both works with the same objective and through similar mechanism.
- Often, the turbulence comes **when a country faces scarcity of foreign currency** which may led to currency crisis and steep depreciation of the domestic currency. In such a scenario, if the central bank/government is able to get sizable foreign currency by exchanging domestic currency, it ensures availability of foreign currency. Hence the turbulence in the foreign exchange market or depreciation of the domestic currency/currency crisis can be avoided.
- Besides currency or exchange rate stability, **currency swaps between governments also have supplementary objectives like promotion of bilateral trade, maintaining the value of foreign exchange reserves with the central bank and ensuring financial stability (protecting the health of the banking system).**
- It is **always desirable for a developing country like India** to reach currency swap agreement with countries like USA/UK/EU/Japan whose currencies are hard currencies (used in international trade as medium of exchange).

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- Currency swap agreement **can be bilateral or multilateral**. The earliest currency swap was between U.S. Federal Reserve and the Central Bank of France signed on February 28, 1962.
- Usually, currency swap agreements are of **five types** depending upon the nature and the status of the currencies swapped.

- 1) Exchange cash for cash vs cash for securities;
- 2) Exchange conditional vs unconditional swaps;
- 3) Exchange reserve currencies on both sides;
- 4) Exchange reserve currency for non-reserve currency; and
- 5) Exchange non-reserve currencies on both sides.

Source: Indian Express

IBC (Second Amendment) Bill 2019

GS-II | 07 March, 2020

Syllabus subtopic: Government Policies and Interventions for Development in various sectors and Issues arising out of their Design and Implementation.

Prelims and Mains focus: key highlights of the bill and its significance

UPSC "PT" DNA (Daily News Analysis)

News: The Lok Sabha passed the Insolvency and Bankruptcy Code (Second Amendment) Bill, 2019.

Background

The Bill was first tabled in Lok Sabha on December 12, 2019, but was referred to the Standing Committee on Finance before being reintroduced in Parliament on 6th February. The Bill is set to replace an ordinance which had brought provisions of the Bill into effect on December 28, 2019.

Key highlights of the Bill

- The Code allows creditors to initiate an insolvency resolution process if a company defaults on its payments. The Bill **introduces an additional threshold** for certain classes of financial creditors, including allottees of real estate projects, for initiating the resolution process. **At least 10% of them or 100 such persons have to jointly initiate the process.**
- The Bill **empowers the resolution professional** to require suppliers to continue providing goods and services. This provision will **not apply if the debtor has unpaid dues** arising from such supplies during the moratorium period. The Bill provides that **the company will not be liable for any offense committed prior to the insolvency resolution process if there is a change in the management** or control of the company.
- Under the Code, the insolvency resolution process commences when the Insolvency Resolution Professional (IRP) is appointed. The Bill states that the **IRP must be appointed on the date of admission of the application by NCLT**, which will be considered as the insolvency commencement date.

Key Issues and Analysis

- In the case of defaults by real estate developers, the insolvency resolution
-

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application should be filed jointly by at least 100 homebuyers or 10% of their total number. The move is aimed at preventing speculative homebuyers from dragging otherwise viable real estate projects through the IBC. Further, a homebuyer wishing to initiate the process may not have details of other allottees.

- The Bill empowers the resolution professional to require suppliers to continue providing goods and services during the moratorium period. **This provision overrides the agency of suppliers to negotiate and decide whether to continue a contractual arrangement.** It may also force the supply of goods and services even if the supplier finds it risky or unviable.
- In order to **balance the rights of the suppliers**, the Bill provides that **suppliers have to continue supplying only if their current dues are paid.** In other countries, additional safeguards are available. These include the right to seek a payment guarantee, and court-granted permission to terminate the contract in cases where the supplier demonstrates that continuation will cause hardship.

Source: Indian Express

National Technical Research Organisation (NTRO)

GS-III | 07 March, 2020

Syllabus subtopic: Challenges to Internal Security through Communication Networks, Role of Media and Social Networking Sites in Internal Security Challenges, Basics of Cyber Security

Prelims and Mains focus: about the cyber security threat concerning India; about NTRO

UPSC "PT" DNA (Daily News Analysis)

News: Although India is the fifth most important target of cyber threats, the country **does not focus enough on security during the technology development process**, National Technical Research Organisation (NTRO) chairman told an audience of cyber security experts at the cyber security Nullcon conference at Dona Paula in Goa.

Need of the hour

- India needs to be **more proactive to common cyber threats**, such as data breaches, supply chain contamination and "malicious actors using social media for violent extremist ideologies.
- There is **hardly any coordination among nations** on how to police cyber space. And messaging applications complicate the problem even more.
- Cyber tactics have become **more state-sponsored** but executed by non-state actors in locations outside their home countries, making attribution difficult.

About NTRO

- NTRO, established in 2004, is housed **under the National Security Advisor** in the Prime Minister's Office and **focuses on intelligence gathering**.
- Under the agency is the **National Critical Information Infrastructure Protection Centre (NCIIPC)** which focuses on threats to information infrastructure.
- NTRO has the **same "norms of conduct"** as the Intelligence Bureau (IB) and the Research and Analysis Wing (R&AW).

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Source: Indian Express

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Red Panda and IUCN

GS-III | 09 March, 2020

Red Panda

Part of: GS Prelims and GS-III- Environment

1. Hunting of Red Panda has decreased as per study by wildlife trade monitoring network TRAFFIC, indicative of the success of awareness campaigns.
 2. Red panda is endemic to the **temperate forests of the Himalayas**.
 3. Native to the eastern Himalayas and southwestern China.
 4. It is arboreal, feeds mainly on bamboo, but also eats eggs, birds, and insects
- **Habitat:** Sikkim, Assam, Meghalaya, West Bengal and northern Arunachal Pradesh.
 - **Threat:** Hunted for meat and fur, besides illegal capture for the pet trade.
 - **IUCN Status:** Endangered
 - **Significance:** Red panda's survival is crucial for the eastern and north-eastern Himalayan subalpine conifer forests and the eastern Himalayan broadleaf forests
 - **Estimated Population:** 14,500 animals in the wild across Nepal, Bhutan, India, China and Myanmar.
 - It is the **state animal of Sikkim**

Protected areas

- Kanchendzonga National Park (NP) — Sikkim
- Neora Valley NP – West Bengal
- Namdapha National Park – Arunachal Pradesh
- Singalila National Park – West Bengal

About IUCN

The International Union for Conservation of Nature

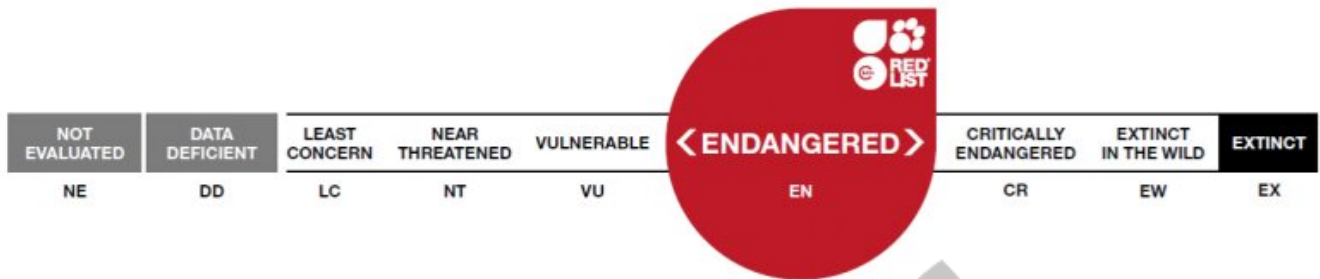
- IUCN is a membership union uniquely composed of both government and civil society organisations.
- Created in **1948**, it is the global authority on the status of the natural world and the measures needed to safeguard it.
- It is headquartered in **Switzerland**.
- The **IUCN Red List** of Threatened Species, is the world's most comprehensive inventory of the global conservation status of plant and animal species.

PT-HIT

The International Union for Conservation of Nature works to achieve the follow

UPSC "PT" DNA (Daily News Analysis)

1. To provide scientific data on the status of species and subspecies at a global level.
2. To address the factors of concern and spread awareness regarding the species and biodiversity ex
3. To plan a layout for the conservation of biodiversity



- It uses a set of quantitative criteria to evaluate the extinction risk of species. These criteria are relevant to most species and all regions of the world.
- The IUCN Red List Categories define the extinction risk of species assessed. **Nine categories** extend from NE (*Not Evaluated*) to EX (*Extinct*). Critically Endangered (CR), Endangered (EN) and Vulnerable (VU) species are considered to be threatened with extinction.
- It is recognized as the most authoritative guide to the status of biological diversity.
- It is also a key indicator for the **SDGs** and Aichi Targets.
- Extinct (EX) – No known individuals remaining.
- Extinct in the wild (EW) – Known only to survive in captivity, or as a naturalized population outside its historic range.
- Critically endangered (CR) – Extremely high risk of extinction in the wild.
- Endangered (EN) – High risk of extinction in the wild.
- Vulnerable (VU) – High risk of endangerment in the wild.
- Near threatened (NT) – Likely to become endangered in the near future.
- Least concern (LC) – Lowest risk. Does not qualify for a more at-risk category. Widespread and abundant taxa are included in this category.
- Data deficient (DD) – Not enough data to make an assessment of its risk of extinction.
- Not evaluated (NE) – Has not yet been evaluated against the criteria

List of critically endangered species in India as per IUCN Red List 2019

The list of critically endangered species in India from various categories are given below:

Critically Endangered Mammals

1. Pygmy Hog
2. Andaman White-toothed Shrew
3. Jenkin's Andaman Spiny Shrew

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4. Nicobar White-tailed Shrew
5. Kondana Rat
6. Large Rock Rat or Elvira Rat
7. Namdapha Flying Squirrel
8. Malabar Civet
9. Sumatran Rhinoceros
10. Javan Rhinoceros

Critically Endangered Birds

1. Aythya baeri
2. Forest Owlet
3. Great Indian Bustard
4. Bengal Florican
5. Siberian Crane
6. Spoon-billed Sandpiper
7. Sociable Lapwing
8. Jerdon's Courser
9. White-backed Vulture
10. Red-headed Vulture
11. White-bellied Heron
12. Slender-billed Vulture
13. Indian Vulture
14. Pink-headed Duck
15. Himalayan Quail

Critically Endangered Reptiles

1. Gharial
2. Hawksbill Turtle
3. Leatherback Turtle
4. River Terrapin
5. Bengal Roof Turtle
6. Sispara day gecko

Critically Endangered Fishes

1. Pondicherry Shark
2. Ganges Shark
3. Knife-tooth Sawfish
4. Large-tooth Sawfish
5. Narrow-snout Sawfish

IUCN Conservation Plan for 2020

The strategy for the conservation of nature by IUCN is as follows:

1. **Assess** – Focus on monitoring species and informing the world about the status and trends of biodiversity, thus providing measures for the protection of our biosphere.

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2. **Plan** – Aims to enhance collaborative and science-based strategies to ensure the most effective species conservation actions.
3. **Act** – Improve the status of biodiversity, by mobilizing actions involving governments, educational institutions, civil society, and the private sector.
4. **Communicate** – The effectiveness of IUCN's species conservation work is enhanced through strategic and targeted communications.

Source: TH/IUCN WEB

CORD BLOOD BANKING-BIOTECHNOLOGY

GS-III | 09 March, 2020

CORD BLOOD BANKING

Part of: GS Prelims and GS-III- S&T

Recently there has been growing concern regarding the aggressively promoted concept of cord blood banking.

Key Points

- Over the past decade, stem cell banking has been aggressively marketed even as its use is still in experimental stages.
- The stem cell banking companies get access to data of to-be parents and start approaching their prospective customers much before the delivery and offer competitive packages.
- Companies convince parents to bank the cells for several years promising future therapeutic use.
- Enormous fees are charged from parents to preserve cells merely by emotional marketing.
- However, according to **Indian Council of Medical Research (ICMR)**, there is **no scientific basis** for preservation of cord blood for future self use and this practice therefore raises ethical and social concerns.
- The ICMR does **not recommend commercial stem cell banking**.
- Private storage of the cord blood is advisable when there is an elder child in the family with a condition treatable with these cells and the mother is expecting the next baby.
- In other situations, parents should be educated about the limitations of banking at this point of time.

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Cord Blood Banking

- Cord blood is the blood from the baby that is left in the umbilical cord and placenta after birth. Cord blood banking involves taking the **umbilical cord blood**, which is a rich source of stem cells, and preserving it for future use.
- It contains special cells called hematopoietic stem cells that can be used to treat some types of diseases.
- **Hematopoietic stem cells** can mature into different types of blood cells in the body.
- Globally, cord blood banking is recommended as a source of **hematopoietic stem cell (derived from bone marrow, peripheral blood, or umbilical cord blood)** transplantation for haematological cancers and disorders where its use is recommended.
- For all other conditions, the use of cord blood as a source of stem cells is not yet established.

Stem Cells

- Stem cells are special human cells that have the ability to develop into **many different cell types**, from muscle cells to brain cells.
 - Stem cells are divided into **two main forms- Embryonic stem cells and Adult Stem Cells**.
 - **Embryonic stem cells** come from **unused embryos** resulting from an **in vitro fertilization** procedure and that are donated to science.
1. These embryonic stem cells are **pluripotent**, meaning that they can turn into more than one type of cell.
 2. **Adult Stem Cells**: There are **two types** of adult stem cells.

One type comes from fully **developed tissues**, like the brain, skin, and bone marrow. There are only **small numbers** of stem cells in these tissues, and they are more likely to generate only certain types of cells. For example, a stem cell derived from the liver will only generate more liver cells.

The second type is induced **pluripotent stem** cells.

These are adult stem cells that have been **manipulated in a laboratory** to take on the pluripotent characteristics of embryonic stem cells.

Indian Council of Medical Research

- ICMR is the **apex body** in India for **formulation, coordination and promotion of biomedical research**.
- Its mandate is to conduct, coordinate and implement medical research for the benefit of the Society; translating medical innovations into products/processes and introducing

UPSC "PT" DNA (Daily News Analysis)

them into the public health system.

- it is funded by the Government of India through the Department of Health Research, Ministry of Health & Family Welfare.

Source: TH

India-USA Defense Cooperation

GS-II | 09 March, 2020

India and USA Military Cooperation

Part of: GS Mains and GS-II- IR

Preface: India-U.S. bilateral relations have developed into a "global strategic partnership", based on shared democratic values and increasing convergence of interests on bilateral, regional and global issues. The emphasis placed by the Government in India on development and good governance has created opportunity to reinvigorate bilateral ties and enhance cooperation under the motto --- **"ChaleinSaathSaath: Forward Together We Go", and "SanjhaPrayas, Sab ka Vikas"** (Shared Effort, Progress for All) adopted during the first two summits of Prime Minister Modi and President Obama in September 2014 and January 2015 respectively. The summit level joint statement issued in June 2016 called the India-U.S. relationship an **"Enduring Global Partners in the 21st Century"**. Regular exchange of high-level political visits has provided sustained momentum to bilateral cooperation, while the wide-ranging and ever-expanding dialogue architecture has established a long-term framework for India-U.S. engagement. Today, the India-U.S. bilateral cooperation is broad-based and multi-sectoral, covering trade and investment, defence and security, education, science and technology, cyber security, high-technology, civil nuclear energy, space technology and applications, clean energy, environment, agriculture and health. Vibrant people-to-people interaction and support across the political spectrum in both countries nurture our bilateral relationship.

India-U.S. Dialogue Architecture: There are more than 50 bilateral dialogue mechanisms between the two governments. The first two meetings of the Strategic and Commercial Dialogue at the level of EAM and MoS (Commerce & Industry) were held in Washington DC in September 2015 and New Delhi in August 2016. This apex-level dialogue has added a commercial component to the **five traditional pillars of bilateral relations on which the erstwhile Strategic Dialogue of Foreign Ministers had focussed, namely: Strategic Cooperation; Energy and Climate Change, Education and Development; Economy, Trade and**

UPSC "PT" DNA (Daily News Analysis)

Agriculture; Science and Technology; and Health and Innovation. The second meeting of the Strategic and Commercial Dialogue took place on 30 August 2016 in New Delhi. In addition, there are Ministerial-level dialogues involving home (Homeland Security Dialogue), finance (Financial and Economic Partnership), commerce (Trade Policy Forum), HRD (Higher Education Dialogue), Science & Technology (Joint Commission Meeting on S&T) and energy (Energy Dialogue).

Defence Cooperation: Defence relationship has emerged as a major pillar of India-U.S. strategic partnership with the signing of '**New Framework for India-U.S. Defense Relations**' in 2005 and the resulting intensification in defence trade, joint exercises, personnel exchanges, collaboration and cooperation in maritime security and counter-piracy, and exchanges between each of the three services. The Defence Framework Agreement was updated and renewed for another 10 years in June 2015. The two countries now conduct more bilateral exercises with each other than they do with any other country. India participated in **Rim of the Pacific (RIMPAC) exercise** in July-August 2016 for the second time with an Indian Naval Frigate. Bilateral dialogue mechanisms in the field of defence include Defence Policy Group (DPG), Defence Joint Working Group (DJWG), Defence Procurement and Production Group (DPPG), Senior Technology Security Group (STSG), Joint Technical Group (JTG), Military Cooperation Group (MCG), and Service-to-Service Executive Steering Groups (ESGs). The agreements signed during the past one year include, **Logistics Exchange Memorandum of Association (LEMOA)** signed in August 2016, Fuel Exchange Agreements signed in November 2015, Technical Agreement (TA) on information sharing on White (merchant) Shipping signed in May 2016 and the Information Exchange Annex (IEA) on Aircraft Carrier Technologies signed in June 2016. Aggregate worth of defence acquisition from U.S. Defence has crossed over US\$ 13 billion. India and the United States have launched a **Defence Technology and Trade Initiative (DTTI)** aimed at simplifying technology transfer policies and exploring possibilities of co-development and co-production to invest the defence relationship with strategic value. The DTTI Working Group and its Task Force will expeditiously evaluate and decide on unique projects and technologies which would have a transformative impact on bilateral defence relations and enhance India's defence industry and military capabilities. During President Obama's visit in January 2015, the two sides agreed to start cooperation on 4 DTTI pathfinder projects and 2 pathfinder initiatives, which are currently at various stages of execution. During RM's visit in December 2015, the two sides also identified opportunities for bilateral cooperation in production and design of jet engine components. During Secretary Carter's visit in April 2014, two more G-2-G DTTI projects were added to the list. The DTTI meeting in Delhi in July 2016 decided to broaden its agenda by setting up five new Joint Working Groups on: Naval Systems; Air Systems, Intelligence, Surveillance and Reconnaissance; Chemical and Biological Protection; and Other Systems. During the visit of Prime Minister to the U.S. in June 2016, the U.S. recognised India as a "Major Defence Partner", which commits the U.S. to facilitate technology sharing with India to a level commensurate with that of its closest allies and partners, and industry collaboration for defence co-production and co-development.

Relationship Dynamics

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- It can be elaborated into three main categories-
 - **Good Phase-** It is linked to the historic terms like the **U.S. civil nuclear deal**, the ongoing **defence cooperation** and the signing of “**Foundational Defence Agreements**” which are the **Communications Compatibility and Security Agreement (COMCASA)**, the **Logistics Exchange Memorandum of Agreement (LEMOA)** and the **Basic Exchange and Cooperation Agreement for Geo-spatial Cooperation (BECA)** etc.
 - **Bad Phase-** It is linked with the current trade challenges, the **U.S.’s hyphenation of India with China** in its trade war and its call for the removal of the ‘**developing country**’ tag assigned by the **WTO**.
 - **Ugly Phase-** It was when the **U.S. sent its fleet towards India** to assist **Pakistan** during the **1971 war**.
- The good outweighs the other two but a **sense of scepticism** remains because of **India’s multilateral outreach**, especially with respect to the procurement of defence material from Russia and Indian military’s presence in Afghanistan.
- India also needs to remain mindful of the **unpredictability and inherent contradictions in U.S. foreign policy** and, at the same time, **capitalise on U.S. ‘isolationism and retrenchment’** by maintaining its time-tested policy of non-alignment and strategic autonomy.

Recent news

- **The India-U.S. Military Cooperation Group (MCG) dialogue** is a forum to review the progress of **defence cooperation between India’s Integrated Defence Staff and the U.S. Indo-Pacific Command (USINDOPACOM)** at the strategic and operational levels.
 - The Integrated Defence Staff was responsible for coordination among the armed forces before the appointment of the Chief of Defence Staff.
- As part of the agreement reached at the **2+2 Dialogue of December 2019**, with the intent to further military liaison relationships, India has already posted a liaison officer at the **U.S. Navy Central Command in Bahrain** and a U.S. liaison officer has joined the **Indian Navy’s Information Fusion Centre for Indian Ocean Region at Gurugram**.

Details:

- The India-U.S. Military Cooperation Group (MCG) dialogue scheduled to be held in the U.S., has been cancelled given the COVID-19 outbreak.
 - As part of improving defence cooperation and interoperability between India and the U.S., India is considering a U.S. request for posting liaison officers at the **U.S. Indo-Pacific Command (USINDOPACOM)** and the **U.S. Special Operations Command (USSOCOM)**. This was to be discussed at the dialogue.
 - The MCG dialogue was to follow up on the U.S. President’s India visit and fast-track the decisions, including that on **24 MH-60R multi-role helicopters**.

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2+2 dialogue

India and the US have recently concluded **second 2+2 ministerial dialogue** in **Washington**. Several landmark agreements in both **defence and Civilian sectors** were signed.

Key Points

- **Industrial Security Annex (ISA)**

- ISA to the will provide a framework for exchange and pr **General Security Of Military Information Agreement (GSOMIA)** of **classified** military information **between the U.S. and Indian defence industries**.
- Currently, under GSOMIA, such information is exchanged between the Government authorities of the two countries but not between **private parties**.
- This will further promote "**Make in India**" in the defence sector.
 - In accordance with the budget announcement (2018-19), the government has already decided to set up **two Defence Industrial Corridors** in the country, **one in Uttar Pradesh and another in Tamil Nadu**.

Peacekeeping for Indo-Pacific

- Cooperation in **capacity-building** of UN peacekeepers from Indo-Pacific countries, based on demands from the countries concerned.
- Counter-terrorism efforts were also discussed including dangers of of cross border terrorism.

Tiger Triumph Exercise

- To hold the **India-U.S. joint tri-services 'Tiger Triumph'** on an **annual** basis.
- **The first edition** was held in **November 2019** as a Humanitarian Assistance and Disaster Relief (**HADR**) exercise.

Coalition for Disaster Resilient Infrastructure (CDRI)

- The **CDRI** was launched at the **UN Climate Action Summit** in **New York, USA** in September 2019. It is **headquartered in New Delhi, India**.
- The US is now part of it.

Water Resource Management

- Memorandum of understanding (MoU) was signed between Ministry of **Jal Shakti** and the **U.S. Geological Survey** to promote **technical cooperation** in water resources management and water technology.

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Space Situational Awareness (SSA)

- Cooperation for **exchange** of information including **space debris and space traffic management**.
- It ensures **navigational safety of our space assets**.

Young Innovators Internship Programme (YIIP)

- Create **internship** opportunities in **key areas of science and economy**.
- New opportunities for **young entrepreneurs**.

Parliamentary Exchange and Judicial cooperation

- **Reciprocal visits** by Parliamentarians from both countries.
- The U.S. Federal Judicial Center and **India's National Judicial Academy in Bhopal** to cooperate in the area of **counter-terrorism jurisprudence** to new areas of **criminal jurisprudence** including **money laundering, drug trafficking** etc.

'2+2' Dialogue

- It is a format of dialogue where the **defense and foreign ministers or secretaries** meet with their country. 2+2 Ministerial is the highest-level institutional mechanism between the two countries.
- India holds such talks with **Australia**, at the foreign secretary and defense secretary level but at the **ministerial level**.
- With the US this was the **second 2+2 meeting (Washington)**, first was held in New Delhi in September.
- US holds such ministerial dialogues with **Australia and Japan** also.

Source: TH-MoEA

Unutilised Budgetary Funds in Education-Right to Education

GS-II | 09 March, 2020

Unutilised Budgetary Funds in Education

- The **Parliamentary Standing Committee on Human Resource Development's (HRD)** report on the 2020-2021 **demand for grants for school education** submitted to the Rajya Sabha.

Details:

Budget allocations and expenditure:

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- The Standing Committee has expressed concerns over the fact that the **budgetary allocations have observed a 27% cut over the budgetary proposals** made by the School Education Department.
- For the **core Samagra Shiksha Scheme**, the department had **only spent 71% of revised estimates** by December 31, 2019.

Samagra Shiksha Scheme (PT-HIT)

Ministry of Human Resource Development is implementing the **Scheme of Vocationalisation of School Education**.

- Under the scheme, a vocational subject is offered for Classes IX to XII along with the general education to develop employability and vocational skills for a variety of occupations.
- The above scheme is being implemented under the umbrella of 'Samagra Shiksha – an integrated approach to school education'.

Samagra Shiksha

▪ Key Provisions:

- Samagra Shiksha is an **integrated** scheme for school education extending from **pre-school to school level** to provide inclusive and equitable quality education at **all levels** of school education.
- It **subsumes** the three Schemes of **Sarva Shiksha Abhiyan (SSA)**, **Rashtriya Madhyamik Shiksha Abhiyan (RMAA)** and **Teacher Education (TE)**.
 - The scheme treats school education holistically as a **continuum from Pre-school to Class XII**.
 - The main emphasis of the Scheme is on improving the quality of school education by focusing on **Teacher and Technology**.

▪ Vision:

- The vision of the Scheme is to ensure inclusive and equitable quality education from pre-school stage in accordance with the **Sustainable Development Goal (SDG)** for Education.
 - **SDG-4.1:** Aims to ensure that all boys and girls complete free, equitable and quality education leading to relevant and effective learning outcomes.
 - **SDG 4.5:** Aims to eliminate gender disparities in education and ensure equal access to all levels of education for all girls and boys.
- The scheme mainly aims to support States in the implementation of the Right to Education Act, 2009, right under **Article 21-A** of the Constitution of India.

▪ Funding

- The Scheme is being implemented as a **Centrally Sponsored Scheme**.
 - The fund sharing pattern for the scheme between Centre and States is at present in the ratio of **60:40** for **North-Eastern States and the Himalayan States** and **60:40 for all other States and Union Territories**.
 - It is **100% centrally sponsored for Union Territories without Legislature**.
- The scheme also proposes to give flexibility to the States and UTs to plan and prioritize the scheme norms and the overall resource envelope available to them.

Critical infrastructure gaps:

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The Parliamentary panel has identified and expressed concerns over **critical infrastructure gaps in the government schools**.

- **The Unified District Information System for Education (UDISE) 2017-18 survey** reports that only 56% of government schools have electricity. Manipur and Madhya Pradesh have reported less than 20% having access to power.
- The latest survey has reported that less than 57% of schools have playgrounds, including less than 30% of schools in Odisha and Jammu and Kashmir.
- The parliamentary panel has come down heavily on the **very slow rate of progress in building classrooms, labs and libraries** to strengthen government higher secondary schools.
 - The panel noted that out of 2,613 sanctioned projects for 2019-20, only three had been completed in the first nine months of the financial year.

Overall Infrastructure:

- A **dismal rate of progress has been observed in building classrooms, labs and libraries** to strengthen government higher secondary schools.
- **Almost 40% of schools did not have a boundary wall**, endangering the safety of students and school property.
- The **higher secondary schools experienced greater infrastructural gaps** compared to secondary schools and primary schools.
- Also, **less than 5% of proposed infrastructure** facilities such as ramps and special toilets **for differently-abled students** have been completed in the government schools.

Concerns:

- The findings of the parliamentary panel point to the **lack of political will in developing this critical sector**.
- The lack of appropriate infrastructure at government schools may **impact the learning outcome** of its students and may also **alienate students from government schools**.

Right to Education Act

The Act is completely titled "**the Right of Children to Free and Compulsory Education Act**". It was passed in August 2009. When the Act came into force in 2010, India became one among 135 countries where the right of every child.

- The 86th Constitutional Amendment (2002) inserted Article 21A in the Indian Constitution which states:
 - "The State shall provide **free and compulsory education to all children of 6 to 14 years** in which the State may by law determine."
- As per this, the right to education was made a fundamental right and removed from the list of Directive Principles of State Policy.
- The RTE is the consequential legislation envisaged under the 86th Amendment.
- The article incorporates the word "free" in its title. What it means is that no child (other than parents in a school not supported by the government) is liable to pay any kind of fee or charge.

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prevent him or her from pursuing and completing elementary education.

- This Act makes it obligatory on the part of the government to ensure admission, attendance and education by all children falling in the age bracket six to fourteen years.
- Essentially, this Act ensures free elementary education to all children in the economically weaker sections.

RTE Provisions

The provisions of the RTE Act are briefly described below. The Act provides for:

- The right of free and compulsory education to children until they complete their elementary education in their neighbourhood.
- The Act makes it clear that 'compulsory education' implies that it is an obligation on the part of the government to ensure admission, attendance and completion of elementary education of children between the ages of 6 to 14. 'free' indicates that no charge is payable by the child which may prevent him/her from completing school education.
- The Act provides for the admission of a non-admitted child to a class of his/her appropriate age.
- It mentions the duties of the respective governments, the local authorities and parents in ensuring the quality of education. It also specifies the sharing of the financial burden between the central and the state governments.
- It specifies standards and norms for Pupil Teacher Ratios (PTR), infrastructure and buildings, working conditions and salaries for the teachers.
- It also says there should be no urban-rural imbalance in teacher postings. The Act also provides for the employment of teachers for non-educational work, other than census, elections and disaster relief work.
- The Act provides that the teachers appointed should be appropriately trained and qualified.
- The Act prohibits:
 - Mental harassment and physical punishment.
 - Screening procedures for the admission of children.
 - Capitation fees.
 - Private tuition by the teachers.
 - Running schools with no recognition.
- The Act envisages that the curriculum should be developed in coherence with the values enshrined in the Constitution and that which would take care of the all-round development of the child. The curriculum should be child-centric, on his/her potentiality and talents, help make the child free of trauma, fear and anxiety via a child-centric and child-friendly.

Significance of RTE

With the passing of the Right to Education Act, India has moved to a rights-based approach towards education for all. This Act casts a legal obligation on the state and central governments to execute the fundamental right to education (Article 21 A of the Constitution).

- The Act lays down specific standards for the student-teacher ratio, which is a very important factor for the quality of education.
- It also talks about providing separate toilet facilities for girls and boys, having adequate drinking water, etc.

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- conditions, drinking water facilities, etc.
- The stress on avoiding the urban-rural imbalance in teachers' posting is important as there are large gaps in the numbers regarding education in the villages compared to the urban areas in the country.
 - The Act provides for zero tolerance against the harassment and discrimination of children. The procedures for admission ensures that there would be no discrimination of children on the basis of caste, gender, etc.
 - **The Act also mandates that no kid is detained until class 8.** It introduced the Continuous and Comprehensive Evaluation (CCE) system in 2009 to have grade-appropriate learning outcomes in schools.
 - The Act also provides for the formation of a School Management Committee (SMC) in every school to ensure participatory democracy and governance in all elementary schools. These committees have to monitor the school's functioning and prepare developmental plans for it.
 - The Act is justiciable and has a Grievance Redressal mechanism which permits people to file a writ if the provisions of the Act are not complied with.

The RTE Act mandates for all private schools to reserve 25 per cent of their seats for disadvantaged and economically backward sections. This move is intended to boost social inclusion and create a more just and equal country.

- This provision is included in Section 12(1)(c) of the RTE Act. All schools (private, unaided, etc.) must reserve 25% of their seats at the entry-level for students from the Economically Weaker Sections and disadvantaged groups.
- When the rough version of the Act was drafted in 2005, there was a lot of outcry in the country over the percentage of seats being reserved for the underprivileged. However, the framers of the Act were able to justify the 25% reservation in private schools.
- This provision is a far-reaching move and perhaps the most important step in so far as social justice is concerned.
- This provision seeks to achieve social integration.
- The loss incurred by the schools as a result of this would be reimbursed by the central government.
- The Act has increased enrolment in the upper primary level (Class 6-8) between 2009 and 2016 by 10%.
- In rural areas, in 2016, only 3.3% of children in the 6 – 14 years bracket were out of school.

Criticism of RTE Act

Even though the RTE Act is a step in the right direction towards the achievement of making education for all in India, it has met with several criticisms. Some of the criticisms are given below:

- The Act was drafted hastily without much thought or consultation being given to the quality of education.
- Children below 6 years are not covered under the Act.
- Many of the schemes under the Act have been compared to the previous schemes on education like Sarva Shiksha Abhiyan, and have been plagued with corruption charges and inefficiency.
- At the time of admissions, many documents such as birth certificate, BPL certificate, etc. are required, which have left out orphans from being beneficiaries of the Act.
- There have been implementational hurdles in the 25% reservation of seats for EWS and others in private schools.

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the challenges in this regard are discriminatory behaviour towards parents and difficulties experienced with a different socio-cultural milieu.

- Regarding the 'no detention' policy till class 8, an amendment to the Act in 2019, introduced classes 5 and 8.
 - In case a student fails in the annual exam, he/she is given extra training and made to appear for the exam. If the exam is not passed, the student can be detained in the class.
 - This amendment was made after many states complained that without regular exams, the quality of education could not be evaluated effectively.
 - The states which were against this amendment were six states with higher learning outcomes: Andhra Pradesh, Goa, Telangana and Maharashtra.
- It has been found that many states find it difficult to move to the CCE system of assessment. This is due to teachers' training and orientation.
- Another criticism levelled against the Act is that instead of increasing the standards and outcomes of the education system in India, it passes the buck to private schools to some extent.

Making the right to education a fundamental right took more than 6 decades after independence. Now all stakeholders should focus on the quality of education, and gradually move towards having a single platform across the country for all sections of society in order to foster equality, inclusion, and unity.

Conclusion:

- The parliamentary panel has recommended that core schemes like the Samagra Shiksha Scheme get **additional funds at the revised estimates stage**.
- The panel has recommended that the **HRD Ministry collaborate with the Ministry of New and Renewable Energy** to provide solar and other energy sources so that schools have access to power.

Source: TH

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SC/ST Education-Social Inclusion

GS-I | 10 March, 2020

'Fall in percentage of school education funds for SC, STs'

Part of: GS Prelims and GS-I- Social Issue

What's in News?

After several years of rising trends, the Centre has reduced the percentage allocation of funds for education of schoolchildren from SC and ST communities as well as for the north-eastern region in the coming year.

- In its report on the demand for grants submitted to the [Rajya Sabha](#), the Parliamentary Standing Committee on Human Resource Development expressed its concern at these declines and urged higher allocations.
- A parliamentary panel expressed concern that any shortage of funds for these marginalised communities could be critical, especially given that more than one in five SC and ST students drop out of school at the secondary level.
- For at least three years, the amounts allocated to improve education for Dalits, Adivasis and those from the north-east have been on the rise in comparison to total allocations for the department. However, the percentage allotted to these communities dipped in 2020-21, although actual amounts still increased slightly.

Concerns:

- A major concern is about the high rates of dropout among SC and ST communities.
 - The annual average dropout rate of SC students at the secondary school level is at 21.8%, according to the latest survey data from the Unified District Information System for Education (UDISE) 2017-18.
 - For ST students, it was 22.3%.

Scheme for SC/ST in education.

NGOs Scheme

Scheme of Grant in Aid to Voluntary Organisations working for Scheduled Castes

Scholarships

Pre-Matric Scholarship to the SC Students studying in classes IX & X

Pre-Matric Scholarships to the Children of those Engaged in occupations involving cleaning and prone to health hazards

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Post-Matric Scholarship for SC students

Uppgradation of Merit Of SC Students

Central Sector Scholarship of Top Class Education for SC Students

National Overseas scholarship

National Fellowship for Scheduled Caste Students

Hostels

BABU JAGJIVAN RAM CHHATRAWAS YOJANA

Free Coaching

Free Coaching Scheme for SC and OBC Students

Schemes for Economic Development

Credit Enhancement Guarantee Scheme for the Scheduled Castes (SCs)

National Safai Karamcharis Finance and Development Corporation (NSKFDC)

National Scheduled Castes Finance and Development Corporation (NSFDC)

Special Central Assistance to Scheduled Caste Sub Plan (SCA to SCSP)

Scheme of Assistance to Scheduled Castes Development Corporations (SCDCs)

Self Employment Scheme for Rehabilitation of Manual Scavengers (SRMS)

Venture Capital Fund For Scheduled Castes

Schemes for Social Empowerment

Centrally Sponsored Scheme for implementation of the Protection of Civil Rights Act, 1955 and the Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act, 1989

Pradhan Mantri Adarsh Gram Yojana (PMAGY)

SCHOLARSHIP SCHEMES FOR SC/ST STUDENTS

The Finance Minister in his budget speech on the Union Budget 2005-06 made the following announcements –

"The key to empowering the scheduled castes and scheduled tribes is to provide top class education opportunities to meritorious students. The three on-going scholarship schemes for

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SC/ST students under the Central Plan – pre-Matric, post-Matric and merit-based – will continue.

To provide an added incentive, I propose a new window: a short list of institutes of excellence will be notified, and any SC/ST student who secures admission in one of those institutes will be awarded a larger scholarship that will meet the requirements for tuition fees, living expenses, books and a computer."

The Scheme was approved in 2007 and was subsequently revised in January, 2012 and June 2016.

2. Objectives and Coverage

2.1 The Scheme aims at recognizing and promoting quality education amongst students belonging to SCs, by providing full financial support. The scheme will cover SC students for pursuing studies beyond 12th class.

2.2 The scheme will operate in all institutions notified by the Ministry of Social Justice and Empowerment.

2.3 The SC students, who secure admission in the notified institutions, will be awarded scholarship to meet the requirements for (i) full tuition fee and non-refundable charges (there will be a ceiling of Rs. 2.00 lakhs per annum per student for private sector institutions and Rs.3.72 lakhs per annum per student for the private sector flying clubs for Commercial Pilot Training and Type Rating Courses), (ii) living expenses to the beneficiary @ Rs. 2220/- per month per student. However, the advance payment of living expenses, to be paid directly by the Central Government, through Direct Benefits Transfer mode would be restricted to 1 quarter only. (iii) books and stationery @ Rs. 3000/- per annum per student and (iv) a latest computer with accessories like UPS, Printer, Multi-media limited to Rs. 45000/- per student as one time assistance during the course. The Institute will procure computers and supply to the awardees. Alternatively, the Institute may also consider re-imbursement of expenses made by a student on Purchase of the computer. Limited Rs. 45,000/- provided, the computer and accessories are procured from a reputed manufacturer/supplier.

2.4 The scholarship, once awarded, will continue till the completion of the course, subject to satisfactory performance.

3. Eligibility

3.1 Those SC students who have secured admission in the notified institutions according to the norms prescribed by the respective institutions will be eligible for the scholarship under the scheme to the extent of the number of scholarships allocated to the institutes concerned. In case the number of students admitted exceeds the number of awards, then the scholarship will be restricted to the top ones in the inter-se merit list. The remaining students from SC

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category admitted in the institute in different courses shall be eligible for the Post-Matric Scholarship (PMS) administered by this Ministry as a centrally sponsored scheme, provided such students are otherwise eligible for the said scheme. In case, the institute finds that the number of eligible candidates in the 1st year are less than the number of scholarships allotted to it, the balance scholarships may be offered to students studying in 2nd, 3rd and 4th year, etc. on the basis of inter-se merit of previous year's result giving priority to those with higher number of Years left to complete their respective course i.e. 1st Year students is to get priority over the 2nd year students and so on.

3.2 Thirty percent (30%) of slots allotted to the Institute shall be reserved for eligible SC girl students as per their inter-se merit. In absence of sufficient number of girl students, the slots may be transferred to eligible boy students as per their merit.

3.3 However, the 30% slots as mentioned above will not include those girl students who are selected on the basis of their performance in the overall merit list of SC students of the Institute.

3.4 The ceiling of total annual family income from all sources under the Scheme is Rs. 6.00 lakh and the general selection criteria among the eligible candidates of any institution must be the merit. However, if for the last available slot in an institution, there is more than one student with equal marks; preference may be given to the student with the lowest parental income.

3.5 The benefit of the Scheme will not be provided to more than 2 siblings in a family. The students will submit an affidavit to this effect in the Institute to certify that he/she is not the 3rd sibling of the family who is availing the benefit under the Scheme.

3.6 The ceiling of total annual family income from all sources under the Scheme is Rs. 6.00 lakh and the general selection criteria among the eligible candidates of any institution must be the merit. However, if for the last available slot in an institution, there is more than one student with equal marks; preference may be given to the student with the lowest parental income.

3.7 The scholarship will become payable immediately after a student has secured admission and has started attending the classes.

3.8 The scholarship will be terminated if the student fails to pass the final examination of each year or any terminal examination or semester examination prescribed. He will, however, remain eligible for the Post-Matric Scholarship.

Way forward:

- "The Committee urges the Department to undertake a study of the social-cultural-financial reasons for the dropout of SC, ST and girls at all levels and with particular emphasis on dropout at secondary level and evolve strategies to remove the cause for the high dropout

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rates," said the report.

The Department may also look into the feasibility of bringing back the students who drop out at secondary level and simultaneously providing them vocational training so that these students can look for job opportunities at the earliest possible and also continue their studies.

Source: TH/MoSJ

Afghanistan crisis and US - Taliban peace process

GS-II | 10 March, 2020

Afghanistan Crisis- US TALIBAN DEAL

Part of: GS Prelims and GS-II- IR

Historical Background

The **Saur Revolution** had taken place in Afghanistan in **1978** which installed a communist party in power. **Nur Muhammad Taraki** became the head of the state replacing the previous president Daoud Khan. Taraki's government introduced many modernisation reforms that were considered too radical and left them unpopular, especially in the rural areas and with the traditional power structures. The communist government also had a policy of brutally suppressing all opposition. Even unarmed civilians opposing the government were not spared. This led to the rise of various anti-government armed groups in the country. The government itself was divided and Taraki was killed by a rival, Hafizullah Amin, who became the president. The Soviet Union, which at that time, wanted a communist ally in the country, decided to intervene.

Soviet army was deployed on 24th December 1979 in Kabul. They staged a coup and killed Amin, installing Babrak Karmal as the president. Karmal was a Soviet ally. This intervention was seen as an invasion by the USA and other western nations. While the Soviet army had control of the cities and towns, the insurgency groups called the Mujahideen had the rural parts of Afghanistan under their control. A bitter war was fought between both groups. The Soviet Union, which had planned to stay for 6 months to a year in Afghanistan found themselves stuck in a war that was proving to be too costly.

The Mujahideen did not relent in their pursuit to 'drive out' the Soviets. They had the support of many countries like the USA, Pakistan, China, Iran, Egypt and Saudi Arabia. They were given assistance like arms and training needed to fight the Soviets. The Soviets followed a policy of

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wiping out the rural regions in order to defeat the Mujahideen. Millions of land mines were planted and important irrigation systems were destroyed. As a result, millions of Afghan refugees took refuge in Pakistan and Iran. Some came to India as well. It is estimated that in the Soviet-Afghan war, about 20 lakh Afghan civilians were killed.

In 1987, after the reformist **Mikhail Gorbachev** came to power in the Soviet Union, he announced that his government would start withdrawing troops. The **final soviet troops were withdrawn on 15 February 1989**. Now, the government of Afghanistan was left alone to fight the Mujahideen. Finally, they succeeded in taking control of Kabul in 1992. Again, the Mujahideen had different factions within and they could not agree on power sharing. The country collapsed into a bloody civil war.

The Taliban

In 1994, a group of fundamentalist students, wrought control of the city of Kandahar and started a campaign to seize power in the country. They were called the Taliban. Many of them were trained in Pakistan when they were in refugee camps. By 1998, almost entire Afghanistan was under the control of the Taliban. Many of the Mujahideen warlords fled to the north of the country and joined the Northern Alliance who were fighting the Taliban. This time, Russia lent support to the Northern Alliance, though they were fighting against them earlier. The Taliban ruled the country under strict interpretation of the Sharia law and many of the progress with regard to women and education which the country had seen earlier, were reversed. Girls were forbidden from attending schools and women banned from working. The Taliban-ruled country also became a safe haven for international terrorists. Only Pakistan, the UAE and Saudi Arabia recognised the Taliban government.

In 2001, a US-led coalition defeated the Taliban and established another government in place. However, Afghanistan still sees resistance from the Taliban in certain pockets.

US fighting a war in Afghanistan and why has it lasted so long?

1. On 11 September 2001, attacks in America killed nearly 3,000 people. Osama Bin Laden, the head of Islamist terror group al-Qaeda, was quickly identified as the man responsible.
2. The Taliban, radical Islamists who ran Afghanistan and protected Bin Laden, refused to hand him over. So, a month after 9/11, the US launched air strikes against Afghanistan.
3. As other countries joined the war (ISAF), the Taliban were quickly removed from power. But they didn't just disappear - their influence grew back and they dug in.
4. Since then, the US and its allies have struggled to stop Afghanistan's government collapsing, and to end deadly attacks by the Taliban.
5. The mission, he said, was "to disrupt the use of Afghanistan as a terrorist base of operations and to attack the military capability of the Taliban regime".
6. The first targets were military sites belonging to the hardline Taliban group who ruled the country. Training camps for al-Qaeda, the terror group run by 9/11 plotter Osama Bin Laden, were also hit.

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7. But 18 years on, it's hard to argue the US mission has been fulfilled - the Taliban may play a part in ruling Afghanistan again if peace talks do eventually succeed.

The Taliban first took control of the capital Kabul in 1996, and ruled most of the country within two years. They followed a radical form of Islam and enforced punishments like public executions. Within two months of the US and its international and Afghan allies launching their attacks, the Taliban regime collapsed and its fighters melted away into Pakistan.

A new US-backed government took over in 2004, but the Taliban still had a lot of support in areas around the Pakistani border, and made hundreds of millions of dollars a year from the drug trade, mining and taxes. As the Taliban carried out more and more suicide attacks, international forces working with Afghan troops struggled to counter the threat the re-energised group posed.

In 2014, at the end of what was the bloodiest year in Afghanistan since 2001, Nato's international forces - wary of staying in Afghanistan indefinitely - ended their combat mission, leaving it to the Afghan army to fight the Taliban. But that gave the Taliban momentum, as they seized territory and detonated bombs against government and civilian targets. In 2018, Taliban was openly active across 70% of Afghanistan.

Where did the Taliban come from?

- Afghanistan had been in a state of almost constant war for 20 years even before the US invaded.
- In **1979**, a year after a coup, the Soviet army invaded Afghanistan to support its communist government. It fought a resistance movement - known as the mujahideen - that was supported by the US, Pakistan, China and Saudi Arabia, among other countries.
- In **1989**, Soviet troops withdrew but the civil war continued. In the chaos that followed, the Taliban (which means "students" in the Pashto language) sprang up.
- They first rose to prominence in the border area of northern Pakistan and south-west Afghanistan in **1994**. They promised to fight corruption and improve security and, at that time, many Afghans were tired of the excesses and infighting of the mujahideen during the civil war.
- It's thought the Taliban first appeared in religious schools, mostly funded by Saudi Arabia, which preached a hardline form of Islam.
- They enforced their own austere version of Sharia, or Islamic law, and introduced brutal punishments. Men were made to grow beards and women had to wear the all-covering burka.
- The Taliban banned television, music and cinema and disapproved of girls' education.
- And because the Taliban gave shelter to militants from the al-Qaeda group, it made them an immediate target for an attack by US, Afghan and international forces in the wake of 9/11.

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Why has the war lasted so long?

- There are many reasons for this. But they include a combination of fierce Taliban resistance, the limitations of Afghan forces and governance, and other countries' reluctance to keep their troops for longer in Afghanistan.
- At times over the past 18 years, the Taliban have been on the back foot. In late 2009, US President Barack Obama announced a troop "surge" that saw the number of American soldiers in Afghanistan top 100,000.
- The surge helped drive the Taliban out of parts of southern Afghanistan, but it was never destined to last for years.
- As a result, the Taliban were able to regroup. When international forces withdrew from fighting, Afghan forces left to lead the charge were easily overwhelmed. To make matters worse, Afghanistan's government, that is full of tribal division, is often hamstrung.

5 Main reasons why war is still going on:

- a lack of political clarity since the invasion began, and questions about the effectiveness of the US strategy over the past 18 years;
- the fact each side is trying to break what has become a stalemate - and that the Taliban have been trying to maximise their leverage during peace negotiations
- an increase in violence by Islamic State militants in Afghanistan - they've been behind some of the bloodiest attacks recently
- There's also the role played by Afghanistan's neighbour, Pakistan.
- There's no question the Taliban have their roots in Pakistan, and that they were able to regroup there during the US invasion. But Pakistan has denied helping or protecting them - even as the US demanded it do more to fight militants.

How have the Taliban managed to stay so strong?

The group could be making as much as \$1.5bn (£1.2bn) a year, a huge increase even within the past decade. Some of this is through drugs - Afghanistan is the world's largest opium producer, and most opium poppies - used for heroin - are grown in Taliban-held areas.

But the Taliban also make money by taxing people who travel through their territory, and through businesses like telecommunications, electricity and minerals.

Foreign countries, including Pakistan and Iran, have denied funding them, but private citizens from the region are thought to have done so.

The figures for Afghan civilians are more difficult to quantify. A UN report in February 2019 said more than **32,000** civilians had died. The Watson Institute at Brown University says **42,000** opposition fighters have died. The same institute says conflicts in Iraq, Syria,

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Afghanistan and Pakistan have cost the US **\$5.9 trillion** since 2001. The US is still conducting air strikes against the Taliban, instigated by the third president to oversee the war, Donald Trump. But he is keen to reduce troop numbers before he faces another election in November 2020. The Taliban now control much more territory than they did when international troops left Afghanistan in 2014. Many in Washington and elsewhere fear that a full US troop pull-out would leave a vacuum that could be filled by militant groups seeking to plot attacks in the West. The Afghan people, meanwhile, continue to bear the brunt of the long and bloody conflict.

What do the Taliban and the United States want?

The negotiations appear to be focused on four elements:

- **Withdrawal of Foreign Forces:** Both sides agree on the full withdrawal of the fourteen thousand U.S. troops currently in Afghanistan, as well as of additional foreign forces, but they disagree on the timeline. The United States is reportedly offering a two-and-a-half-year deadline, while the Taliban insists on nine months.
- **Counterterrorism Assurances:** The Taliban has agreed to prevent Afghanistan from being used by terrorist groups, but negotiators disagree over how to define the terms "terrorism" and "terrorist."
- **Intra-Afghan Dialogue:** Washington has urged Afghan government and Taliban leaders to begin official talks on how Afghanistan will be governed after the war, but the Taliban refuses to negotiate with the government until after it has reached a deal with the United States.
- **Comprehensive Cease-fire:** U.S. negotiators seek a permanent cease-fire among U.S., Taliban, and Afghan government forces prior to a peace deal, but the Taliban insists on putting off a cease-fire until U.S. troops have withdrawn.

Reasons for India to be part of reconciliation process with the Taliban:

- **Regional Stability:** Security and Stability are foundations over which development can be built on. Peaceful neighbourhood and trouble free regional climate will provide space for the regimes to focus more on development as threats of violence by Taliban's in the region will be minimized.
- **Counter China and Pakistan's vested interests:** India should play a considerable role through Quadrilateral group plus 2 talks to thwart the efforts of china to place puppet regimes which can play according to their own vested interests. This can be counterproductive for India's aspirations and concerns.
- **Connectivity with Central Asia:** India's trade with Central Asia and reaping benefits from the enhanced connectivity will be largely dependent on Afghanistan's domestic environment. A peaceful and cooperative Afghanistan will be a key pin in India's central Asia policy. The latest trilateral transit agreement between India, Iran and Afghanistan is a significant step in this direction.

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- **TAPI for Energy security:** Violence free Afghanistan is desideratum for finishing the project of TAPI and sustaining the benefits from it through energy supplies from Turkmenistan.
- **Gateway to "Link west" policy:** Afghanistan will act as a gateway to India's increasing rigour on its west Asia policy.
- **Minerals of Afghanistan:** The cost of access to minerals will be minimum and helpful in expanding the production of Indian Industries.

US- Taliban Deal

Recently, the U.S. **signed a deal (at Qatar's capital-Doha) with the Taliban** that could pave the way towards a **full withdrawal of foreign soldiers** from Afghanistan over the next 14 months and **represent a step towards ending the 18-year-war in Afghanistan**. Along with this, a **separate joint declaration** was also signed between the Afghan government and the US at Kabul.

The peace deal is expected to kick-off two processes- **a phased withdrawal of US troops and an 'intra-Afghan' dialogue**. The deal is a **fundamental step to deliver a comprehensive and permanent ceasefire and the future political roadmap for Afghanistan peace process and the Central region**.

Background of the Deal

- **On 11 September 2001**, terrorist attacks in America killed nearly 3,000 people. **Osama Bin Laden**, the head of Islamist terror group al-Qaeda, was quickly identified as the man responsible.
- **The Taliban**, radical Islamists who ran Afghanistan at that time, protected Bin Laden, refused to hand him over. So, a month after 9/11, the US launched airstrikes against Afghanistan.
- The US was joined by an **international coalition** and the Taliban were quickly removed from power. However, they turned into an insurgent force and continued deadly attacks, destabilising subsequent Afghan governments.
- **Since then, the US is fighting a war against the Taliban.**
- **Donald Trump's 2017 policy on Afghanistan**, was based on breaking the military stalemate in Afghanistan by authorising an additional 5,000 soldiers, giving US forces a freer hand to go after the Taliban, putting Pakistan on notice, and strengthening Afghan capabilities.
- However, **the US realised that the Taliban insurgency could not be defeated as long as it enjoyed safe havens and secure sanctuaries in Pakistan**, the US changed track and sought Pakistan's help to get the Taliban to the negotiating table.
- **The negotiations began in September 2018** with the appointment of Ambassador Zalmay Khalilzad to initiate direct talks with the Taliban. After nine rounds of US-Taliban talks in Qatar, the two sides seemed close to an agreement.

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Salient Features of the Deal

- **Troops Withdrawal:** The US will draw down to **8,600 troops in 135 days** and the NATO or coalition troop numbers will also be brought down, proportionately and simultaneously. And all troops will be out within 14 months.
- **Taliban Commitment:** The main counter-terrorism commitment by the Taliban is that Taliban will not allow any of its members, other individuals or groups, including al-Qaeda, to use the soil of Afghanistan to threaten the **security of the United States and its allies**.
- **Sanctions Removal:** UN sanctions on Taliban leaders to be removed by three months and US sanctions by August 27. The sanctions will be out before much progress is expected in the intra-Afghan dialogue.
- **Prisoner Release:** The US-Taliban pact says up to 5,000 imprisoned Taliban and up to 1,000 prisoners from "the other side" held by Taliban "will be released" by March 10.

Challenges in the Deal

- **One-Sided Deal:** The fundamental issue with the U.S.'s Taliban engagement is that it **deliberately excluded the Afghan government** because the Taliban do not see the government as legitimate rulers. Also, there is **no reference** to the Constitution, rule of law, democracy and elections in the deal.
 - Taliban is **known for strict religious laws**, banishing women from public life, shutting down schools and unleashing systemic discrimination on religious and ethnic minorities, has not made any promises on whether it would respect civil liberties or accept the Afghan Constitution.
 - Therefore, **Shariat-based system** (political system based on fundamental Islamic values) with the existing constitution is not easy.
- **Issues with Intra-Afghan Dialogue:**
 - President Ashraf Ghani faces a **political crisis following claims of fraud** in his recent re-election.
 - The political tussle is between **Ashraf Ghani** (who belongs to the largest ethnic group in Afghanistan- the Pashtun) and **Abdullah Abdullah** (whose base is among his fellow Tajiks, the second largest group in Afghanistan).
 - If there are any concessions made by Mr Ghani's government to the **Taliban (predominantly Pashtun)** will likely be interpreted by Mr Abdullah's supporters as **an intra-Pashtun deal** reached at the cost of other ethnic groups, especially the Tajiks and the Uzbeks.
 - Consequently, **these ethnic fissures may descend into open conflict and can start the next round of civil war.**
- Thus, the lifting of the US military footprint and the return of a unilateral Taliban could set the stage for the **next round of civil war** that has hobbled the nation since the late 1970s.
- **Problem with Prisoner's Swap:** The US-Taliban agreement and the joint declaration differ:

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- The US-Taliban pact says up to 5,000 imprisoned Taliban and up to 1,000 prisoners from "the other side" held by Taliban "will be released" by March 10.
- However, the joint declaration **lays down no numbers or deadlines for the prisoner's swap**. Afghanistan President held that there is no commitment to releasing 5,000 prisoners. He also held that such prisoners' swap is not in the authority of the US, but in the authority of the Afghan government.
- Also, the Taliban is fragmented or divided internally. It is composed of various regional and tribal groups **acting semi-autonomously**.
 - Therefore, it is possible that some of them may continue to engage in assaults on government troops and even American forces during the withdrawal process.
 - It is unclear if there is a date for the complete withdrawal of US troops or for concluding the intra-Afghan dialogue, or how long the truce will hold.

Impact of the Deal on Other Stakeholders

- **US:** The promise to **end America's "endless wars"** in the greater Middle East region was one of the central themes of US President Donald Trump's election campaign in 2016. This deal may demonstrate progress on that front in his **bid for re-election** later this year.
 - Though, the US doesn't recognise Taliban as a state under the name of Islamic Emirate of Afghanistan (key demand of Taliban), though many experts are of the view that this deal is a little more than a dressed-up U.S. surrender that will ultimately see the Taliban return to power.
- **Pakistan:** The deal provides the strategic advantage to Pakistan, who is a long-time **benefactor of the Taliban**.
- **China:** After the launch of the **China-Pakistan Economic Corridor (CPEC)**, Pakistan is seen as more of a **protectorate state of China**. Thus, China may leverage Pakistan's influence on the Taliban, to propel its strategic projects like the Belt and Road Initiative.

Impact of this Deal on India

This deal alters the **balance of power in favour of the Taliban**, which will have strategic, security and political implications for India. The deal may **jeopardise the key stakes of India in Afghanistan**:

- India has a major stake in the stability of Afghanistan. India has invested **considerable resources in Afghanistan's development**.
- India has a major stake in the continuation of the current **Afghanistan government** in power, which it considers a **strategic asset vis-à-vis Pakistan**.
 - An increased political and military role for the Taliban and the expansion of its territorial control should be of great concern to India since the Taliban is widely

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believed to be a protégé of Islamabad.

- As Afghanistan is the gateway to Central Asia, the deal might dampen India's interest in Central Asia.
- Withdrawal of US troops could result in the breeding of the fertile ground for various anti-India terrorist outfits like Lashkar-e-Taiba or Jaish-e-Mohammed.

Way Forward

An independent, sovereign, democratic, pluralistic and inclusive Afghanistan is crucial for peace and stability in the region. In order to ensure this:

- The Afghan peace process should be Afghan-led, **Afghan-owned and Afghan-controlled**.
- Also, there is a need for the global community to fight against the global concern of terrorism. In this context, it high time to adopt the Comprehensive Convention on International Terrorism (**proposed by India at UN in 1996**).

Though the deal is a good step, the road ahead would not be easy. Achieving lasting peace in Afghanistan will require patience and compromise among all parties.

Recent News: Afghanistan's two rival leaders have sworn themselves in as President at simultaneous ceremonies that were interrupted by at least two blasts.

Background:

Ashraf Ghani was declared the winner of a disputed presidential election in Afghanistan by the country's independent Election Commission.

Concerns:

- The bitter feud between President Ashraf Ghani and his former Chief Executive Abdullah Abdullah has raised fears for Afghanistan's fragile democracy as the U.S. prepares to leave the country following an agreement with a strong and largely unified Taliban.

Source: TH/ BBC

India and Afghanistan analysis

GS-II | 10 March, 2020

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India's role in Afghanistan

Part of: GS Prelims and GS-II- IR

Responding to President Donald Trump, the Indian government has stressed on the fact that developmental assistance can play a major role in transforming Afghanistan. US mocked at India for funding a "library" in Afghanistan, saying it is of no use in the war-torn country as he criticised India and others for not doing enough for the nation's security. US also asked India, Russia, Pakistan and other neighbouring countries to take responsibility for Afghanistan's security as he defended his push for the US to invest less overseas.

India most of the investments in Afghanistan were on mega infrastructure projects including the 218 km road from Zaranj to Delaram, the Salma Dam and the new Afghan Parliament building. India has also been supplying military equipment to Afghanistan besides providing training to hundreds of Afghan security personnel.

India and Afghanistan (PT and Mains)

- Post the Taliban era, engagement by India with Afghanistan focused on to ensure a strong commitment **for building peace and stability in Afghanistan.**
- **India's strategy in Afghanistan** is guided by the desire to prevent a government that would readily provide Pakistan with strategic depth and a safe haven for terror groups.
- India has opted to pursue a **'soft power' strategy to engage Afghanistan**, preferring to contribute substantially in the civilian sector rather than in defence and security.
- India is particularly active in the **construction, infrastructure, human capital building and mining sectors.** Besides, it has also identified the telecommunications, health, pharmaceuticals, and information technology and education sectors for cooperation.
- Within the framework of two bilateral agreements, **India has pledged over \$ 2 billion in aid to Afghanistan.** And, by the end of the year 2017 the investment has already crossed \$3 billion.
- **India has also agreed to build the 600-km-long Bamiyan – Herat rail link which will serve to connect the Hajigak mines to Herat and further to the Iranian port of Chabahar via the Delaram-Zaranj highway, which India had constructed in 2009.**
- This makes India the fifth largest investor in Afghanistan's stability and quest for economic and social development.
- **Some of the other important projects**
 - Supply of 250,000 tons of wheat.
 - Construction of the Parliament building (\$ 178 million).
 - Construction of the Pul-i-Khumri to Kabul power line (\$120 million).
 - Salma Dam power project (\$ 130 million).
 - Food assistance to primary school children, and construction and rehabilitation of schools (\$ 321 million).
 - Expansion of national television network with an uplink from Kabul and downlinks in all 34 provincial capitals.
 - Women's Vocational Training Center in Bagh-e-Zanana for training of Afghan women in garment making, nursery plantation, food processing and marketing.

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- Reconstruction of Indira Gandhi Institute for Child Health, Afghanistan's only hospital for children, in Kabul.
- 84 ongoing projects related to agriculture, education, health, vocational training and solar energy.

Heart of Asia Conference

The Heart of Asia-Istanbul Process (HoA) was founded on November 2nd, 2011 in Istanbul, Turkey to address the shared challenges and interests of Afghanistan and its neighbours and regional partners. It will also contribute to the stability and prosperity to Afghanistan's extended neighbourhood in South Asia, Central Asia and West Asia. The Heart of Asia-Istanbul Process was launched in 2011 and the participating countries include Pakistan, Afghanistan, Azerbaijan, China, India, Iran, Kazakhstan, Kyrgyzstan, Russia, Saudi Arabia, Tajikistan, Turkey, Turkmenistan and the United Arab Emirates. **Three pillars of this conference process are:**

- Political Consultations: Political consultation involving Afghanistan and its near and extended neighbours
- Confidence Building Measures (CBMs): Areas for CBMs identified in the Istanbul Process document are Disaster management, Counter-terrorism, Counter-narcotics, Trade, Commerce and Investment, Regional infrastructure, and Education.
- Cooperation with Regional Organizations

Key Highlights of the Sixth Conference

a) Menace of terrorism dominated the Amritsar meet

- Amritsar Declaration named the terrorist organisations that are jeopardising the security situation in Afghanistan: – This was a big blow to Pakistan as almost all the terrorist organisations which are named in the declaration are based in Pakistan. – The declaration mentions two groups targeting India, Lashkar-e-Taiba and the Jaish-e-Mohammad, in addition to the Haqqani network, among the organisations causing a "high level of violence" in Afghanistan and the region.

b) A regional approach to eliminate terrorism is suggested:

- It included dismantling of terrorist sanctuaries and safe havens in the Heart of Asia region, as well as disrupting all financial, tactical and logistical support for terrorism.
- It also includes tapping the capacities of political and religious leaders, civil society, mass media and social networks in the fight against terror.

c) The declaration asks for early finalization of the Comprehensive Convention on International Terrorism with consensus.

d) For the first time, a Heart of Asia declaration has expressed concern at the violence caused in Afghanistan and the region by groups like al-Qaeda and Daesh, Lashkar-e-Taiba, Jaish-e-Mohammad etc.

e) The declaration has spoken of the dangers emanating from the increase in production and cultivation of opium in Afghanistan, the volume of drug trafficking and demand in the HoA Region and beyond.

f) Afghanistan rejected Pakistan's offer of \$500 million for reconstruction of Afghanistan, and advised it to use the money to counter terrorist activities emanating from Pakistan.

Afghan Peace Process

Stakeholders

There are a number of indigenous players with regard to Afghan peace process

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- **The Taliban group** – against whom the military action was taken post 9/11. The Taliban has at least four main branches whose relations range from **pragmatic cooperation to active hostility**.
- **They are organized around decision-making bodies called "shuras,"** these branches oversee various commissions and operate across Afghanistan – often in competition with one another and sometimes even within themselves.
- **Recently, they have engaged with countries like Russia and the US regarding peace process and withdrawal of troops from its soil.**
- The Taliban does not recognize the present day Afghan government as legitimate government as they believe that it does not represent the will of the people.
- **The Afghan Government** – they are the legitimate government recognized by the UN along with other countries.
- President Ashraf Ghani **re-launched the Kabul Process in June 2017**. The principal purpose of the process is to ensure an **Afghan-led and Afghan-owned, inclusive peace process** where the people are fully in the driver's seat to address the multiple dimensions of ongoing war and violence in Afghanistan.
- **The Haqqani Network** – the Haqqani network is the most ruthless, disciplined and organized subgroup within the Taliban. The Haqqani network is also a major impediment to the prospects of negotiations with Kabul. The network's leader favors a solely military solution to the conflict. The main base of its operation is in Pakistan.

External Stakeholders

- **The US led NATO forces** – the US and the allied countries have actively engaged with all the parties in the peace process including the political faction of the Taliban group.
- The US government has become wary of the long drawn war (which resulted \$900billion dollars in the past 17 years) and one of the most important agendas of the Trump administration is safe return of the American soldiers.
- **Regional powers** – countries like Qatar and Russia have actively engaged with all the stakeholders of the peace process, including the Taliban. The headquarters of the Taliban is located in Doha from where they engage with the rest of the world.
- **Russia a key stakeholder in the process** – Russia has hosted talks with Taliban delegates and members of Afghanistan high peace council, as the Kremlin seeks a role as peace broker between Islamist rebels and the US-backed government in Kabul.
- **Pakistan's destabilizing role in Afghanistan** – Pakistan sees Afghanistan as potentially providing strategic depth against India.
- Pakistan may also view a weak and destabilised Afghanistan as preferable to a strong, unified Afghan state (particularly one led by a Pashtun-dominated government in Kabul.)

India's Engagement with the Peace Process

- **India an important player in the peace process** – it has been acknowledged by all

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including the US and very recently by Pakistan that India is a key player in the peace process.

- The External Affairs Ministers have reiterated that in India supports all efforts for peace and reconciliation in Afghanistan which are inclusive and **Afghan-led, Afghan-owned and Afghan-controlled**.
- **India had strictly refused to put boots on the ground previously and would maintain the status quo.** Instead India has invested heavily in training security forces and supplying with necessary equipment.
- The key concern and challenge is the protection of the investment that India has made in Afghanistan.

Source: RS tv

Quantum Supremacy

GS-III | 10 March, 2020

Quantum Supremacy

Part of: GS Prelims and GS-III- S&T

Recently, **Google's quantum computer**, named **Sycamore**, claimed "**quantum supremacy**", as it reportedly did the task in 200 seconds that would have apparently taken a supercomputer 10,000 years to complete.

What is "quantum supremacy"?

- The phrase "quantum supremacy" was coined in **2012** by **John Preskill**.
- Quantum supremacy refers to a **quantum computer solving a problem that cannot be expected of a classical computer in a normal lifetime**.

Quantum Computing vs Traditional Computing

- Traditional computers work on the **basis of the laws of classical physics**, specifically by **utilizing the flow of electricity**. A quantum computer, on the other hand, seeks to **exploit the laws that govern the behavior of atoms and subatomic particles**.
- Conventional computers process information in '**bits**' or **1s and 0s**, following classical physics under which our computers **can process a '1' or a '0' at a time**.
- Quantum computers compute in '**qubits**' (or **quantum bits**). They exploit the properties of

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quantum mechanics, the science that governs how matter behaves on the atomic scale.

- In this scheme of things, processors **can be a 1 and a 0 simultaneously**, a state called **quantum superposition**.
- Because of quantum superposition, a quantum computer — if it works to plan — can **mimic several classical computers working in parallel**.
- **World's most powerful supercomputers** today can **juggle 148,000 trillion operations in a second** and requires about **9000 IBM CPUs** connected in a particular **combination** to achieve this feat.
- **At that tiny scale**, many **laws of classical physics cease to apply**, and the **unique laws of quantum physics come into play**.
- Unlike classical physics, in which an object can exist in one place at one time, quantum physics looks at the probabilities of an object being at different points. Existence in multiple states is called **superposition**, and the relationships among these states is called **entanglement**.
- The **higher the number of qubits**, the **higher the amount of information stored** in them. Compared to the information stored in the same number of bits, the information in qubits rises exponentially. That is what makes a quantum computer so powerful.
- **Building reliable quantum hardware is challenging** because of the **difficulty of controlling quantum systems** accurately.

What is quantum computing?

Let's start with the basics.

An ordinary computer chip uses bits. These are like tiny switches, that can either be in the off position – represented by a zero – or in the on position – represented by a one. Every app you use, website you visit and photograph you take is ultimately made up of millions of these bits in some combination of ones and zeroes.

This works great for most things, but it doesn't reflect the way the universe actually works. In nature, things aren't just on or off. They're uncertain. And even our best supercomputers aren't very good at dealing with uncertainty. That's a problem.

That's because, over the last century, physicists have discovered when you go down to a really small scale, weird things start to happen. They've developed a whole new field of science to try and explain them. It's called quantum mechanics.

Quantum mechanics is the foundation of physics, which underlies chemistry, which is the foundation of biology. So for scientists to accurately simulate any of those things, they need a better way of making calculations that can handle uncertainty. Enter, quantum computers.

How do quantum computers work?

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Instead of bits, quantum computers use qubits. Rather than just being on or off, qubits can also be in what's called 'superposition' – where they're both on and off at the same time, or somewhere on a spectrum between the two.

Take a coin. If you flip it, it can either be heads or tails. But if you spin it – it's got a chance of landing on heads, and a chance of landing on tails. Until you measure it, by stopping the coin, it can be either. Superposition is like a spinning coin, and it's one of the things that makes quantum computers so powerful. A qubit allows for uncertainty.

If you ask a normal computer to figure its way out of a maze, it will try every single branch in turn, ruling them all out individually until it finds the right one. A quantum computer can go down every path of the maze at once. It can hold uncertainty in its head.

It's a bit like keeping a finger in the pages of a choose your own adventure book. If your character dies, you can immediately choose a different path, instead of having to return to the start of the book.

The other thing that qubits can do is called entanglement. Normally, if you flip two coins, the result of one coin toss has no bearing on the result of the other one. They're independent. In entanglement, two particles are linked together, even if they're physically separate. If one comes up heads, the other one will also be heads.

It sounds like magic, and physicists still don't fully understand how or why it works. But in the realm of quantum computing, it means that you can move information around, even if it contains uncertainty. You can take that spinning coin and use it to perform complex calculations. And if you can string together multiple qubits, you can tackle problems that would take our best computers millions of years to solve.

What can quantum computers do?

Quantum computers aren't just about doing things faster or more efficiently. They'll let us do things that we couldn't even have dreamed of without them. Things that even the best supercomputer just isn't capable of.

They have the potential to rapidly accelerate the development of artificial intelligence. Google is already using them to improve the software of self-driving cars. They'll also be vital for modelling chemical reactions.

Right now, supercomputers can only analyse the most basic molecules. But quantum computers operate using the same quantum properties as the molecules they're trying to simulate. They should have no problem handling even the most complicated reactions.

That could mean more efficient products – from new materials for batteries in electric cars, through to better and cheaper drugs, or vastly improved solar panels. Scientists hope that quantum simulations could even help find a cure for Alzheimer's.

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Quantum computers will find a use anywhere where there's a large, uncertain complicated system that needs to be simulated. That could be anything from predicting the financial markets, to improving weather forecasts, to modelling the behaviour of individual electrons: using quantum computing to understand quantum physics.

Cryptography will be another key application. Right now, a lot of encryption systems rely on the difficulty of breaking down large numbers into prime numbers. This is called factoring, and for classical computers, it's slow, expensive and impractical. But quantum computers can do it easily. And that could put our data at risk.

There are rumours that intelligence agencies across the world are already stockpiling vast amounts of encrypted data in the hope that they'll soon have access to a quantum computer that can crack it.

The only way to fight back is with quantum encryption. This relies on the uncertainty principle – the idea that you can't measure something without influencing the result. Quantum encryption keys could not be copied or hacked. They would be completely unbreakable.

How will it help us?

- The **speed and capability of classical supercomputers are limited by energy requirements**. Along with these they also **need more physical space**.
- It can have a major impact through quantum chemistry, which could be important in **agriculture and human health**.
- It could help with the development of new pharmaceuticals, new energy sources, new ways to collect solar power, and new materials.
- **Looking for really useful information** by processing huge amounts of data **quickly is a real-world problem** and one that can be **tackled faster by quantum computers**.
 - For example, if we have a database of a million social media profiles and had to look for a particular individual, a classical computer would have to scan each one of those profiles which would amount to a million steps.
- In **1996, Lov K. Grover from Bell Labs** discovered that a quantum computer would be able to do the same task with one thousand steps instead of a million. That **translates into reduced processors and reduced energy**.
- A quantum computer can attack complex problems that are beyond the scope of a classical computer. The **basic advantage is speed** as it is able to simulate several classical computers working in parallel.
- Quantum computers would also be useful for tasks which **handle huge amounts of data**. **Data mining and artificial intelligence would be major beneficiaries**, along with sciences which deal in volumes of data, from astronomy to linguistics.

Government's Initiative

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- In 2018, the Department of Science & Technology unveiled a programme called **Quantum-Enabled Science & Technology (QuEST)** and committed to **investing ₹80 crore over the next three years** to accelerate research.
- The ostensible plan is to have a quantum computer built in India within the next decade.

Challenges Associated with Quantum Computing

- The dark side of quantum computing is the **disruptive effect** that it can have on **cryptographic encryption**, which **secures communications and computers**.
- It might pose a **challenge for the government also** because if this technology goes into wrong hands, all the government's official and confidential data will be at a **risk of being hacked and misused**.

Way Forward

- Long after the birth of social media and artificial intelligence, there are now **demands to regulate them**. It would be **prudent to develop a regulatory framework for quantum computing before it becomes widely available**.
- It will be better to **regulate it or define the limits of its legitimate use, nationally and internationally** before the problem gets out of hand like nuclear technology.

Source: TH

COMPREHENSIVE CONVENTION ON INTERNATIONAL TERRORISM

GS-II | 10 March, 2020

COMPREHENSIVE CONVENTION ON INTERNATIONAL TERRORISM

Part of: GS Prelims and GS-II- IR

The date 26/11 has gone down in the history as a day that saw the most heinous attack carried on the Indian soil. The attack claimed 164 lives; leftover 300 injured and sent shock waves around the world. Terrorism has reared its ugly head every now and then and has devastated the world like nothing else. It is an issue which has affected millions of lives from Asia to the Americas but till date, there is no consensus on an international convention on terrorism.

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Several efforts have been made to address the problem but negotiations have not borne out results to address the issue.

What is it?

The Comprehensive Convention on International Terrorism is a proposed treaty which intends to criminalize all forms of international terrorism and deny terrorists, their financiers and supporters access to funds, arms, and safe havens. It is a draft proposed by India in 1996 that is yet to be adopted by the UNGA.

What does it call for?

Universal definition of terrorism: no good terrorist or bad terrorist.

Ban on all groups regardless of country of operation, cut off access to funds and safe havens.

Prosecution of all groups including cross border groups.

Amending domestic laws to make cross-border terror an extraditable offence.

It also addresses, among other things, the issue of Pakistan's alleged support for cross-border terrorism in south Asia.

Concerns expressed by various countries:

US + allies: concerns over definition of terrorism, including acts by US soldiers in international interventions without UN mandate.

Latin American countries: concerns over international humanitarian laws being ignored.

There are also concerns that convention will be used to target Pakistan and restrict rights of self-determination groups in Palestine, Kashmir etc.

Why the Lack of Consensus?

- The Sixth Committee, the primary forum for the consideration of legal questions in the General Assembly had created an ad hoc group which is still debating the draft for Comprehensive Convention for Countering International Terrorism. There are several issues but the most important of them is "defining the terms related to terrorism". Multiple groups have contentious claims over what should and what should not be regarded as terrorism.
- For instance, Organisation of Islamic Conference (OIC) has denied inclusion of liberation movement activities as terrorism, keeping in mind the Israel- Palestine conflict.
- On the other hand, the US and the allied countries who are involved in many counter-terrorism activities in various countries wanted the draft to exclude acts committed by military forces of states during peacetime. The Latin American countries want exactly the opposite.

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- Hence, for the committee prescribing an overarching definition that satisfies all the parties is a bone of contention.

Origin and Status of Comprehensive Convention on International Terrorism

New Delhi has pushed for an intergovernmental convention to enhance the adoption of the terrorism convention, discussions have yielded three separate conventions since 1996. In 2018, even after two decades, there is still a lack of consensus.

- *International Convention for the Suppression of Terrorist Bombings,*
- *International Convention for the Suppression of the Financing of Terrorism,*
- *International Convention for the Suppression of Acts of Nuclear Terrorism*

Geopolitics and the Act of terror

- Geopolitics is one of the most important determinants that has played the invisible hand in protecting the agents of terror. Masood Azhar is a case in point.
- Time and again China has been reluctant in declaring Azhar a terrorist. China, being a veto-wielding permanent member of the UN Security Council, has repeatedly blocked India's move to do so. The US, Britain and France all back India to designate Masood Azhar a terrorist under the Al-Qaida Sanctions Committee of the UN Security Council.
- China, in its statement, said that since Pakistan didn't agree with India on this issue, there is no "consensus" between the two directly affected parties. Beijing made it clear that China will support the issue only if Pakistan agrees with India.
- Pakistan government has been proven toothless when it comes to curbing nefarious activities emanating from her soil. There are scores of terrorist camps along the border, aided and funded either by the army (clandestinely) or terrorist groups like Jaish e Mohammad.
- The motive of the Pakistani administration has always been to support the fringe elements tacitly, in order to fulfill its policy to "bleed India with thousand cuts".
- Adoption of the convention would not only force Pakistan to withdraw any tacit state support to the terrorist groups but would also enable India to extradite culprits who are responsible for designing terrorist acts from foreign soil.

Comprehensive Convention on International Terrorism (CCIT)

- The CCIT will provide legal framework which will make it binding on all signatories to deny funds and safe havens to terrorist groups. **The original draft that was tabled in 1996 and discussed until April 2013 included the following major objectives:**
 - To have a universal definition of terrorism that all 193-members of the UNGA will adopt into their own criminal law.
 - To ban all terror groups and shut down terror camps.
 - Deny safe haven to those who finance, plan, support, or commit terrorist acts.
- To prosecute all terrorists under a special law.
- Exchange information in accordance with international and domestic law and cooperate on administrative and judicial matters to prevent the commission of terrorist acts.
- To make cross-border terrorism an extraditable offence worldwide.

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The global impact of terrorism:

1. There was no change in the five countries *most impacted by terrorism*, which include Iraq, Afghanistan, Nigeria, Syria and Pakistan. All of these countries have been ranked in the worst five every year since 2013.
2. Conflict continued to be the *primary driver of terrorist activity* for the countries most impacted by terrorism in 2017.
3. In 2017, terrorist attacks in conflict countries *averaged 2.4 deaths*, compared to 0.84 deaths in non-conflict countries. Terrorist attacks are more lethal on average in countries with a *greater intensity of conflict*. In 2017, countries in a state of war averaged 2.97 deaths per attack, compared to 1.36 in countries involved in a minor armed conflict.
4. There are *numerous possible reasons* for this difference. Countries in conflict have a *greater availability* of more military-grade small arms and bomb-making capabilities.
5. Countries that are not in conflict tend to be more economically-developed and spend *more on intelligence gathering, policing and counterterrorism*.

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HITTING HURDLES



Comprehensive Convention on International Terrorism is a draft proposed by India in 1996, that has yet to be adopted by the UN General assembly

What does it call for?

- ➔ **Universal definition of terrorism:** No good terrorist or bad terrorist
- ➔ Ban on all groups regardless of country of operation, cut off access to fund and safe havens
- ➔ Prosecution of all groups, including cross-border groups
- ➔ Amending domestic laws to make cross-border terror an extraditable offence

Why has CCIT been blocked?

- ➔ **US+allies:** Concerns over definitions of terrorism, including acts by US soldiers in international interventions without UN mandate
- ➔ **Latin American countries:** Concerns over international humanitarian laws and HR being ignored
- ➔ **OIC:** Concerns that convention will be used to target Pakistan, and restrict rights of self-determination groups in Palestine, Kashmir etc



Terror striking every day now -Turkey, Somalia, Afghanistan, Kenya & Bangladesh. Mere condemnation & commiseration @un won't do. Need CCIT

— Syed Akbaruddin, India's ambassador to UN, on Twitter



Measures to Tackle Terrorism

- India should play a proactive role to neutralize any threat of terrorism.
- Addressing UN High-Level conference on Heads of Counter Terrorism, Indian Special Secretary, Internal Security) extended a five-point formula –
 - Exchange of timely and actionable intelligence.
 - Prevention of misuse of modern communication through collaboration with the private sector.
 - Building capacities for improved border controls.
 - Sharing of info related to the movement of passengers.
 - Designation of Counter-Terror focal points to fight global terror.
- In addition, there should be a concerted effort from the countries affected by the scourge

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of terrorism to pressurize countries who engage in state-sponsored terrorism.

- It is believed that the Indian intelligence agencies did have actionable intelligence from its Israeli and the US counterpart regarding 26/11. So, intelligence gathering and sharing are not enough, timely & appropriate action is required on the intelligence received. Consequently, the Indian intelligence agencies have to be empowered both monetarily and through modern infrastructure to be able to respond in time.

Source: UN/TH

ASPIRE IAS

UPSC "PT" DNA (Daily News Analysis)

G20 pledges \$5 trillion to defend global economy against COVID-19

GS-II | 26 March, 2020

G20 pledges \$5 trillion to defend global economy against COVID-19

Part of: GS Prelims and GS-II- IO

In a show of crisis unity, leaders commit to implement and fund all health measures needed to stop the virus's spread.

Leaders of the Group of 20 major economies pledged to **inject \$5 trillion** in fiscal spending into the global economy to blunt the economic impact of the coronavirus and "do whatever it takes to overcome the pandemic".

Showing more unity than at any time since the 2008-2009 financial crisis that led to the G20's creation, the leaders said they committed during a video conference summit to implement and fund all necessary health measures needed to stop the virus's spread.

G-20

▪ About

- The **G20** is an **informal group of 19 countries and the European Union**, with representatives of the **International Monetary Fund** and the **World Bank**.
- The G20 membership comprises a mix of the world's largest advanced and emerging economies, representing about two-thirds of the world's population, 85% of global gross domestic product, 80% of global investment and over 75% of global trade.

▪ Headquarter

- The G20 operates **as a forum and not as an organisation**. Therefore, it does not have any permanent secretariat or management and administrative structure.

▪ Origin

- **1997-1999 Asian Financial Crisis**: This was a ministerial-level forum which emerged after G7 invited both developed and developing economies. The finance ministers and central bank governors began meeting in 1999.
- Amid **2008 Financial Crisis** the world saw the need for a new consensus-building at the highest political level. It was decided that the G20 leaders would begin meeting once annually.

▪ Members

- The members of the G20 are **Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, the United Kingdom, the United States, and the European Union**.
- One nation holds the **Chair every year**, known as '**G20 Presidency**'. Argentina chaired the G20 summit of 2018 and Japan for 2019.

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In a statement containing the most conciliatory language on trade in years, the G20 leaders pledged to ensure the flow of vital medical supplies and other goods across borders and to resolve supply chain disruptions.

As many countries enact export bans on medical supplies, the G20 leaders said they would coordinate responses to avoid unnecessary interference. "Emergency measures aimed at protecting health will be targeted, proportionate, transparent, and temporary," they said.

The G20 leaders also expressed concern about the risks to fragile countries, notably in Africa, and populations such as refugees, acknowledging the need to bolster global financial safety nets and national health systems. "We are strongly committed to presenting a united front against this common threat," the G20 leaders said in a joint statement following their 90-minute call.

Saudi Arabia, the current G20 chair, called the video summit amid earlier criticism of the group's slow response to the disease. It has infected more than 500,000 people worldwide and killed more than 23,000 - and is expected to trigger a global recession.

Saudi Arabia's ruler, King Salman, in opening remarks, said the G20 should resume the normal flow of goods and services, including vital medical supplies, as soon as possible to help restore confidence in the global economy. The group committed to national spending measures totalling \$5 trillion - an amount equal to that pledged in 2009 - along with other large-scale liquidity, credit guarantee schemes and other economic measures.

World Health Organization Director General Tedros Adhanom Ghebreyesus was to address the G20 to seek support for ramping up funding and production of personal protective equipment for health workers amid a global shortage. "We have a global responsibility as humanity and especially those countries like the G20," Tedros told a news conference in Geneva on Wednesday. "They should be able to support countries all over the world."

In his remarks to the group, **United States President Donald Trump** shared details of the \$6 trillion in support the US is making available through legislation and increased Federal Reserve liquidity, including \$2 trillion in fiscal spending. Trump also spoke in support of multilateral action and coordination. "He talked about working together, and sounded more supportive of multilateral coordination than ever before," said one source who observed the meeting.

The meeting was not marred by acrimony, as was feared given the on-going oil price war initiated by Saudi Arabia-led OPEC, and a war of words between the US and China over the origins and handling of the pandemic, who was not authorised to speak publicly. Tedros told G20 leaders that the pandemic is "accelerating at an exponential rate" and urged them to ramp up production of protective gear for health workers and remove export bans.

"Everyone realises that it is essential to preserve jobs, and to maintain trade flows, not disrupt the supply chains," said one Brazilian government official with knowledge of the video

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conference discussions. No country advocated "total confinement", mainly because most of the countries in the G20 are not implementing such moves, the official added.

Several participants called upon the G20 to play the same role that it played in overcoming the 2008-2009 global financial crisis, when member countries pledged to inject massive fiscal stimulus and financial liquidity into the economy, the Brazilian official said.

IMF resources

The G20 leaders also *asked the International Monetary Fund (IMF) and the World Bank Group "to support countries in need using all instruments to the fullest extent"*.

IMF Managing Director Kristalina Georgieva plans to ask the Fund's steering committee on Friday to consider doubling the current \$50bn in emergency financing available to help developing countries deal with the virus, a source familiar with the plans told Reuters news agency.

To boost global liquidity, Georgieva also asked G20 leaders to back a Fund plan to allow member countries to temporarily draw on part of its \$1 trillion in overall resources to boost liquidity. The IMF made a similar move in 2009 with a \$250bn allocation of Special Drawing Rights (SDR), its internal unit of currency.

Georgieva gave no specific number in her statement, but observers to the G20 meeting said an SDR allocation of up to \$500bn could be needed.

On the health response, the G20 leaders committed to close the financing gap in the WHO's response plan and to strengthen its mandate as well as expand the manufacturing capacity for medical supplies, strengthen capacities to respond to infectious diseases, and share clinical data.

Before this G20

Recently, the ministers and central bankers from the world's largest economies participated in **G20 meeting** held in **Riyadh (Saudi Arabia)**.

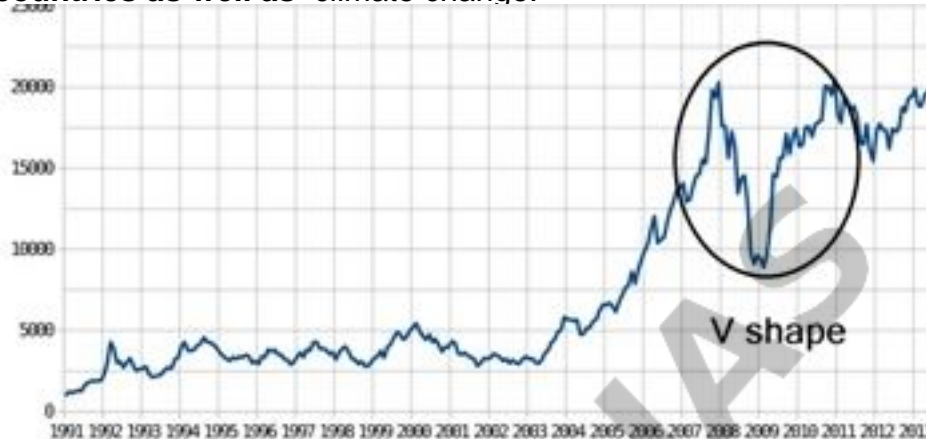
- It was **presided** by **Saudi Arabia**. **Saudi Arabia** is the first Arab nation to hold the G20 presidency.
- The 2020 G20 Presidency will focus discussions, forums, working groups and Ministerial Meetings under the **theme of "Realizing Opportunities of the 21st Century for All"**.

Key Points

- **Global Economy:**
 - The global economic growth **remains slow** and downside risks due to the geopolitical and remaining trade tensions, and policy uncertainty.

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- Though the economic growth is **expected to increase in 2020 and 2021** due to **loose monetary policy** and an **easing of trade tensions**.
- **IMF' Views at the Meeting:**
 - It projects a **"V-shaped, rapid recovery"** for the global economy, but it warns about the uncertainty around the spread of the coronavirus (COVID 19).
 - The **IMF** also warned about other **risks including rising debt levels in some countries as well as** climate change.



- **Demand for Global Taxation System:**
 - It discussed ways to achieve **consensus** on a global taxation system for the digital era by the **end of 2020**.
 - It aims to allow governments to tax digital companies where they do business, rather than where they are registered for tax purposes.
 - India has also demanded closer collaboration between international revenue agencies **to investigate tax affairs of offenders who cross borders for escaping tax investigation**.



JAI HIND JAI BHARAT

Source: TH/Aljazeera

RRB and COVID-19

GS-III | 26 March, 2020

RRB and COVID-19

Part of: GS Prelims and GS-III- Economics

Recently, the Centre has approved a ₹1,340-crore recapitalisation plan for Regional Rural

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Banks (RRBs). The move is crucial to ensure liquidity in rural areas during the lockdown due to the COVID-19 crisis.

Key Points

- This recapitalisation (a strategy of enhancing the financial base of an entity to overcome a rough financial situation) would improve their **capital-to-risk weighted assets ratio (CRAR)** and strengthen these institutions for providing credit in rural areas.
 - The step will help those RRBs which are unable to maintain a minimum CRAR of 9%, as per the regulatory norms prescribed by the RBI.
- The release of the Rs. 670 crore as the central share funds will be contingent upon the release of the proportionate share by the sponsor banks.
- The recapitalisation process of RRBs **was approved by the cabinet in 2011 based on the recommendations of a committee set up under the Chairmanship of K C Chakrabarty.**
 - The National Bank for Agriculture and Rural Development (NABARD) identifies those RRBs, which require recapitalisation assistance to maintain the mandatory CRAR of 9% based on the CRAR position of RRBs, as on 31st March of every year.
 - The scheme for recapitalization of RRBs was extended up to 2019-20 in a phased manner post 2011.

Capital-to-risk Weighted Assets Ratio

- CRAR or **Capital Adequacy Ratio (CAR)** is the ratio of a bank's capital in relation to its **risk weighted assets and current liabilities.**
- It is decided by central banks and bank regulators to prevent commercial banks from taking excess leverage and becoming insolvent in the process.
- The Basel III norms stipulated a capital to risk weighted assets of 8%.
- However, as per **RBI** norms, Indian scheduled commercial banks are required to maintain a **CRAR of 9%.**

Regional Rural Banks

RRBs are financial institutions which ensure adequate credit for agriculture and other rural sectors.

Regional Rural Banks were set up on the basis of the recommendations of the Narasimham Working Group of the **Regional Rural Banks Act, 1976.**

The first Regional Rural Bank "**Prathama Grameen Bank**" was set up on **2nd October, 1975.**

Stakeholders: The equity of a regional rural bank is held by **the Central Government, concerned State Government and the Bank in the proportion of 50:15:35 (PT SHOT).**

The RRBs combine the characteristics of a cooperative in terms of the familiarity of the rural problems and professionalisation and ability to mobilise financial resources.

Each RRB operates within the local limits as notified by the Government.

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The main objectives of RRBs are

1. To provide credit and other facilities to the small and marginal farmers, agricultural labourers, artisans and other entrepreneurs in rural areas.
2. To check the outflow of rural deposits to urban areas and reduce regional imbalances and increase rural employment.
3. The RRBs are required to provide 75% of their total credit as priority sector lending.

Reforms

Recapitalization and amalgamation of RRBs

RRBs became financially weak with many having high NPAs because of the difficult loans they are giving to rural areas.

Chakrabarty reviewed the financial position of all RRBs in 2010 and recommended for recapitalization and amalgamation.

According to the Committee, the remaining RRBs are in a position to achieve the desired level of performance. Following the recommendations of the committee, the central government along with other shareholders started to recapitalize them. In the same manner the process of amalgamation continued.

Amalgamation of RRBs were made in two phases and the number of RRBs were brought down during the second phase of amalgamation and restructuring, which is ongoing from 2012, geographically extensive sponsor banks are amalgamated to have just one RRB in medium-sized states and two or three RRBs in small states. RRBs into sponsoring banks and their merger brought down the number from 196 in late 1990s to 56 by 2015.

Most of the reform measures enabled the RRBs to make a smart recovery without being a burden on the government. The original risky mission of extending lending to the rural people. But still their NPAs remains high at around 10%. For their activities need additional capital in the context of advanced capital requirements and regulatory standards. To acquire more capital the government has enacted RRB Amendment Act (2015). The amendment is aimed at raising capital from financial markets. This Act let them to mobilize additional capital by keeping a combined government and sponsor bank shareholding of 51%.

RRBs Amendment Act 2015

The Regional Rural Banks (Amendment) Act, 2015, came into effect from 4th February 2016. The Act raised the minimum capital requirement to Rs 2,000 crore and states that it cannot be reduced below Rs One crore. The Act allows RRBs to raise capital from existing shareholders -central and state governments, and sponsor banks. Here, the combined shareholding of the central government, state government and the sponsor bank cannot be less than 51%.

For the sponsoring banks, they can provide various initiating assistance to the RRBs beyond the initial five years (after which the bank's responsibility will be over in five years). The Act states that the central government may by notification specify the shareholding of the central government, state government or the sponsoring bank in the RRB. For this, the state government and the sponsor bank.



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Source: TH/RRB

Economic package during COVID-19

GS-III | 26 March, 2020

Economic package during COVID-19

Part of: GS Prelims and GS-III- Economics

The Union Finance & Corporate Affairs Minister Smt. Nirmala Sitharaman announced Rs 1.70 Lakh Crore relief package under *Pradhan Mantri Garib Kalyan Yojana* for the poor to help them fight the battle against Corona Virus. While addressing the press conference here, Smt. Sitharaman said "Today's measures are intended at reaching out to the poorest of the poor, with food and money in hands, so that they do not face difficulties in buying essential supplies and meeting essential needs."

Finance Minister announces Rs 1.70 Lakh Crore relief package under **Pradhan Mantri Garib Kalyan Yojana** for the poor to help them fight the battle against Corona Virus

? **Insurance cover of Rs 50 Lakh per health worker** fighting COVID-19 to be provided under Insurance Scheme

? 80 crore poor people will to get **5 kg wheat or rice and 1 kg of preferred pulses** for free every month for the next three months

? 20 crore women **Jan Dhan account holders** to get **Rs 500 per month** for next three months

? Increase in **MNREGA wage to Rs 202 a day** from **Rs 182** to benefit 13.62 crore families

? **An ex-gratia of Rs 1,000** to **3 crore poor senior citizen**, poor widows and poor disabled

? Government to front-load **Rs 2,000 paid to farmers in first week of April** under existing PM Kisan Yojana to benefit 8.7 crore farmers

? Central Government has given orders to State Governments to **use Building and Construction Workers Welfare Fund** to provide relief to Construction Workers.

Following are the components of the Pradhan Mantri Garib Kalyan Package: —

PRADHAN MANTRI GARIB KALYAN PACKAGE

UPSC "PT" DNA (Daily News Analysis)

I. Insurance scheme for health workers fighting COVID-19 in Government Hospitals and Health Care Centres

- Safai karamcharis, ward-boys, nurses, ASHA workers, paramedics, technicians, doctors and specialists and other health workers would be covered by a Special insurance Scheme.
- Any health professional, who while treating Covid-19 patients, meet with some accident, then he/she would be compensated with an amount of Rs 50 lakh under the scheme.
- All government health centres, wellness centres and hospitals of Centre as well as States would be covered under this scheme approximately 22 lakh health workers would be provided insurance cover to fight this pandemic.

II. PM Garib Kalyan Ann (????) Yojana

- Government of India would not allow anybody, especially any poor family, to suffer on account of non-availability of foodgrains due to disruption in the next three months.
- 80 crore individuals, i.e, roughly two-thirds of India's population would be covered under this scheme.
- Each one of them would be provided double of their current entitlement over next three months.
- This additionality would be free of cost.

Pulses:

- To ensure adequate availability of protein to all the above mentioned individuals, 1 kg per family, would be provided pulses according to regional preferences for next three months.
- These pulses would be provided free of cost by the Government of India.

III. Under Pradhan Mantri Garib Kalyan Yojana,

Benefit to farmers:

- The first instalment of Rs 2,000 due in 2020-21 will be front-loaded and paid in April 2020 itself under the PM KISAN Yojana.
- It would cover 8.7 crore farmers

IV. Cash transfers Under PM Garib Kalyan Yojana:

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Help to Poor:

- A total of 20.40 crores PMJDY women account-holders would be given an ex-gratia of Rs 500 per month for next three months.

Gas cylinders:

- Under PM Garib Kalyan Yojana, gas cylinders, free of cost, would be provided to 8 crore poor families for the next three months.

Help to low wage earners in organised sectors:

- Wage-earners below Rs 15,000 per month in businesses having less than 100 workers are at risk of losing their employment.
- Under this package, government proposes to pay 24 percent of their monthly wages into their PF accounts for next three months.
- This would prevent disruption in their employment. Support for senior citizens (above 60 years), widows and Divyang:
- There are around 3 crore aged widows and people in Divyang category who are vulnerable due to economic disruption caused by COVID-19.
- Government will give them Rs 1,000 to tide over difficulties during next three months.

MNREGA

- Under PM Garib Kalyan Yojana, MNREGA wages would be increased by Rs 20 with effect from 1 April, 2020. Wage increase under MNREGA will provide an additional Rs 2,000 benefit annually to a worker.
- This will benefit approximately 13.62 crore families.

V. Self-Help groups:

- Women organised through 63 lakhs Self Help Groups (SHGs) support 6.85 crore households.
- a) Limit of collateral free lending would be increased from Rs 10 to Rs 20 lakhs.

VI. Other components of PM Garib Kalyan package

Organised sector:

- Employees' Provident Fund Regulations will be amended to include Pandemic as the reason

UPSC "PT" DNA (Daily News Analysis)

to allow non-refundable advance of 75 percent of the amount or three months of the wages, whichever is lower, from their accounts.

- Families of four crore workers registered under EPF can take benefit of this window. Building and Other **Construction Workers Welfare Fund**:

- Welfare Fund for Building and Other Constructions Workers has been created under a Central Government Act.

- There are around 3.5 Crore registered workers in the Fund.

- State Governments will be given directions to utilise this fund to provide assistance and support to these workers to protect them against economic disruptions.

District Mineral Fund

- The State Government will be asked to utilise the funds available under District Mineral Fund (DMF) for supplementing and augmenting facilities of medical testing, screening and other requirements in connection with preventing the spread of COVID-19 pandemic as well as treating the patients affected with this pandemic.

RBI ANNOUNCED

- RBI has permitted banks to give 3-month moratorium on term loans and EMIs
- Central bank has also slashed repo rate by 75 basis points
- Shaktikanta Das assured Indians that RBI is ready to tackle financial difficulties due to Covid-19 pandemic

The RBI's MPC has voted in favour of an interest rate cut to the tune of 75 basis points, which brings the repo rate down to **4.4 per cent from 5.15 per cent**. The reverse repo rate has also been reduced by 90 basis points to 4 per cent in a bid to maintain financial stability and revive growth.

RBI Governor said that the outlook remains extremely uncertain at the time and going forward much will depend on how India battles Covid-19 pandemic. "The outlook is now heavily contingent upon the intensity, spread and duration of the pandemic. There is a rising probability that large parts of the world will slip into recession,".

EMI, LOANS ON HOLD

It also announced that banks are permitted to allow a three-month moratorium for on payment of EMIs on all term loans that were outstanding on March 1.

"MPC noted that global economic activity has come to a near stand-still as Covid-19 related lockdowns and social distancing in affected countries. Expectations of a shallow recovery in

UPSC "PT" DNA (Daily News Analysis)

2020 from 2019's decade low in global growth have been dashed,"

However, this means that the final decision to provide such a relief is in the hands of the banks. This is one of the key takeaways from RBI's announcements as many people have been financially affected due to the lockdown implemented to prevent novel coronavirus from spreading in India. But it remains to be seen as to what extent this helps customers.

OTHER LIQUIDITY MEASURES

Apart from reducing key rates, the RBI also announced a slew of liquidity measures related to TLTRO, CRR and MLCR to ease mounting pressure. ***(The targeted longer-term refinancing operations (TLTROs) are Eurosystem operations that provide financing to credit institutions. By offering banks long-term funding at attractive conditions they preserve favourable borrowing conditions for banks and stimulate bank lending to the real economy)***

"It has been decided to reduce the Cash Reserve Ratio (CRR) of all banks by 100 basis points to 3% of Net Demand and Time Liabilities with effect from the fortnight beginning March 28 for a period of 1 year," the RBI governor announced.

The announcement came just a day after the government unveiled a Rs 1.70 lakh crore relief package to shield poor people from the virus outbreak.

The RBI's relief measures announced in view of the Covid-19 pandemic stands at 3.2 per cent of the GDP.

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Coronaviruses

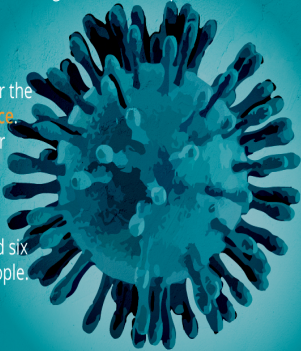
According to the World Health Organization (WHO), a new variant of coronavirus has caused **pneumonia outbreak in Wuhan, China**.

○ The new coronavirus is different from previously discovered human coronaviruses and further understanding of the virus requires more scientific research.

About Coronaviruses

● Coronaviruses are named for the **crown-like spikes on their surface**. "Corona" in Latin means "halo" or "crown."

● Human coronaviruses were first identified in the mid-1960s. Till date, scientists have identified six coronaviruses that can infect people.



Types

● **Four common coronavirus** that cause mild to moderate upper-respiratory tract illnesses, like the common cold are:

- 229E (alpha coronavirus)
- NL63 (alpha coronavirus)
- OC43 (beta coronavirus)
- HKU1 (beta coronavirus)

● While, the **two other human coronaviruses** that have been known to frequently cause severe symptoms are:

- MERS-CoV (the beta coronavirus that causes Middle East Respiratory Syndrome, or MERS)
- SARS-CoV (the beta coronavirus that causes Severe Acute Respiratory Syndrome, or SARS)

● Other coronaviruses can infect animals like **cats, dogs, monkeys, and rodents**.

Antibodies

Since coronavirus **antibodies do not last for a very long time**, a person can catch the virus again within months. Also, the antibodies for one strain of coronavirus may be useless against other strains.

Transmission

Human coronaviruses most commonly spread from an infected person to others through

- the air by coughing and sneezing,
- close personal contact, such as touching or shaking hands,
- touching an object or surface with the virus on it, then touching your mouth, nose, or eyes before washing your hands,
- rarely through fecal contamination.

Vaccination

There are currently **no vaccines available against human coronavirus infection**.

Middle East Respiratory Syndrome (MERS)

● MERS was first reported in **Saudi Arabia** in 2012 and has since spread to several other countries.

● It is caused by a virus (more specifically, a coronavirus) called Middle East Respiratory Syndrome Coronavirus (MERS-CoV).

● Most MERS patients develop severe respiratory illness with symptoms of fever, cough and shortness of breath.

● About 3 or 4 out of every 10 patients reported with MERS have died.

Severe Acute Respiratory Syndrome

● SARS coronavirus (SARS-CoV) was identified in 2003. It first infected humans in the Guangdong province of **southern China** in 2002.

● An epidemic of SARS affected 26 countries and resulted in more than 8000 cases in 2003.

● Its transmission is primarily from person to person.

● Symptoms are influenza-like and include fever, malaise, myalgia, headache, diarrhoea, and shivering (rigors). No individual symptom or cluster of symptoms has proved to be specific for a diagnosis of SARS.



Jai Hind Jai Bharat

UPSC "PT" DNA (Daily News Analysis)

Source: PIB/India Today

Japan and Russia - Kuril Islands

GS-II | 26 March, 2020

Japan and Russia - Kuril Islands

Part of: GS Prelims and GS-II- IR

Historical Background

- **Sovereignty Issue of South Kuril Islands:**
 - The Kuril Islands dispute between **Japan and Russia** is over the **sovereignty of South Kuril Islands**.
 - The South Kuril Islands comprises **Etorofu island, Kunashiri island, Shikotan island and the Habomai island**. These islands are **claimed by Japan** but **occupied by Russia** as successor state of the Soviet Union.
 - These islands are known as **Southern Kurils by Russia** whereas **Japan** calls them **Northern Territories**.
- **Original Inhabitants-Ainu People:**
 - The Kurils were **originally inhabited by the Ainu people**, and they were later settled by the Russians and Japanese, following several waves of exploration in the **17th and 18th centuries**.
 - The Ainu or the Aynu, also **known as the Ezo** in the historical Japanese texts, are an indigenous people of Japan and Russia.
- **Treaty of Shimoda (1855):**
 - In **1855**, Japan and Russia concluded the **Treaty of Shimoda**, which gave control of the four southernmost islands to Japan and the remainder of the chain to Russia.
- **Treaty of Saint Petersburg (1875):**
 - In the **Treaty of Saint Petersburg**, signed between two countries in **1875**, Russia ceded possession of the Kurils to Japan in exchange for uncontested control of Sakhalin Island.
- **Yalta Agreement (1945):**
 - In **1945**, as part of the **Yalta agreements (formalized in the 1951 Treaty of Peace with Japan)**, the islands were ceded to the Soviet Union, and the Japanese population was repatriated and replaced by Soviets.
 - The **San Francisco Peace Treaty** signed between the Allies and Japan in 1951, states that Japan must give up "all right, title and claim to the Kuril Islands", **but it also does not recognize the Soviet Union's sovereignty over them**.
- **Japan-Soviet Joint Declaration (1956):**
 - The dispute over the islands has **prevented the conclusion of a peace treaty to**

UPSC "PT" DNA (Daily News Analysis)

end World War II.

- In 1956, diplomatic ties were restored between Japan and Russia by **Japan-Soviet Joint Declaration**.
- During that time, Russia offered to give away the two islands closest to Japan. But the offer was rejected by Japan as the two islands constituted **only 7% of the land** in question.

▪ **Developments After 1991:**

- Despite a series of agreements, the dispute continues and **Japan still claims historical rights to the southernmost islands** and has tried repeatedly to persuade the Soviet Union and, from 1991, Russia to return those islands to Japanese sovereignty.
- In **2018**, the Russian President and the Japanese Prime Minister (PM) met on the sidelines of the East Asia Summit and decided to end the territorial dispute by Japanese PM agreeing to negotiate based on the 1956 declaration.
 - This implicitly showed that Japan has given up the two islands to maintain peace with Russia.
 - However, Russia indicated that the joint declaration signed by Japan and the Soviet Union in 1956 **neither mentions a basis for returning Habomai and Shikotan nor clarifies which country has sovereignty over the islands**.
- Further, in **2019**, Japanese PM made it clear that the country is **not in the favour of withdrawing control over the Islands**. Japan also believes that the islands are the inherent part of the nation's territory. Therefore, Japan mentioned that it aims to sign the peace treaty after the territorial issue is resolved.

UPSC "PT" DNA (Daily News Analysis)

RUSSIA-JAPAN TALKS ON DISPUTED KURIL ISLANDS



HISTORY OF KURIL DISPUTE

■ **1855: Treaty of Shimoda** gives southern Kurils to Japan and rest of island chain to Russia.

■ **1875: Treaty of St Petersburg** cedes all Kurils to Japan in exchange for Russian jurisdiction over Sakhalin

■ **1905:** After Russia's defeat in **Russo-Japanese War**, Japan gains control of southern Sakhalin

■ **1945:** Soviet Union occupies entire Kuril chain and southern Sakhalin after declaring war on Japan during final days of **World War II**

■ **1951:** Japan renounces claim to Kurils in **Treaty of San Francisco**, signed between Japan and Allied powers.



■ **1956: Soviet-Japanese Joint Declaration** restores diplomatic ties between two countries.

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Importance of South Kuril Islands

UPSC "PT" DNA (Daily News Analysis)

■ Natural resources:

- The islands are surrounded by **rich fishing grounds** and are thought to have **offshore reserves of oil and gas**.
- Rare **rhenum deposits** have been found on the Kudriavy volcano on Iturup.

- **Nickel-based superalloys of rhenum** are used in the combustion chambers, turbine blades, and exhaust nozzles of jet engines.

- **Tourism** is also a potential source of income, as the islands have several volcanoes and a variety of birdlife.

■ Strategic Importance:

- Russia has deployed **missile systems** in the region.
- Russia also plans a **submarine project** and intends to prevent any American military use of the islands.

■ Cultural Importance:

- The Japanese people, especially conservatives in Hokkaido, are emotionally attached to the islands.

Recently, a 7.5 magnitude earthquake struck in the northern Pacific and a tsunami warning was issued for the closest shores on Russia's far eastern Kuril Islands. The earthquakes of this strength in the region have caused tsunamis in the past far from the epicenter of the earthquake. The epicenter is the point on the Earth's surface directly above a **hypocenter** or focus (**The hypocenter is where an earthquake or an underground explosion originates**)

Kuril Islands are stretched from the **Japanese island of Hokkaido to the southern tip of Russia's Kamchatka Peninsula** separating Okhotsk Sea from the North Pacific ocean. It consists of **56 islands and minor rocks**. The chain is part of the belt of geologic instability circling the Pacific and contains at least 100 volcanoes, of which 35 are still active, and many hot springs. Earthquakes and tidal waves are common phenomena over these islands.

Source: TH

Waste management and Legacy Waste

GS-III | 26 March, 2020

Waste management and Legacy Waste

Part of: GS Prelims and GS-III- Environment

The Environment Ministry has revised Solid Waste Management Rules after 16 years. The Rules are now applicable **beyond municipal areas** and will extend to urban agglomerations, census towns, notified industrial townships, areas under the control of Indian Railways, airports,

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airbase, port and harbour, defence establishments, special economic zones, State and Central government organizations, places of pilgrims, religious & historical importance.

62 million tonnes of waste is generated annually in the country at present, out of which 5.6 million tonnes is plastic waste, 0.17 million tonnes is biomedical waste, hazardous waste generation is 7.90 million tonnes per annum and 15 lakh tonne is e-waste. **The per capita waste generation in Indian cities ranges from 200 grams to 600 grams per day.** 43 million TPA is collected, 11.9 million is treated and 31 million is dumped in landfill sites, which means that only about 75-80% of the municipal waste gets collected and only 22-28 % of this waste is processed and treated. "Waste generation will increase from 62 million tonnes to about 165 million tonnes in 2030".

Some of the salient features of SWM Rules, 2016 include:-

1. The Rules are now applicable beyond Municipal areas and extend to urban agglomerations, census towns, notified industrial townships, areas under the control of Indian Railways, airports, airbase, Port and harbour, defence establishments, special economic zones, State and Central government organizations, places of pilgrims, religious & historical importance.
2. The source segregation of waste has been mandated to channelize the waste to wealth by recovery, reuse and recycle.
3. Responsibilities of Generators have been introduced to segregate waste in to three streams, Wet (Biodegradable), Dry (Plastic, Paper, metal, wood, etc.) and domestic hazardous wastes (diapers, napkins, empty containers of cleaning agents, mosquito repellents, etc.) and handover segregated wastes to authorized rag-pickers or waste collectors or local bodies.
4. Integration of waste pickers/ ragpickers and waste dealers/ Kabadiwalas in the formal system should be done by State Governments, and Self Help Group, or any other group to be formed.
5. No person should throw, burn, or bury the solid waste generated by him, on streets, open public spaces outside his premises, or in the drain, or water bodies.

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6. Generator will have to pay 'User Fee' to waste collector and for 'Spot Fine' for Littering and Non-segregation.
7. Used sanitary waste like diapers, sanitary pads should be wrapped securely in pouches provided by manufacturers or brand owners of these products or in a suitable wrapping material and shall place the same in the bin meant for dry waste / non- bio-degradable waste.
8. The concept of partnership in Swachh Bharat has been introduced. Bulk and institutional generators, market associations, event organizers and hotels and restaurants have been made directly responsible for segregation and sorting the waste and manage in partnership with local bodies.
9. All hotels and restaurants should segregate biodegradable waste and set up a system of collection or follow the system of collection set up by local body to ensure that such food waste is utilized for composting / biomethanation.
10. All Resident Welfare and market Associations, Gated communities and institution with an area >5,000 sq. m should segregate waste at source- in to valuable dry waste like plastic, tin, glass, paper, etc. and handover recyclable material to either the authorized waste pickers or the authorized recyclers, or to the urban local body.
11. The bio-degradable waste should be processed, treated and disposed of through composting or bio-methanation within the premises as far as possible. The residual waste shall be given to the waste collectors or agency as directed by the local authority.
12. New townships and Group Housing Societies have been made responsible to develop in-house waste handling, and processing arrangements for bio-degradable waste.
13. Every street vendor should keep suitable containers for storage of waste generated during the course of his activity such as food waste, disposable plates, cups, cans, wrappers, coconut shells, leftover food, vegetables, fruits etc. and deposit such waste at waste storage

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depot or container or vehicle as notified by the local authority.

14. The developers of Special Economic Zone, industrial estate, industrial park to earmark at least 5% of the total area of the plot or minimum 5 plots/ sheds for recovery and recycling facility.
15. All manufacturers of disposable products such as tin, glass, plastics packaging etc. or brand owners who introduce such products in the market shall provide necessary financial assistance to local authorities for the establishment of waste management system.
16. All such brand owners who sale or market their products in such packaging material which are non-biodegradable should put in place a system to collect back the packaging waste generated due to their production.
17. Manufacturers or Brand Owners or marketing companies of sanitary napkins and diapers should explore the possibility of using all recyclable materials in their products or they shall provide a pouch or wrapper for disposal of each napkin or diapers along with the packet of their sanitary products.
18. All such manufacturers, brand owners or marketing companies should educate the masses for wrapping and disposal of their products.
19. All industrial units using fuel and located within 100 km from a solid waste based RDF plant shall make arrangements within six months from the date of notification of these rules to replace at least 5 % of their fuel requirement by RDF so produced.
20. Non-recyclable waste having calorific value of 1500 K/cal/kg or more shall not be disposed of on landfills and shall only be utilized for generating energy either or through refuse derived fuel or by giving away as feed stock for preparing refuse derived fuel.
21. High calorific wastes shall be used for co-processing in cement or thermal power plants.

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22. Construction and demolition waste should be stored, separately disposed off, as per the Construction and Demolition Waste Management Rules, 2016
23. Horticulture waste and garden waste generated from his premises should be disposed as per the directions of local authority.
24. An event, or gathering organiser of more than 100 persons at any licensed/unlicensed place, should ensure segregation of waste at source and handing over of segregated waste to waste collector or agency, as specified by local authority.
25. Special provision for management of solid waste in hilly areas:- Construction of landfill on the hill shall be avoided. A transfer station at a suitable enclosed location shall be setup to collect residual waste from the processing facility and inert waste. Suitable land shall be identified in the plain areas, down the hill, within 25 kilometers for setting up sanitary landfill. The residual waste from the transfer station shall be disposed off at this sanitary landfill.
26. In case of non-availability of such land, efforts shall be made to set up regional sanitary landfill for the inert and residual waste.

(II) Municipal Solid Waste

With the ever increasing population and urbanization, the waste management has emerged as a huge challenge in the country. Not only the waste has increased in quantity, but the characteristics of waste have also changed tremendously over a period, with the introduction of so many new gadgets and equipment. It is estimated that about 62 million tonnes of waste is generated annually in the country, out of which 5.6 million is plastic waste, 0.17 million is biomedical waste. In addition, hazardous waste generation is 7.90 million TPA and 15 lakh tonne is e-waste. The per capita waste generation in Indian cities range from 200 grams to 600 grams per day (2011). 43 million TPA is collected, 11.9 million is treated and 31 million is dumped in landfill sites.

(III) Proper solid waste management

Scientific disposal of solid waste through segregation, collection and treatment and disposal in an environmentally sound manner minimises the adverse impact on the

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environment. The local authorities are responsible for the development of infrastructure for collection, storage, segregation, transportation, processing and disposal of MSW.

As per information available for 2013-14, compiled by CPCB, municipal authorities have so far only set up 553 compost & vermi-compost plants, 56 bio-methanation plants, 22 RDF plants and 13 Waste to Energy (W to E) plants in the country.

(IV) Problems of unscientific MSW disposal

Only about 75- 80% of the municipal waste gets collected and out of this only 22-28 % is processed and treated and remaining is disposed of indiscriminately at dump yards. It is projected that by the year 2031 the MSW generation shall increase to 165 million tonnes and to 436 million tons by 2050. If cities continue to dump the waste at present rate without treatment, it will need 1240 hectares of land per year and with projected generation of 165 million tons of waste by 2031, the requirement of setting up of land fill for 20 years of 10 meters height will require 66,000 hectares of land.

As per the Report of the Task Force of erstwhile Planning Commission, the untapped waste has a potential of generating 439 MW of power from 32,890 TPD of combustible wastes including Refused Derived Fuel (RDF), 1.3 million cubic metre of biogas per day, or 72 MW of electricity from biogas and 5.4 million metric tonnes of compost annually to support agriculture.

(V) Consultation process for new Solid Waste Rules

The draft Solid Waste Management Rules were published in June, 2015 inviting public objections and suggestions. Stakeholders consultation meets were organized in New Delhi, Mumbai and Kolkata. Consultative meetings with relevant Central Ministries, State Governments, State Pollution Control Boards and major hospitals were also held. The suggestions/objections (about 111) received were examined by the Working Group in the Ministry. Based on the recommendations of the Working Group, the Ministry has published the Solid Waste Management Rules, 2016.

Note: Apart from this, **Article 51 A (g) of the Constitution** of India makes it a fundamental duty of every citizen of India to protect and improve the natural environment including forests, lakes, rivers, and wildlife, and to have compassion for living creatures.

Bioremediation: Bioremediation uses natural as well as recombinant microorganisms to break down toxic and hazardous substances in a solid waste by aerobic and anaerobic means.

Biomining: Biomining is the process of using microorganisms (microbes) to extract metals of economic interest from rock ores or mine waste. Biomining techniques may also be used to clean up sites that have been polluted with metals.

Way Ahead

- **Laying down clear technical norms:** It is important that Bio-mining and Bio-remediation

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is made compulsory for areas wherever it can be applied. It shouldn't be left to the discretion of municipalities to decide whether there are geographical constraints that prevent the use of the aforementioned techniques.

- **Biomining and Bioremediation** are superior as well as simple methods which are not only cost-effective but also environment-friendly. The best part is that the land which was a landfill is fully available for alternate uses.
- **Scientific Capping:** Capping, if it is inevitable, should be done scientifically with underground pits that have a good bottom and sideliners, and proper piping and gas extraction systems to prevent the escape of leachate and gases.
- **Decentralization of waste management:** It is important that waste management is decentralized. Ambikapur in Chhattisgarh and Vellore present a very good example of the same where the waste was collected in a decentralized manner, composted naturally and is planted.

It is important that the decision-makers at all levels of government opt for more innovative and green approaches rather than falling for the technology-extensive costly methods of waste disposal which are normally being lobbied for by the manufacturers of such technologies.

Legacy waste

Recently, the National Green Tribunal (NGT) has directed a committee to assess the amount of damage caused to the environment due to the dump sites (legacy waste) in Delhi.

- The committee comprises representatives from the Central Pollution Control Board, National Environmental Engineering Research Institute (NEERI) and IIT Delhi.

Key Points

- Legacy wastes are the wastes that have been collected and kept for years at some barren land or a place dedicated for Landfill (an area to dump solid waste).
- This waste can be roughly grouped into **four categories**:
 - Contained and/or stored waste(contained or stored waste are wastes in tanks, canisters, and stainless steel bins).
 - Buried waste.
 - Contaminated soil and groundwater
 - Contaminated building materials and structures.
- **Biomining method** has been proposed by the Central Pollution Control Board (CPCB) for the effective disposal of legacy wastes.
- **Environmental Impact of Legacy Waste**
 - Legacy wastes not only **occupy large space**, but also become a **breeding ground** for pathogens, flies, malodours and generation of leachate, which may lead to **water contamination**.
 - They also contribute to generation of **greenhouse gases** and **pose risk of uncontrollable fire**.

Biomining

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- Biomining is the process of **using microorganisms (microbes)** to extract metals of economic interest from rock ores or mine waste.
- Biomining techniques may also be used to **clean up sites** that have been polluted with metals.
- It is usually used for old dumped waste that remains in a **partly or fully decomposed state with no segregation in existence between wet and dry waste**.
- In the cost effective method of biomining, treatment is done by dividing the garbage heap at the site into suitable blocks to let the air percolate in the heap.
- As a result, the leachate which is the water in the heap with suspended solid particles is drained off and microbes are sprayed in the heap to initiate biological decompositions.
- The waste is turned over several times in order to devoid the waste to leachate as much as possible.
- This biological decomposition of the waste **decreases the volume of the waste by 40%**.

What is National Green Tribunal (NGT)?

- It is a specialised body set up under the National Green Tribunal Act (2010) for effective and exp environmental protection and conservation of forests and other natural resources.
- With the establishment of the NGT, India became the third country in the world to set up a speciali Australia and New Zealand, and the first developing country to do so.
- NGT is mandated to make disposal of applications or appeals finally within 6 months of filing of the
- The NGT has five places of sittings, New Delhi is the Principal place of sitting and Bhopal, Pune four.

Structure of NGT

- The Tribunal comprises of the Chairperson, the Judicial Members and Expert Members. They s and are not eligible for reappointment.
- The Chairperson is appointed by the Central Government in consultation with Chief Justice of India
- A Selection Committee shall be formed by central government to appoint the Judicial Members and
- There are to be least 10 and maximum 20 full time Judicial members and Expert Members in the t

Powers & Jurisdiction

- The Tribunal has jurisdiction over all civil cases involving substantial question relating to environ legal right relating to environment).
- Being a statutory adjudicatory body like Courts, apart from original jurisdiction side on filing of an jurisdiction to hear appeal as a Court (Tribunal).
- The Tribunal is not bound by the procedure laid down under the Code of Civil Procedure 1908, 'natural justice'.
- While passing any order/decision/ award, it shall apply the principles of sustainable development polluter pays principle.
- NGT by an order, can provide
 - relief and compensation to the victims of pollution and other environmental damage (includi any hazardous substance),
 - for restitution of property damaged, and
 - for restitution of the environment for such area or areas, as the Tribunal may think fit.

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- An order/decision/award of Tribunal is executable as a decree of a civil court.
- The NGT Act also provides a procedure for a penalty for non compliance:
 - Imprisonment for a term which may extend to three years,
 - Fine which may extend to ten crore rupees, and
 - Both fine and imprisonment.
- An appeal against order/decision/ award of the NGT lies to the Supreme Court, generally via communication.
- The NGT deals with civil cases under the seven laws related to the environment, these include:
 - The Water (Prevention and Control of Pollution) Act, 1974,
 - The Water (Prevention and Control of Pollution) Cess Act, 1977,
 - The Forest (Conservation) Act, 1980,
 - The Air (Prevention and Control of Pollution) Act, 1981,
 - The Environment (Protection) Act, 1986,
 - The Public Liability Insurance Act, 1991 and
 - The Biological Diversity Act, 2002.
- Any violation pertaining to these laws or any decision taken by the Government under these laws

Strengths of NGT

- Over the years NGT has emerged as a critical player in environmental regulation, passing strict orders to deforestation to waste management.
- NGT offers a path for the evolution of environmental jurisprudence by setting up an alternative dispute resolution mechanism.
- It helps reduce the burden of litigation in the higher courts on environmental matters.
- NGT is less formal, less expensive, and a faster way of resolving environment related disputes.
- It plays a crucial role in curbing environment-damaging activities.
- The Chairperson and members are not eligible for reappointment, hence they are likely to deliver without succumbing to pressure from any quarter.
- The NGT has been instrumental in ensuring that the Environment Impact Assessment process is strictly followed.

Challenges

- Two important acts - Wildlife (Protection) Act, 1972 and Scheduled Tribes and Other Traditional Forest Dwellers (Rights) Act, 2006 have been kept out of NGT's jurisdiction. This restricts the jurisdiction area as the functioning as crucial forest rights issue is linked directly to environment.
- The NGT decisions are being challenged in various High Courts under Article 226 (power of High Courts) many asserting the superiority of a High Court over the NGT, claiming 'High Court is a constitutional body'. This is one of the weaknesses of the Act as there is lack of clarity about what kind of orders can be challenged though according to the NGT Act, its decision can be challenged before the Supreme Court.
- Decisions of NGT have also been criticised and challenged due to their repercussions on economic activities.
- The absence of a formula based mechanism in determining the compensation has also brought criticism.
- The decisions given by NGT are not fully complied by the stakeholders or the government. Sometimes it is not feasible to implement within a given timeframe.
- The lack of human and financial resources has led to high pendency of cases - which undermines the purpose of the Act.
- The justice delivery mechanism is also hindered by limited number of regional benches.

Important Landmark Judgements of NGT

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- In 2012, POSCO a steelmaker company signed a MoU with the Odisha government to set up steel plant, this was considered a radical step in favour of the local communities and forests.
- In 2012 Almitra H. Patel vs. Union of India case, NGT gave judgment of complete prohibition of landfills including landfills – regarded as the single biggest landmark case dealing with the issue of solid waste.
- In 2013 in Uttarakhand floods case, the Alaknanda Hydro Power Co. Ltd. was ordered to compensate directly relied on the principle of 'polluter pays'.
- In 2015, the NGT ordered that all diesel vehicles over 10 years old will not be permitted to ply in Delhi.
- In 2017, the Art of Living Festival on Yamuna Food Plain was declared violating the environment protection act with a penalty of Rs. 5 Crore.
- The NGT, in 2017, imposed an interim ban on plastic bags of less than 50-micron thickness in Delhi to prevent animal deaths, clogging sewers and harming the environment".

Source: TH/MoEF

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Initiatives to Fight Coronavirus

GS-III | 27 March, 2020

Initiatives to Fight Coronavirus

Part of: GS Prelims and GS-III- Health

1. Recently, the Government has developed a platform which will host webinars by **All India Institutes of Medical Sciences (AIIMS)** doctors for healthcare workers across the country.

- It has also developed an app that will trace the paths of **COVID-19** positive patients, serving as a warning to possible contacts.

Key Points

- **Chat Boxes on Facebook and WhatsApp** have been set up by the **Ministry of Electronics and Information Technology (MeitY)** for providing information about COVID-19.
- **A portal to map the requirements of hospitals**, and cross-referencing them with those who have offered to help with equipment is also being set up by the government.
- **A webinar platform** has been developed in tandem with the **Ministry of Health and Family Welfare**.
 - The webinars are for the **frontline health workers** (nurses, paramedics, ASHA-Accredited Social Health Activist workers, anganwadi workers), who are more prone to COVID-19.
 - The webinars would be streamed on Facebook, YouTube and WhatsApp.
 - The state governments would also be involved so as to make the content available in **regional languages**.
- The government has also worked on a **contact path tracing app**, tentatively called '**Corona Kavach**'.
 - The app would store location data and would enter the credentials of the person if he/she tests positive. This information would be sent to the cloud.
 - A signal would come to the app which would convert it from green to red.
 - The server would then find out people who were in close proximity with the infected person in the last 14 days.
 - Their apps would turn yellow and they would get an alert that they should quarantine themselves.

Pradhan Mantri Swasthya Suraksha Yojana

- PMSSY is a **Central Sector Scheme**.
- The primary objective of PMSSY is to correct the **regional imbalances in availability of**

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affordable/reliable tertiary level healthcare in the country in general, and, to augment facilities for quality medical education in under-served or backward States, in particular.

- In addition to **setting up of AIIMS**, PMSSY also envisages **up-gradation of several existing Government Medical Colleges/Institutions** in different states in the country.

All India Institutes of Medical Sciences

- The AIIMS was **created in 1956**, as an **autonomous institution** of national importance through an Act of Parliament.
- **Objectives**
 - To develop a **pattern of teaching in undergraduate and postgraduate medical education** to demonstrate high standard of medical education to all medical colleges and other allied institutions.
 - To bring together in one place educational facilities of the highest order for the **training** in various branches of the health activity.
 - To attain **self sufficiency** in postgraduate in medical education.
- Recently, the central government has decided to set up 22 new establishments of AIIMS. This is part of the **Pradhan Mantri Swasthya Suraksha Yojana**.

II. The Indian Council of Medical Research (ICMR) has invited manufacturers to supply **5 lakh antibody kits** for diagnosis of COVID-19 infection.

- The antibody test will help in screening suspected patients.

Key Points

- **The Antibody Test (PT SHOT)**
 - The antibody test for **COVID-19** will act as a **screening process** that will give quick results in a few hours.
 - The antibody test detects the body's response to the virus. It gives an indication that a person has been exposed to the virus.
 - If the test is positive, the swab is collected and a Ribonucleic Acid (RNA) test is done using the **Polymerase Chain Reaction (PCR) kit**. Therefore, this is a **two-stage process**.
 - However, the antibody test **does not not definitely indicate that a person is infected with COVID-19 infection**. It is **only for screening**.
- Currently, India is **only conducting the conventional RT-PCR test (Reverse Transcription Polymerase Chain Reaction)**.
- **Antibody Kits vs RT-PCR Test (PT SHOT)**
 - RT-PCR test detects the **virus genetic material, which is the RNA**.
 - The antibody test detects the body's response to the virus.
 - RT-PCR provides direct evidence whereas antibody kits provide the indirect evidence.
- **Need for Antibody Kits**
 - **Shortage of the PCR kits** and thus the test is complicated, expensive and time-consuming.
 - The antibody test will be where a large number of people are being quarantined and where everybody cannot undergo an RNA test.

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◦ Results of Testing in South Korea

- The antibody test was done in South Korea, one of the few countries which has been able to flatten the pandemic curve.
- In South Korea, people with a history of travel and contact are screened using the antibody kit.
- Then, a large number of suspected patients were being quarantined in the country through contact tracing of just a single patient.

Ribonucleic Acid

- RNA is an important **biological macromolecule** that is present in all biological cells.
- It is principally involved in the **synthesis of proteins, carrying the messenger instructions** from Deoxyribonucleic acid (DNA), which itself contains the genetic instructions required for the development and maintenance of life.
- In some **viruses, RNA, rather than DNA, carries genetic information.**

Contract Tracing

- Contact tracing is the process of identifying, assessing, and managing people who have been exposed to a disease to prevent transmission.

Indian Council of Medical Research

- Indian Council of Medical Research (ICMR) is the **apex body in India for the formulation of biomedical research.**
- Its mandate is to **conduct, coordinate and implement medical research** for the benefit of innovations into products/processes and introducing them into the public health system.
- It is funded by the Government of India through the **Department of Health Research, Ministry of Health and Family Welfare.**

III. The **Defence Research and Development Organisation (DRDO)** has developed a ventilator and plans to produce 5,000 of them per month to treat **COVID-19** patients.

Key Points

- DRDO had developed a ventilator along with the **Society for Biomedical Technology (SBMT)** and now the technology has been transferred to an industry in Mysuru.
 - The industry is producing the secondary version of a ventilator initially developed by DRDO.
 - Currently, it has a capacity to manufacture 5,000 ventilators per month and this could be scaled up to 10,000 per month.
- **Other contributions by DRDO:**
 - DRDO laboratories have **manufactured 20,000 litres of sanitiser** and supplied to various organisations like Delhi police.
 - It has **developed N-99 and 3-layered masks** and **supplied 10,000 masks** to Delhi police personnel.

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- It is **tying up with some private companies** to make **personal protection equipment** such as body suits and also ventilators.
- It is working on **providing ready-to-eat meals** for the government and health workers through the Defence Food Research Laboratory, Mysore which already supplies them to the armed forces.
- The **Ordnance Factory Board (OFB)** has also increased the production of sanitisers, masks and bodysuits.

Defence Research and Development Organisation

- It works under the **administrative control** of the **Ministry of Defence**.
- It's **objective** is to establish a world class science and technology base for India and provide India by equipping them with internationally competitive systems and solutions.
- It was **established in 1958** after **combining** Technical Development Establishment (TDEs) of the Technical Development & Production (DTDP) with the Defence Science Organisation (DSO).
- **Mission:**
 - Design, develop and lead to production state-of-the-art sensors, weapon systems, platform for Defence Services.
 - Provide technological solutions to the services to optimise combat effectiveness and to promote.
 - Develop infrastructure and committed quality manpower and build strong indigenous technology.

Society for Biomedical Technology

It is an **inter-ministerial initiative of the Government of India** established to **promote healthcare** by providing indigenous solutions in the field of medical equipment and devices.

- It was established under the **Department of Defence Research and Development (DRDO)** in collaboration with the Ministry of Science and Technology, Ministry of Social Justice and Empowerment and Ministry of Health & Family Welfare.

Ordnance Factory Board

- The OFB which includes 41 Ordnance Factories is headquartered at **Kolkata**.
- Indian Ordnance Factories is the **oldest and largest industrial setup** which functions under the **Department of Defence Production of the Ministry of Defence**.
- The ordnance factories form an **integrated base for indigenous production of defence hardware and equipment**, with the **primary objective of self reliance** in equipping the armed forces with state of the art battlefield equipment.

IV. The Supreme Court has issued a circular informing that it would continue to hear cases of extreme urgency through videoconferencing during the lockdown, keeping in mind physical distancing norms.

- A Bench, led by Chief Justice of India Sharad A. Bobde, recently used its extraordinary powers under Article 142 to lift the limitation period for all cases until further notice.

V. In view of prevailing sensitive health conditions affecting community health due to **Covid-19**,

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the Ministry of Tribal Affairs has asked State Governments for rescheduling of holidays in **Eklavya Model Residential Schools (EMRS)** and **Eklavya Model Day Boarding Schools (EMDBS)**.

Eklavya Model Residential Schools

- **Eklavya Model Residential Schools (EMRS)** started in the year 1997-98 to impart quality education to ST children in remote areas.
- The schools focus not only on academic education but on the all-round development of the students.
- The objective of EMRS is **to provide quality middle and high level education** to Scheduled Tribe (ST) students in remote areas, not only to enable them to avail of reservation in high and professional educational courses and as jobs in government and public and private sectors but also to have access to the best opportunities in education at par with the non ST population.
- Each school has a capacity of **480 students, catering to students from Class VI to XII.**
- These are being set up by grants provided **under Article 275(1) of the Constitution.**
- Eklavya Model Residential Schools (EMRSs) are funded by the Ministry of Tribal Affairs.
- In order to give further impetus to EMRS, it has been decided that by the **year 2022, every block with more than 50% ST population and at least 20,000 tribal persons,** will have an EMRS.
- Eklavya schools are on par with Navodaya Vidyalaya and have special facilities for preserving local art and culture besides providing training in sports and skill development.

Eklavya Model Day Boarding Schools (EMDBS)

- Wherever **density of ST population is higher** in identified Sub-Districts (90% or more), it is proposed to set up a Day Boarding School (EMDBS) on an experimental basis for providing additional scope for ST Students without residential facility.

Background

- STs, constitute 8.6% of the country's total population and 11.3% of the total rural population.
- Despite the increase in literacy rates among STs from 8.53% in 1961 to 58.96% in 2011, and the fact that the Right to Education Act, 2009 makes it mandatory that all children between the ages of 6 and 14 be provided free and compulsory education, significant disparities exist in enrolment rates, drop-outs, across states, districts and blocks.
- In the case of tribals, **dropout rates are still very high** – 35.6% in Classes I to V; 55% in Classes VI to VIII; 65% in Classes IX to XII. In 2010-11, according to the Statistics Of School Education 2010-2011.
- According to a 2014 UNICEF-sponsored South Asia regional study, **economic and socio-cultural factors** are the major causes of education deprivation for certain groups in India, especially SCs, STs and Muslims.
- The India Human Development Survey shows the incidence of poverty is highest among the STs (32.3%), and then the Muslims (30.6%).

VI. RBI cuts rates, allows loan moratorium

Context:

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- The **economic impact of the COVID-19 pandemic** and Reserve Bank of India's (RBI) efforts to address it.

Details:

- The countrywide **lockdown in place to check the spread of novel Coronavirus** will have an economic impact for India.
- In this light of the unprecedented crisis, the **meeting of the Monetary Policy Committee (MPC) was advanced**.
- In a move aimed at easing the impact of the lockdown, RBI has come out with several measures to **increase liquidity in the economy**.

CRR reduction:

- In a move to infuse sufficient liquidity into the banking system, RBI has **reduced the Cash Reserve Ratio (CRR) requirement** by 100 basis points (bps) for banks. The cash reserve ratio has been reduced from 4% to 3%.
- The minimum daily requirement of maintaining CRR balance has also been reduced to 80% from 90%.
- With the reduction in CRR requirements, **banks can deploy the liquidity in interest-earning assets**.

Reduction in key interest rates:

- The RBI has **reduced the key interest rates of repo and reverse repo rates sharply**.
- The repo rate was reduced by 75 bps to 4.4% while the reverse repo rate was cut by 90 bps point to 4%.
 - The higher reduction in the reverse repo rate was aimed at prompting banks to lend more rather than keeping their excess liquidity with the RBI.
- While cutting benchmark rates, the RBI has **continued with its accommodative stance**.

EMIs deferred:

- RBI has also allowed banks to defer **payment of Equated Monthly Installments (EMIs)** on home, car, personal loans as well as credit card dues for three months till May 31, 2020.
 - Since non-payment will not lead to non-performing asset classification by banks, there will be no impact on credit score of the borrowers.
- The interest payments have been deferred and not waived.
- The three-month moratorium on all term loan installments, along with deferment of **interest on working capital, will help mitigate debt servicing burden due to COVID-19 disruption**, and prevent transmission of financial stress to various sectors of the economy. This move will protect borrowers financially amid the nationwide lockdown.

Marginal Standing Facility:

- RBI has increased **the cap for liquidity available under the marginal standing facility**.
- Under the marginal standing facility (MSF), banks can borrow overnight at their discretion by dipping up to 2% into the Statutory Liquidity Ratio (SLR). The RBI has decided to increase the limit of 2% to 3% till June 2020.

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- Marginal standing facility (MSF) is a window for banks to borrow from the Reserve Bank of India in an emergency situation when inter-bank liquidity dries up completely.
- Banks borrow from the central bank by pledging government securities at a rate higher than the repo rate under liquidity adjustment facility. **The MSF rate is pegged 100 basis points or a percentage point above the repo rate.**

Long-term repo operations:

- Observing that large **sell-offs in the domestic equity, bond and forex markets** has intensified redemption pressures, the central bank has decided to infuse money into the economy through **Targeted Long-Term Repo Operations (TLTRO)**.
- The RBI will auction long-term repo of **around 1 lakh crore rupees**.
- Liquidity availed under the scheme by banks has to be deployed in investment grade corporate bonds, commercial paper and non-convertible debentures.
- The three-year targeted long term repo operations will **decongest credit channels and lower cost of credit**, providing much needed relief to the corporate.

Indian Banks in offshore NDF markets:

- The **ongoing financial market volatilities** triggered by Coronavirus outbreak dragged the **rupee to touch lifetime lows** and also breach the 75-mark against the US dollar. The rupee has come under pressure recently as foreign investors are exiting emerging economies.
- The Reserve Bank of India has allowed Indian banks to participate in the offshore Non-Deliverable Forwards (NDF) rupee derivatives.
- This is a positive step in **broadening market participants and better rate discovery**.
- The move is aimed at **curtailing the volatility in the domestic currency** due to the Covid-19 pandemic.

Conclusion:

- The above actions will see an **infusion of 3.74 lakh crore rupees into the banking system**. These measures will provide adequate liquidity in the system, bring down the cost of capital and mitigate the impact of pandemic COVID-19.
- The **Indian financial markets** which are facing heightened volatility due to the spread of the COVID-19 pandemic **could stabilize** with the Reserve Bank of India unveiling measures.
- Given the **importance of monetary policy transmission** to ensure the effectiveness of RBI actions, banks will have to **reduce their lending rates and ramp up credit disbursal**.

Economic Impact of the Pandemic

- According to the **International Monetary Fund (IMF)** chief Kristalina Georgieva, the **world has entered a recession** in 2009, following the global financial crisis.
 - Recession implies significant decline in general economic activity.
- **Moody's Investor Service (a rating agency)** has reduced its **GDP growth forecast for India to 2.5%** in 2020, from its previous projection of 5.3%, due to the impact of the COVID-19 pandemic and the resultant lockdown.
 - At the low growth rate of 2.5% in 2020, India may see a sharp fall in incomes, further weighing on domestic recovery in 2021.
 - The ongoing 21-day lockdown in India has brought business activity in most sectors of the economy to a standstill, leading to job losses.

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- The ratings agency expects the country's economy to recover in **2021**, estimating a **growth rate of 5.8%**, but the virus's spread and containment makes it difficult to fully assess the **economic toll** of the crisis. **India grew** 3.2% in 2021.
- The **G20 countries** are likely to see an overall contraction of GDP by 0.5%. G20 GDP growth rate, which was 3.2% in 2021.
- The U.S. economy would contract by 2% in 2020, while the Euro area would see a 2.2% contraction. China's growth slowed to 3.3%, although it is expected to recover to 6% in 2021.

VII. The Centre has announced a ₹1.7 lakh crore relief package – Pradhan Mantri Garib Kalyan (PMGK) Yojana in response to the COVID-19 pandemic and countrywide lockdown, providing free food and cash transfers to support the poorest and most vulnerable citizens during the crisis.

Details:

- The package will cost the national exchequer Rs 1.7 lakh crore, which is 0.8 per cent of India's estimated gross domestic product in the current financial year.
- Garib Kalyan package is a range of measures that the Government of India will take to alleviate the economic, health, and food-related distress of India's poor.
- The Finance Minister's (FM) previous relief package was primarily targeted towards the firms in the organised sector of the economy. (However, the informal sector accounts for 90 per cent of all jobs in the country). The PMGK attempts to plug these gaps.

What does the PM Garib Kalyan package entail?

There are five elements to the PMGK package:

1. Medical insurance cover of Rs 50 lakh for all health workers (doctors, paramedics, Asha workers, etc.) treating patients.
2. Help for the poor and those engaged in the unorganised sector.
3. Help for the poor engaged in the organised sector.
4. Help for construction workers.
5. Use the money already available in the "district(-level) mineral fund" to pay for medical testing and screening for the coronavirus.

How does it benefit the health workers?

- Medical insurance cover of Rs 50 lakh per person for all health workers (doctors, paramedics, Asha workers, etc.) treating COVID-19 patients has been announced.

What help is being provided to poor and those in unorganised sector?

The help is in two ways — free food grains and cash transfers.

1. The central government, working with the state governments, will provide an additional quota of food grains free of cost to all 80 crore beneficiaries under the Public Distribution System.
 - As such, PDS beneficiaries will get 5 kg of wheat (or rice) per month for the next three months.

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- Additionally, each household (or family – typically, a household is assumed to have 5 members) will get 1 kg of pulses per month.
2. 6 types of additional cash transfers have been announced. These are:
- Rs 2,000 per farmer to 9 crore farmers under the PM-KISAN scheme. (To be frontloaded in the first week of April).
 - An additional Rs 1,000 per month pension for the next 3 months for those receiving old age, widow or disability pensions. It is a one-time payment. (Expected to help 3 crore beneficiaries).
 - Rs 500 per month will be transferred for the next 3 months to women holding a Jan Dhan bank account. (Expected to help 20 crore women).
 - Women who are registered beneficiaries under Ujjwala Yojana will get one LPG cylinder per month for the next three months. While this is not cash transfer, the cylinders will be free of cost. (Expected to help over 8 crore women beneficiaries under the programme).
 - Women Self Help Groups across the country can take collateral-free loans up to Rs 20 lakh instead of the existing limit of Rs 10 lakh. There are roughly around 63 lakh SHGs. (This is an enabling provision for receiving higher credit).
 - Wages paid for manual labour under MGNREGA have been increased from Rs 180 per day to Rs 202 per day. (This move will help 5 crore households [since only one person per household can avail of employment under MGNREGA] and enable them to earn Rs 2,000 as additional income). However, the work needs to be done in a manner that ensures social distancing.

What help is being provided to poor in organised sector?

This help essentially relates to the Employees' Provident Fund. There are two initiatives announced by the government.

- Under the first provision, the GoI will pay the EPF contributions (12% of the basic salary) of both the employees and the employers for the next three months.
 - However, this move applies only to about 4 lakh firms where the total number of employees is less than 100, and where 90 per cent of the employees earn less than Rs 15,000 per month.
 - The move is aimed at reducing the monetary strain on small firms in the organised sector that may feel compelled to fire employees given the mounting financial strain.
- The government has amended the Employees Provident Fund Organisation (EPFO) regulations to enable workers to withdraw a non-refundable advance from their EPF accounts.
 - This amount is, however, limited to 75 per cent of the total money in one's EPF account, or one's salary for three months, whichever is lower.
 - This move is expected to help close to 4.8 crore workers registered with the EPFO.

What about construction workers?

- To alleviate the economic distress of construction workers, the government has asked state governments to use the money which is roughly Rs 31,000 crore, already available

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in a welfare fund for construction workers.

- This would give relief to 3.5 crore registered workers.

Concerns:

The announcements related to the provisioning of food grains via PDS will be especially helpful. However, a few points need to be flagged.

- Some of the cash transfer amounts are too small (like Rs 500 per month for women Jan Dhan account holders); some others are not really there (like the doubling of loans for women SHGs).
- At present many construction workers and labourers are struggling to reach their homes. To receive help, they will need to have been registered in a particular state, but there is nothing to assume that they are in the state in which they are registered.
- It is a concern as to how work would be carried out under MGNREGA while maintaining social distancing. If a lot of people join in, there would be a concern of disease transmission — and if very few join in (fearing the disease) then the hoped-for benefit may not actually accrue.
- In a lockdown, where there's little scope to undertake MNREGA works, an unemployment allowance would have served well.
- Since the onus for paying unemployment allowance to MGNREGA workers under the Act is on the state governments, there remain concerns if the state governments would make the necessary budgetary provision.
- These measures ignore the poorest, especially migrant workers, who have been excluded from the ambit of social security programmes of the government because they do not possess the necessary documents and proof of address.
- It is time for states to learn from the experience of Kerala and other States which have universalised their social security programmes to ensure no deserving family is excluded.
- Also, care needs to be taken to ensure that social distancing norms necessary to prevent the COVID-19 from spreading are adhered to, else the entire purpose of the curbs stands to be defeated.

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Booster dose

Main features of the economic relief package announced by the Finance Minister on Thursday



Insurance cover of **₹50 lakh** per person for doctors and medical workers fighting COVID-19



80 crore poor people will receive 5 kg wheat or rice and 1 kg of preferred pulses for free every month for the next three months. Free grains can be availed of in two installments

▪ Increase in MGNREGA wage to **₹202** a day from ₹182 for **13.62 crore** families

▪ **20.4 crore** Jan Dhan women account holders to get **₹500** per month for next three months



Union Finance Minister Nirmala Sitharaman announcing the measures in New Delhi on Thursday. ■ PTI



Ex-gratia of **₹1,000** to 3 crore senior citizens, disabled and widows among the poor



Government to front-load **₹2,000** to **8.7 crore** farmers in the first week of April under the existing PM Kisan Yojana



8.3 crore below the poverty line families to receive free cylinders for the next three months



Wage-earners below **₹15,000** per month in businesses having less than 100 workers to receive **24%** of their monthly wages into their **PF accounts** for the next three months



The Centre has directed the State governments to use the Construction Workers Welfare Fund to give relief to **3.5 crore** registered workers

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Source: TH/IE

International efforts to Fight Coronavirus

GS-II | 27 March, 2020

International efforts to Fight Coronavirus

Part of: GS Prelims and GS-II- IR

I. Amidst COVID-19 pandemic, G20 summit was held through video conferencing, recently.

Key takeaways:

- G20 nations **pledged** a united front in the fight against coronavirus.
- They also committed to inject **\$5 trillion** into the global economy to ensure the situation of deep recession doesn't arise.
- G20 leaders also **pledged to work** with bodies such as the **International Monetary Fund** to deploy a **robust financial package** to support the **developing nations** which **do not have access** to capital markets or adequate health facilities.
- Other **affected countries** also **joined** the virtual summit including Spain, Jordan, Singapore and Switzerland.
- Leaders also **agreed to contribute** to the WHO-led **COVID-19 Solidarity Response Fund** on a voluntary basis.
- G20 was criticised recently for being slow to address the COVID-19 pandemic.

G20 additions:

COVID-19 Solidarity Response Fund

- It is a global fund for supporting the work of the World Health Organization in containing the 2019-20 coronavirus pandemic.
- It was launched in Geneva, Switzerland.

International Monetary Fund

- It is an **international organization** headquartered in Washington, D.C.
- It works to foster global **monetary cooperation**, secure **financial stability**, facilitate **international trade**, promote **high employment** and sustainable **economic growth**, and **reduce poverty** around the world

II. The UNICEF recently appealed to the governments worldwide to **not to ignore life-saving health interventions** such as immunisation in their efforts to contain the spread of coronavirus

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(COVID-19).

Key takeaways:

- The children from the poorest families in **countries affected by conflicts and natural disasters** will be at the greatest risk.
- It is also feared that **critical life-saving services**, including immunisation may be **disrupted**, especially in **Africa, Asia and the Middle East** where they are essentially needed.
- The UNICEF also **announced that** it would **increase support** to all countries so that **children continue their learning** despite schools being shut.
- Initial sum of **\$9 million** had already been allocated to help governments and education partners **develop plans for alternative learning programmes** and **ensure access to remote learning**.

United Nations International Children's Emergency Fund (UNICEF) (PT SHOT)

- It is a United Nations agency **responsible for providing** humanitarian and developmental aid to children.
- It is among **the most widespread and recognizable social welfare organizations** in the world.
- UNICEF's activities include:
 - Immunizations and disease prevention
 - Administering treatment for children and mothers with HIV
 - Enhancing childhood and maternal nutrition
 - Improving sanitation
 - Promoting education
 - Providing emergency relief in response to disasters
- UNICEF relies **entirely on contributions** from governments and private donors.
- Its Headquarter is in New York City, US.

III. US's historic \$2.2 trillion coronavirus stimulus package

- It is a \$2.2 trillion economic package to contain the damage caused to the country's economy due to the novel coronavirus outbreak.
- It is far bigger than the \$800 billion assistance provided in the aftermath of the 2008 financial crisis.
- The package intends to respond to the coronavirus pandemic and provide direct payments and jobless benefits for individuals, money for states and a huge bailout fund for businesses.

What does the US's \$2 trillion package aim to do?

Quarantine orders due to the COVID-19 pandemic in many parts of the US have caused a serious downturn in the country's economy.

- The deal aims at sustaining businesses and workers that have been losing income, as

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well as enabling the economy to recover once the quarantine orders are lifted.

Main provisions of the \$2 trillion package

- The package will provide direct financial support for **low and middle-income families**, and payments for **companies** that have lost a majority or all of their customers due to the pandemic.
- The support for companies is aimed towards ensuring that they keep paying wages to their employees through the crisis, despite losing business activity. The deal also provides increased support for workers who have been fired or who have had their remuneration reduced.

1. Individuals and Families

- The package has earmarked \$250 billion for individuals and families. Workers with annual incomes of up to \$75,000 will receive \$1,200 in direct payments, which will increase to \$2,400 for couples, as well as an additional \$500 per child. The benefits will phase out for those with higher salaries.
- At least \$260 billion will be provided for **emergency unemployment insurance**, which will include an extra 13 weeks of coverage for those who have already used up existing benefits.
- **Self-employed and gig economy workers** will also be covered, and weekly benefits will be increased up to \$600.

2. Companies

- \$350 billion have been **earmarked for small businesses** to pay salaries, rent and utilities. These benefits will extend to businesses having 500 or fewer employees, as well as nonprofits, self-employed persons and hotel and restaurant chains having not more than 500 workers per location.
- It has also provided \$17 billion to help small businesses **repay existing loans**, and \$10 billion for grants up to \$10,000 for small businesses to **pay operating costs**.
- The **companies benefitting from the stimulus package** will not be able to buy back outstanding stock, and have to maintain employment levels as of March 13, 2020, as far as possible.
- The companies in which top administration officials, members of Congress or their families have 20 per cent stake will not be able to avail the schemes.

3. Institutions

- A **disaster relief fund** of \$45 billion will be created to reimburse state and local governments for the purposes of providing community services, medical services among other safety measures.
- The package has assigned \$31 billion for **education**, which will include \$13.5 billion for local schools and programmes, and \$14 billion for assisting universities and colleges.
 - Student loans have been suspended, and no interest will be accrued over the next

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few months.

- Allocations have also been made for **social programmes**, such as child care, aid for heating and cooling, homeless assistance, as well as money for evacuating US citizens and diplomats stuck overseas, international disaster aid, and money for organising the 2020 general election.
- Lastly, coronavirus testing will be free for all citizens.



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Source: TH/IE

Humanoid robot and application

GS-III | 27 March, 2020

Humanoid robot tested

Part of: GS Prelims and GS III – Science and Technology

A series of trials were conducted on a **humanoid robot** at a government hospital in Jaipur.

Key takeaways:

- The trials were carried out to check if robot could be **used for delivering medicines and food** to the COVID-19 patients admitted there.
- If approved, the robot would help in keeping the **doctors and nursing staff at a safe distance** to protect them against the dreaded **coronavirus**.
- The medicos and paramedical staff are at **higher risk** of being infected with the virus despite wearing protective gear.
- It is battery-operated humanoid robot with a lifespan of four to five years
- It uses **artificial intelligence and Internet of Things (IoT)**.
- It can **navigate its own way without the instructions** to follow lines on the floor.
- The robots could also be **easily disinfected** and **used multiple times** inside the high-risk isolation ward.

Humanoid robot

- It is a robot with its body shape built to resemble the human body.
- The design may be for functional purposes.

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More PICK Ups

1. **Vyommitra**, a half-humanoid is being developed by the Indian Space Research Organisation (ISRO) for an unmanned space mission later in 2020.

Who is Vyommitra?

- ISRO's Vyommitra (vyoma = space, mitra = friend) is the prototype for a "half-humanoid".
- She is also being called a half-humanoid since she will only have a head, two hands and a torso, and will not have lower limbs.
- She is under development at a robotics laboratory at the Vikram Sarabhai Space Centre.
- She will fly to space on an unmanned mission later this year, aiming to lay the ground for ISRO's manned mission Gaganyaan in 2022.

What is a half-humanoid?

- A humanoid is basically a robot with the appearance of a human being.
- Like any robot, a humanoid's functions are determined by the computer systems to which it is connected.
- With the growth of artificial intelligence and robotics, humanoids are being increasingly used for repetitive jobs.
- The artificial intelligence technologies are used in a humanoid to perform simple functions that include walking, moving things, communicating and obeying commands.

Why is ISRO developing a humanoid?

- ISRO plans to send a human into space for the first time by 2022.
- It is racing against time to develop a crew module and rocket systems that will ensure the safe travel and return of the Indian astronaut.
- Other countries that have successfully launched humans into space did so after having used animals for conducting tests of their rockets and crew recovery systems.
- ISRO will use the humanoid to test the efficacy of its GSLV Mk III rocket to transport a human to space and back.

What are the tasks that Vyommitra will perform in space?

- The Vyommitra humanoid will test the ground for the human spaceflight.
- Once fully developed for the unmanned flight, she will be able to perform activities which will include,
 1. Procedures to use equipment on board the spacecraft's crew module such as safety mechanisms and switches,
 2. Receiving and acting on commands sent from ground stations.
- The functions listed for the humanoid include attaining launch and orbital postures, responding to the environment, generating warnings, replacing CO2 canisters, monitoring the crew module, etc.
- Vyommitra will have lip movement synchronised to mimic speech.
- She can also double up as an artificial buddy to an astronaut - providing audio imgs on

UPSC "PT" DNA (Daily News Analysis)

aspects like the health of the spacecraft during the launch, landing and orbital phases of the manned mission.

- She will report back to Earth on the changes occurring in the crew module during the spaceflight and return.
- This will enable ISRO to understand the safety levels required in the crew module that will eventually fly a human being.

2. FEDOR

1. It is carrying a **life-size humanoid robot** that will spend 10 days learning to assist astronauts on the International Space Station.
2. Known as **FEDOR**, which stands for **Final Experimental Demonstration Object Research**, the Skybot F-850 is the **first humanoid robot to be sent to space by Russia**.
3. The robot's main purpose is to be used in operations that are especially dangerous for humans onboard spacecraft and in outer space.
4. FEDOR, who is the size of an adult and **can emulate movements of the human body, has apparently embraced his mission, describing himself as "an assistant to the ISS crew"**.

Significance:

1. Fedor copies human movements, a key skill that allows it to remotely help astronauts or even people on Earth to carry out tasks while the humans are strapped into an exoskeleton.
2. Fedor is described as potentially useful on Earth for working in high radiation environments, demining and tricky rescue missions.

PT SHOT: Fedor is not the first robot to go into space.

In 2011, NASA sent up **Robonaut 2**, a humanoid robot developed with General Motors that had a similar aim of working in high-risk environments.

In 2013, Japan sent up a small robot called **Kirobo** along with the ISS's first Japanese space commander.

3. Recently an exhibition of art created by a **humanoid AI robot**, named **Ai-da** was held at **University of Oxford**.

- Aida is the world's **first ultra-realistic humanoid artist**, able to draw creatively due to **in-built artificial intelligence (AI) technology**.
- Ai-Da is named after **Ada Lovelace**, the English mathematician and writer often called the world's first computer coder.
- In **2017**, **social robot Sophia** was given citizenship of Saudi Arabia – the **first robot to**

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be given legal personhood anywhere in the world.

4. **Sophia** is a social humanoid robot developed by Hong Kong based company Hanson Robotics. Sophia was activated on February 14, **2016**, and made her first public appearance at South by Southwest Festival (SXSW) in mid-March 2016 in Austin, Texas, United States. She is able to display more than 60 facial expressions.

Sophia has been covered by media around the globe and has participated in many high-profile interviews. In October 2017, Sophia became a Saudi Arabian citizen, the first robot to receive citizenship of any country. In November 2017, Sophia was named the United Nations Development Programme first ever Innovation Champion, and is the first non-human to be given any United Nation title.



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Source: TH/IE/PIB

Pandemics of the world

GS-III | 27 March, 2020

Pandemics of the world

Part of: GS Prelims and GS-III- Health

COVID-19 is the most recent disease which was declared as pandemic by the World Health Organization.

Difference between Epidemic Vs Pandemic

Epidemic is a term that is often broadly used to describe any problem that has grown out of control. An epidemic is defined as "an outbreak of a disease that occurs over a wide geographic area and affects an exceptionally high proportion of the population."²

An epidemic is an event in which a disease is *actively* spreading. In contrast, the term **pandemic** relates to geographic spread and is used to describe a disease that affects a whole country or the entire world.³

While casual use of *epidemic* may not require such nuance, it's important to know the differences between these two terms (and similar ones like *outbreak* and *endemic*) when

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considering public health news. In addition, from an epidemiologic standpoint, terms like these direct the public health response to better control and prevent a disease.

A glimpse through major pandemics of the world which caused huge loss to life:

The Plague of Justinian

It killed between 30 million and 50 million people. The cause of the Plague of Justinian was infectious fever caused by *Yersinia pestis*.

Black death

Between 1347 and 1351, it spread throughout **Europe**, killing approximately 25 million people. It is believed to have been the result of plague – an infectious fever caused by bacterium *Yersinia pestis*. It was likely transmitted from rodents to humans by the bite of infected fleas.

Smallpox (15th – 17th centuries)

Smallpox claimed the lives of approximately 20 million people, close to 90% of the population, in the Americas. The pandemic helped Europeans colonize and develop the newly vacated areas. Smallpox is caused by infection with the variola virus transmitted through various ways.

Cholera (1817 – 1823)

The first cholera pandemic began in Jessore, India. It was the first of 7 major cholera pandemics that have killed millions of people. The World Health Organization has called cholera "the forgotten pandemic". Its seventh outbreak, which began in 1961, continues to this day. It is caused by eating food or drinking water contaminated with a bacterium called **Vibrio cholera**.

Spanish Flu or H1N1 (1918 – 1919)

It is caused due to H1N1 virus. It infected around 500 million people, or a third of the world's population, of that time. The pandemic was responsible for killing over 50 million people globally.

Hong Kong Flu or H3N2 (1968 – 1970)

Global fatalities were around one million. It was caused by an H3N2 strain of the influenza A virus. It is believed that the virus responsible for the Asian flu evolved and re-emerged 10 years later into this so-called "Hong Kong flu". H3N2 was exceptionally contagious.

HIV/AIDS (1981 – present)

Since 1981, 75 million people have had the HIV virus and approximately 32 million have died as a result.

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HIV/AIDS is a persistent epidemic that continues to impact millions of people every year. The HIV infection is caused by the human immunodeficiency virus (HIV). The virus can be transmitted through contact with infected blood, semen or vaginal fluids.

SARS (2002 – 2003)

SARS, or severe acute respiratory syndrome, is an illness caused by one of the 7 coronaviruses that can infect humans. In 2003, an outbreak that originated in the Guangdong province of China became a global pandemic. It infected around 8,000 people and killing 774 of them. The consequences of the 2003 SARS pandemic were largely limited due to an intense public health response by global authorities.

Swine Flu or H1N1 (2009 – 2010)

It was a new form of the influenza virus which emerged in 2009. It infected approximately millions of people with global deaths in the range of 151,700 to 575,400. It is called the "swine flu" because it appeared to cross over from pigs to humans in transmission. 80% of the virus-related deaths occurred in people younger than 65.

Ebola (2014 – 2016)

It began in a small village in Guinea in 2014 and spread to a handful of neighbouring countries in West Africa. It is caused by infection with a virus of the Filoviridae family, genus Ebolavirus. The virus killed 11,325 of the 28,600 infected people, with most cases occurring in Guinea, Liberia, and Sierra Leone.

Zika Virus (2017)

Zika virus (ZIKV) is a member of the virus family Flaviviridae. It is spread by daytime-active Aedes mosquitoes, such as **A. aegypti** and **A. albopictus**. Its name comes from the **Ziika Forest of Uganda**, where the virus was first isolated in 1947. **Zika virus is related to the dengue, yellow fever, Japanese encephalitis, and West Nile viruses.** Since the 1950s, it has been known to occur within a narrow equatorial belt from Africa to Asia. From 2007 to 2016, the virus spread eastward, across the Pacific Ocean to the Americas, leading to the 2015–2016 Zika virus epidemic.

The infection, known as Zika fever or Zika virus disease, often causes no or only mild symptoms, similar to a very mild form of dengue fever. While there is no specific treatment, paracetamol (acetaminophen) and rest may help with the symptoms. As of 2016, the illness cannot be prevented by medications or vaccines. Zika can spread from a pregnant woman to her baby. This can result in **microcephaly**, severe brain malformations, and other birth defects. Zika infections in adults may result rarely in **Guillain–Barré syndrome**.

Coronavirus, or COVID-19 (2019 – present)

Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered

UPSC "PT" DNA (Daily News Analysis)

coronavirus. Worldwide cases have surpassed 500,000 with more than 24,000 deaths globally. It is believed to be transmitted from animals to humans. The vast majority of cases are reported from USA now. On March 11, the WHO characterized the outbreak as a pandemic. Estimates indicate that Coronavirus could eventually infect 40% to 70% of the global population. Practicing social distancing is recommended. The damage to the world economy threaten the worst recession since the Great Depression or the "panics" of the 1800s, depending on the scale of government responses.



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Source: Web

Afghanistan terrorist attack

GS-II | 27 March, 2020

Afghanistan and terrorist attack

Part of: GS Prelims and GS-II- IR

The terrorist attack on a **gurudwara in Kabul**, claimed by Islamic State (IS), has killed 25 people, mostly members of Afghanistan's persecuted Sikh minority.

FOR CURRENT IMPORTANT LOCATION: <https://www.youtube.com/watch?v=3EBazqLy34M>

Afghanistan is notorious for violence against its minority communities.

- The Hazara Shias were brutally attacked during the Taliban regime in 1996-2001.
- Most Hindus and Sikhs, once spread across the country in hundreds of thousands, have fled the country in past three decades

Past:

- Post 9/11 attacks, US invaded Afghanistan with the aim to destroy Al-Qaeda terrorist group.
- For past two decades, there is a Civil War going on in Afghanistan between Taliban (Fundamentalist group supported by Pakistan) and the Afghan government (supported by USA).
- US and Taliban signed a peace deal in March 2020
- One of the provisions of peace deal was that the Taliban had committed themselves to eliminating the Islamic State from Afghanistan

UPSC "PT" DNA (Daily News Analysis)

Why Islamic State (IS) has attacked now?

- To send a message to its rivals that it continues to be a potent force
- Increasing influence of Taliban (reflected through peace deal with US) is clashing with IS's own interest to control vast territory & spread its own ideology
- Hence, it wants to revive its own importance vis-à-vis Taliban
- IS wants to exploit the clashes between Taliban and Afghan government – unable to finalize on the prisoner swap part of the peace deal – to increase its own influence
- Division in Afghan Political leadership –Afghanistan now has two Presidents – meaning weak coordinated response on the perpetrators of attack

What are the consequences of the attack?

- Less focus on fighting the COVID-19 pandemic in Afghanistan – Iran (epicentre of the pandemic) borders the country => dangers of Afghanistan becoming a new epicentre.
- Abandonment of minorities in the country may lead to refugee crisis
- Derails the peace deal signed between Taliban and USA
- Increased instability in the region

What is the Impact on India?

- **Internationalization of Kashmir Issue:** IS has stated that it had carried out the attack in revenge for Kashmir.
- Doubts over Pakistan's involvement in this attack shows that there is increased security threat to Indians (workers & Officials) in Afghanistan
- Increased terrorism in the region is not in the Economic & Strategic interest of India

Afghanistan faces two contagions, new and old — COVID-19 and the relentless violence. A united effort has to be made for the ceasefire of violence so as to enable humanitarian assistance to deal with the pandemic.



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Source: TH

UPSC "PT" DNA (Daily News Analysis)

Ministry of Science & Technology - Achievements

GS-III | 28 March, 2020

Review 2019: Ministry of Science & Technology

Part of: GS Prelims and GS-III- S&T

Atal Jai Anusandhan Biotech Mission - Undertaking Nationally Relevant Technology Innovation (UNaTI)

- It is expected to transform the Health, Agriculture and Energy sectors during the next 5 years. This mission includes the following missions-
 - GARBH-ini** - A Mission to promote Maternal and Child Health and develop prediction tools for preterm birth.
 - IndCEPI** - A Mission to develop affordable vaccines for endemic diseases,
 - Development of Biofortified and Protein-Rich wheat** - contributing to **POSHAN Abhiyan**,
 - Mission on Antimicrobial Resistance** for Affordable Diagnostics and Therapeutics
 - Clean Energy Mission** - Innovative Technology interventions for Swachh Bharat.

UMMID Initiative

- Government has launched UMMID (Unique Methods of Management and treatment of Inherited Disorders) initiative
- NIDAN (National Inherited Diseases Administration) Kendras have also been launched.

Global Innovation and Technology Alliance (GITA)

- IT is PPP between Department of Science & Technology (DST) and Confederation of Indian Industry (CII).
- It aims towards enhancing the country's innovation ecosystem.

Redefined Units of Kilogram, Kelvin, Mole and Ampere

- The recent open session of the General Conference on Weights and Measures (CGPM) at BIPM, has unanimously adopted the resolution to redefine four of the seven base units, the kilogram (SI unit of weight), Kelvin (SI unit of temperature), mole (SI unit of amount of substance), and ampere (SI unit of current).
- The new SI is being implemented worldwide from 20th May 2019 i.e. the World Metrology Day by CSIR-NPL in India.

IndiGen Genome Project

- The CSIR has conducted Whole Genome Sequencing of 1,008 Indians from different populations across the country.
- The whole genome data will be important for building the knowhow, baseline data and indigenous capacity in the emerging area of Precision Medicine.

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Important Legislations

DNA Technology (Use and Application) Regulation Bill - 2019

- **The Bill has been passed in Lok Sabha.**
- The Bill has been formulated recognizing the need for regulation of the use and application of Deoxyribonucleic Acid (DNA) technology, for establishing identity of missing persons, victims, offenders, under trials and unknown deceased persons.

Guidelines for Evaluation of Nanopharmaceuticals in India

These guidelines are intended to provide transparent, consistent and predictable regulatory pathways for nanopharmaceuticals in India.

- **Nanopharmaceuticals** are defined as a pharmaceutical preparation containing nanomaterials intended for internal use or external application on a human for the purpose of therapeutics, diagnostics and health benefits.
- **Nanomaterial** is defined as material having a particle size in the range of 1 to 100 nm in at least one dimension.
- **Nano-formulations** are not entirely new drugs but medicines that have better quality because of the technology-led delivery mechanisms that are used to make its administration in the body more effective.

Important Conventions

One Health India Conference, 2019

- The conference aimed to launch India's new One Health Initiative - an inter-sectoral approach to tackling the most urgent health threats in India as well as in low and middle income countries across South and South East Asia and Sub-Saharan Africa.

Global Antimicrobial Resistance Research and Development Hub

- India joined the **Global Antimicrobial Resistance (AMR) Research and Development (R&D) Hub.**
- This expands the global partnership working to address challenges and improve coordination and collaboration in global AMR R&D to 16 countries, the European Commission, two philanthropic foundations and four international organisations (as observers).

Global Bio-India Summit, 2019

- Global Bio-India is one of the largest biotechnology stakeholders conglomerates being held in India for the first time.

Important Facts

Prime Minister's Science, Technology and Innovation Advisory Council (PM-STIAC)

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- PM-STIAC is an overarching body that assesses specific science and technology domains in India, and formulates interventions and roadmaps.
- It advises the Prime Minister on all matters of science, technology and innovation.

Department of Biotechnology

- The Department of Biotechnology in the Ministry of Science and Technology celebrated its 33rd Foundation Day in New Delhi on 26th February with the theme as "Celebrating Biotechnology: Building Indian as an Innovation Nation".
- Biotechnology Research Innovation and Technology Excellence (BRITE) awards were given on the occasion.

Shanti Swarup Bhatnagar (SSB) prizes for the years 2016, 2017 and 2018

The SSB Prize is awarded each year on the basis of conspicuously important and outstanding contributions to human knowledge and progress, made through work done primarily in India during the five years, preceding the year of the prize.

First Indigenous Fuel Cell System developed by CSIR

- Developed under India's flagship program named "New Millennium Indian Technology Leadership Initiative (NMITLI)"

Bharatiya Nideshak Dravya

- HPCL and **CSIR–NPL** released 26 Petroleum BNDs (Bharatiya Nideshak Dravya or Indian Reference Material) coinciding with the occasion of **World Metrology Day**.
- These will be of immense use for BS VI fuels and will save foreign exchange through import substitution for Certified Reference Materials (CRMs).
- This will provide traceability for all vital parameters of Petroleum products testing and certification comprising 13 physical properties, 2 Physicochemical properties and 11 Chemical properties, including BND for sulfur content measurement at lower concentrations which will be of immense use for BS VI fuels.



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Source: TH/WEB

IndiGen Genome project

GS-III | 28 March, 2020

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IndiGen Genome project

Part of: GS Prelims and GS-III- S&T

Details of the *IndiGen Genome project, conducted by CSIR*, were recently announced.

The initiative was *implemented by the CSIR-Institute of Genomics and Integrative Biology (IGIB), Delhi and CSIR-Centre for Cellular and Molecular Biology (CCMB), Hyderabad.*

Significance, outcomes and benefits of the project:

The outcomes of the IndiGen will have applications in a number of areas including *predictive and preventive medicine with faster and efficient diagnosis of rare genetic diseases.*

The data will be *important for building the knowhow, baseline data and indigenous capacity in the emerging area of Precision Medicine.*

About Genomics for Public Health in India (IndiGen) programme:

IndiGen programme aims *to undertake whole genome sequencing of thousands of individuals representing diverse ethnic groups from India.*

The objective is to enable genetic epidemiology and develop public health technologies applications using population genome data.

Need for genome sequencing:

1. Ever since the human genome was first sequenced in 2003, it opened a fresh perspective on the *link between disease and the unique genetic make-up of each individual.*
2. Nearly 10,000 diseases — including cystic fibrosis, thalassemia — are known to be the result of a single gene malfunctioning.
3. While genes may render some insensitive to certain drugs, genome sequencing has shown that cancer too can be understood from the viewpoint of genetics, rather than being seen as a disease of certain organs.



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Source: TH

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DNA Technology- Bill Analysis

GS-III | 28 March, 2020

DNA Technology- Bill Analysis

Part of: GS Prelims and GS-III- S&T

This bill allows the use of DNA Technology for establishing the identity of persons in matters of crime, parentage disputes, immigration and transplantation of human organs.

Provisions of the Bill

- The Bill regulates DNA testing for identification of persons under the Indian Penal Code, 1860, the Immoral Traffic (Prevention) Act, 1956, the Medical Termination of Pregnancy Act, 1971 and the Motor Vehicles Act, 1988.
- **The Bill allows for DNA testing in certain civil matters as well.** This includes matters such as parentage disputes; issues related to ancestry, immigration, assisted reproductive technologies, transplantation of human organs, and for the establishment of individual identity.
- Written consent is required for DNA samples to be collected, processed and included in the database except for those **who have committed crimes with punishment of seven years.**
- **DNA Regulatory Board:** This Bill envisages the establishment of DNA Regulatory Board that will set standards for the proper storage of DNA samples collected. It will be chaired by Secretary of Government of India, Department of Biotechnology.
- **Any laboratory that conducts DNA testing and analysis to establish the identity of an individual** (in respect of matters listed in the Schedule) is required to obtain accreditation from the DNA Regulatory Board.
- **DNA Databanks will be created at national and regional levels.** DNA laboratories will have to share DNA data prepared by them with DNA Data Banks.
- In criminal cases, the laboratory is required to return the biological sample to the investigating officer after depositing the DNA profile with the DNA Data Banks. In all other cases, the laboratory will destroy the sample and inform the concerned person.
- **Punishment:** The penalty for various offences such as unauthorized disclosure of information from the Data Bank or obtaining information from the Data Bank without authorization is imprisonment up to three years and fine of up to One Lakh Rupees.

DNA Technology

- The Deoxyribonucleic Acid (DNA) is a set of instructions found in a cell. These instructions are necessary for the growth and development of an organism.
- The DNA of a person is unique, and variation in the sequence of DNA can be used to match individuals and identify them.
- A DNA test is an ultimate test for deciding the cases on parentage, inheritance, unidentified bodies and thus also useful in identifying victims of natural and man-made disasters.

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- Use of DNA Technology in criminal investigations was first started in the U.K. in 1984.
- In India, the first conviction with the help of DNA Technology was made in Rajiv Gandhi's murder case.

Concerns

- **Inadequate Resources:** Currently, laboratories are able to assess only one or two samples at a time. This results in delayed investigations.
- **Shortage of such investigators** who either are trained forensic scientists or know the art of collecting and preserving the requisite DNA sample.
- **The possibility of misuse of DNA samples:** Through DNA, not only the identity of a person can be known but also other characteristics like if she/he is suffering from any disease etc. There is a possibility that people having access to DNA samples, blackmail the person who has submitted his/her DNA sample.
- **Single Use:** Bill envisages the use of a DNA sample for a particular specified purpose only. For any other purpose, the DNA sample will have to be processed again.

Way Forward

- **Laboratories need to be modernized** so that around 40 to 50 samples can be processed at the same time. This will help in the quick resolution of various cases and thus will strengthen India's Justice Delivery System.
- **Use of DNA cannot be restricted to a particular purpose.** A series of situations may arise that can demand usage of a DNA sample again and again.
- **Effective implementation of the provisions mentioned in the bill** is required to ensure the proper storage and usage of DNA bills. Privacy of individuals anyhow cannot be compromised.

Source: TH/PIB

Initiatives to Fight Coronavirus – Part-2

GS-III | 28 March, 2020

Initiatives to Fight Coronavirus – Part-2

Part of: GS Prelims and GS-III- Health

India is all set to join the **World Health Organisation's (WHO) Solidarity Trial** which aims at rapid global search for drugs to treat **COVID-19**.

Key Points

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- India has **stayed away from the multi-country trial** till now due to its small sample size.
- It will express its interest to participate in the trial for the Indian population when it feels that the time is right.
- Vaccine development wasn't a priority for **Indian Council of Medical Research (ICMR)** currently because there are around 30 vaccine groups already in operation worldwide.
- Keeping in view the **rising number of cases and challenges faced by India**, the government has decided to participate in the solidarity trial.

Solidarity Trial (PT SHOT)

- It will test different drugs or combinations like:
 - Remdesivir.**
 - Combination of **lopinavir** and **ritonavir (anti-HIV drugs).**
 - Interferon beta with the combination of lopinavir and ritonavir.**
 - Chloroquine.**
- It will compare their effectiveness to the **standard of care**, the regular support used by the hospitals treating COVID-19 patients.

Challenges

- Shortage of Medical Devices and Equipment:** The **Medical Technology Association of India (MTAI)**, which represents research-based medical technology companies, has highlighted the shortage of medical devices and equipment.
 - The Centre has exempted manufacturing, warehousing and distribution of the medical devices and equipment from the lockdown but these are being clamped down by the state governments and local level administrators.
 - Transport trucks carrying these vital preparatory materials are stuck at city and state borders.
- Delays in Import:** India is importing probes and rapid testing kits from China, Germany and WHO. However, some delays have been reported but it is made sure that the delays do not affect the testings.
- Time Constraints:** ICMR is currently looking at repurposed drug molecules to find treatment for COVID-19 due to time constraints.

Solutions

- India needs to prioritise what it needs right now to deal with the situation.
- Indian scientists have formed a group called **Indian Scientists' Response to COVID-19 (ISRC)** to tackle the pandemic.
- While governmental bodies make their decisions and professional scientific academies take principled stands, there is a need for individuals in the scientific community to also help individually and collectively.

Indian Scientists' Response to COVID-19

- Indian Scientists' Response to COVID-19 (ISRC)** is a **voluntary group of scientists** to address the concerns raised by the COVID-19 outbreak and to discuss the rapidly

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evolving situation with its dire need for science communication.

- The group **consists of nearly 200 scientists** from institutions such as the National Centre for Biological Sciences (NCBS), the Indian Institute of Science (IISc), the Tata Institute of Fundamental Research (TIFR), the Indian Institute of Technologies (IITs), etc.
- It **aims** to study existing and available data to bring out analysis that will support the Central, State and local governments in carrying out their tasks.
- There are **several working groups within it**:
 - One of them works on **hoax busting** to address disinformation spreading with respect to the coronavirus.
 - One works on **science popularisation** to develop material that explains concepts such as home quarantine.
 - Other groups **work on resources in Indian languages**, mathematical models and apps etc.
 - It is **suggested that an app should be developed** that can map spaces being used as shelters and share that data with the State governments.
- A **platform has also been developed to connect people in need with those who can provide help**.
 - It works through two channels, phone and WhatsApp.
 - It can connect patients or people with symptoms to doctors.
 - It may also connect elderly people with volunteers from NGOs to assist in chores such as grocery shopping.

NOTE: World Health Organization (WHO), the United Nations' specialized agency for Health was founded in 1948.

- Its **headquarters** are situated in **Geneva, Switzerland**.
- There are 194 Member States, 150 country offices, six regional offices.
- It is an inter-governmental organization and works in collaboration with its member states usually through the Ministries of Health.
- The WHO provides leadership on global health matters, shaping the health research agenda, setting norms and standards, articulating evidence-based policy options, providing technical support to countries and monitoring and assessing health trends.

It began functioning on **April 7, 1948** – a date now being celebrated every year as **World Health Day**.

Objectives

- To act as the **directing and coordinating authority on international health work**.
- To **establish and maintain effective collaboration with the United Nations**, specialized agencies, governmental health administrations, professional groups and such other organizations as may be deemed appropriate.
- To **provide assistance** to the Governments, upon request, in **strengthening health services**.
- To **promote cooperation among scientific and professional groups** which contribute

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to the advancement of health.

II. Recently, India has decided to set up an electronic platform to help member countries of the South Asian Association for Regional Cooperation (SAARC) fight the COVID-19 pandemic.

- The decision has been conveyed during a virtual conference of health professionals of eight countries in the region.

Key Points

- The virtual conferencing of the health workers of the SAARC Nation was part of the two proposals made by Indian Prime Minister during the recently held virtual meeting of SAARC.
 - The other proposal was to set up SAARC COVID-19 Emergency Fund.
- The e-Platform will enable the SAARC nations to share and exchange information, knowledge, expertise and best practices for jointly combating the Coronavirus epidemic.
 - Objectives of the e-Platform
 - Training of emergency personnel
 - Disease surveillance
 - Joint research
 - Currently the platform is in the construction stage.
 - Meanwhile India suggested to set up a Whatsapp or email group to help facilitate exchange of information among the SAARC countries till the platform became fully operational
- During the conference all the countries highlighted their specific vulnerabilities, capacities, the best practices, gaps in resources and logistics, private sector participation as well as levels of preparedness.
- Community engagement and participation was identified as an important element in any anti-Covid19 strategy.
- Fight Corona IDEathon
 - Recently, a 2-day online IDEathon has been organized to search for accessible and affordable technological solutions that can contain the rapid spread of infection, ease the mounting pressure and ensure a quick return to normalcy.
 - The initiative was jointly organised by MHRD Innovation Cell, AICTE, MeitY Startup Hub, InnovatioCuris and other institutions of global and national prominence.
 - The focus area of the IDEathon was
 - designing reusable/washable masks
 - system to disinfect currency notes/coins
 - a non-invasive diagnostic kit
 - Storage Kits to collect test samples from homes

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India in SAARC Region- Neighbour first policy

- India launched the **GSAT-9, also dubbed the South Asia Satellite**, aiming to provide space-enabled services to other South Asian countries.
- India has offered member countries of the South Asian Association for Regional Cooperation (SAARC) to join its advanced navigational satellite programme—GPS-Aided Geo Augmented Navigation (GAGAN).
- Indian Regional Navigation Satellite System (IRNSS) has potential to be useful for the SAARC countries which are dependent on foreign systems.

III. The **Indian Army** has code-named its **anti-COVID-19 campaign** as **Operation Namaste** to help the government in its fight against the **pandemic**.

Key Points

- **Soldiers are advised to follow the lockdown**, wherever they do not have any operational role, and stay fit. They are assured that their families will be well taken care of.
 - **Leave extension** of those on leave as well as **curtailment of leave** to bare minimum have been imposed.
 - **Segregation facilities** have been set up to observe troops already back from leave from various states.
- So far **six quarantine facilities** at Manesar, Jaisalmer, Jodhpur, Chennai, Hindan and Mumbai have been established where 1,463 people evacuated from coronavirus-affected countries have been accommodated.
 - The forces are setting up more such facilities at Kolkata, Visakhapatnam, Kochi, Dundigal, Bengaluru, Kanpur, Jaisalmer, Jorhat and Gorakhpur which can be ready within 72 hours, if needed.
- **28 Armed Forces hospitals have been earmarked as COVID hospitals**
 - These hospitals will include armed forces patients as well as civilian patients transferred from state health authorities.
 - Five hospitals from the Army, Navy and the Air Force are conducting coronavirus tests using the **RT-PCR methodology** and more hospitals will be equipped soon with the resources.
 - 62 Cantonment Boards have been instructed to identify beds in hospitals and health centres and guesthouses for any eventuality.

Contributions by Other Forces

- Recently, **Defence Research and Development Organisation (DRDO)** also came forward to help by **developing ventilators** and providing other medical equipment.
- **Indian Navy** also contributed by delivering 60,000 face masks ordered by **Indian Medical Association, Goa** which were stuck in Delhi due to the lockdown.
 - **Ilyushin 38 SD (FROM RUSSIA)** departed **INS Hansa** for Palam Airport, New Delhi and returned on the same day with the masks.

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IV. In view of the **COVID-19 pandemic**, Indian Railways has decided that the period from 22.03.2020 to 14.04.2020 shall be treated under "**Force Majeure**".

Key Points

- A **Force Majeure (FM)** means extraordinary events or circumstances beyond human control such as an event described as an Act of God (like a natural calamity).
- During this period no **demurrage, wharfage, stacking, stabling, detention and ground usage charge shall be leviable**.
- Zonal Railways have been advised to coordinate with State Government authorities to **ensure logistics support** in order to **keep up the essential goods transportation**.

Force Majeure

- Force majeure refers to a **clause that is included in contracts** to remove liability for natural and unavoidable catastrophes that interrupt the expected course of events and restrict participants from fulfilling obligations.
- Force majeure clauses **excuse companies (or other parties to a contract) from meeting certain obligations** when events beyond their control interfere with their ability to hold up their end of the bargain.
- If invoked, the clauses can relieve companies from commitments, temporarily or permanently, without being in breach of their agreement.

V. In view of the hardships faced by the parents and the students due to the COVID-19 epidemic, the **National Testing Agency** has postponed the ensuing NEET (UG) May 2020 examination scheduled to the last week of May 2020. The National Eligibility-cum-Entrance Test (NEET) is the examination for admission to undergraduate medical degree programmes.

National Testing Agency

- **National Testing Agency (NTA)** was established as a Society registered under the Indian Societies Registration Act, 1860.
- It is an autonomous and self-sustained testing organization to conduct entrance examinations for admission/fellowship in higher educational institutions.
- **Objective:** To conduct efficient, transparent and international standards tests in order to assess the competency of candidates for admission and recruitment purposes.

VI. The **Department of Empowerment of Persons with Disabilities (DEPwD)** under the Ministry of Social Justice and Empowerment has issued "**Comprehensive Disability Inclusive Guidelines**" to States and Union territories. This is for the protection and safety of **Persons with Disabilities (Divyangjan)** in light of Pandemic **COVID19**.

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Highlights from the Guidelines

- **Training:** All persons responsible for handling emergency response services should be trained on
 - the rights of persons with disabilities.
 - the risks associated with additional problems for persons having specific impairments.
- **Ensuring Essentials to PwDs:** All states and UTs should ensure services like caregiver support, supplies and medical aid at the doorstep of PwDs.
 - It is sought that caregivers should be allowed to reach PwDs by exempting them from restrictions during lockdown or providing passes in a simplified manner on priority.
- **Helpline Number:** States should set-up 24x7 helplines for persons with disabilities.
- **Information:** All video-graphic awareness material related to COVID 19 should be with subtitles and there should be sign language interpretation for persons with hearing impairment.
- **For Resolving Disability Specific Issues:** The states should make the State Commissioner for PwDs the nodal officer to resolve disability specific issues during the crisis period.

Note: Section 8 of the Rights of Persons with Disabilities Act, 2016 guarantees equal protection and safety for persons with disabilities in human emergencies and natural disasters

- The Government of India has declared the **situation arising out of COVID 19 as a National Disaster.**
- In September 2019, **National Disaster Management Authority**, Union Ministry of Home Affairs issued National Disaster Management Guidelines on **Disability Inclusive Disaster Risk Reduction (DiDRR).**

VII. Privacy concerns over the government's measures to tackle the spread of Coronavirus.

Details:

- The governments have taken many steps to monitor the people who are advised quarantine to contain the spread of COVID-19.
 - **Databases of passengers who returned from high risk "coronavirus affected countries"** have been shared with relevant departments to monitor these high risk suspected cases. In Delhi, the list contains details of 722 passengers who arrived in Delhi and are **mandated 14 days of quarantine.**
 - The government has newly launched pilot or beta version of a mobile phone application called "**Corona Kavach**" which uses the data of confirmed COVID-19 patients to alert subscribers when they are in close proximity.
 - The app is designed to **track the location of COVID-19 infected people and alert subscribers when they come near their location.**

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- The app will require all the COVID-19 patients to download the app to track their whereabouts.

Government's efforts to monitor people advised quarantine for COVID-19 has run into **privacy issues**.



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Source: TH/PIB

WHO

GS-II | 28 March, 2020

World Health Organization (WHO)

Part of: GS Prelims and GS-II- IO

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- To **promote cooperation among scientific and professional groups** which contribute to the advancement of health.

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Governance

World Health Assembly

- The Health Assembly is composed of delegates representing Members.
- Each Member is represented by not more than three delegates, one of whom is designated by the Member as chief delegate.
- These delegates are chosen from among persons most qualified by their technical competence in the field of health, preferably representing the national health administration of the Member.
- The Health Assembly meets in regular annual session and sometimes in special sessions as well.

Functions

- The Health Assembly determines the policies of the Organization.
- It supervises the financial policies of the Organization and reviews and approves the budget.
- It reports to the **Economic and Social Council** in accordance with any agreement between the Organization and the United Nations.

The Secretariat

- The Secretariat comprises of the Director-General and such technical and administrative staff as the Organization may require.
- The Director-General is appointed by the Health Assembly on the nomination of the Board on such terms as the Health Assembly may determine.

Membership and Associate Membership

- Members of the United Nations may become Members of the Organization.
- Territories or groups of territories which are not responsible for the conduct of their international relations may be admitted as Associate Members by the Health Assembly.

WHO's Contribution to World

- **The country offices are WHO's primary contact points with governments.**
 - They provide technical support on health matters, share relevant global standards and guidelines, and relay government requests and requirements to other levels of WHO.
 - They also inform and follow up with the host government on reports of disease outbreaks outside the country.
 - They provide advice and guidance on public health to other UN agency offices in-country.
- In addition to governments, WHO also coordinates with other UN agencies, donors, non-governmental organizations (NGOs) and the private sector.
- The benefits of WHO's international health work are reaped by all countries, including the

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most developed.

- For example, all nations have benefited from their contributions to the WHO programs that led to the global eradication of smallpox and to promote better and cheaper ways of controlling tuberculosis.
- The organization believes that **immunization, which prevents the six major communicable diseases of childhood—diphtheria, measles, poliomyelitis, tetanus, tuberculosis, and whooping cough—**should be available to all children who need it.
 - WHO is leading a worldwide campaign to provide effective immunization for all children in cooperation with the United Nations Children's Fund (UNICEF).
- **During the first decade (1948-58),** the WHO focused **major attention on specific infectious diseases** afflicting millions of people in the developing countries.
 - These included malaria, yaws, tuberculosis, and venereal diseases.
 - There was also a high priority for maternal and child health services, for environmental sanitation (especially safe water), and for standardization of drugs and vaccines.
 - In these years, WHO developed close working relationships with other UN agencies.
- **The period (1958 to 68)** was much **influenced by the national liberation in Africa** of several former colonies, which became voting members of the Organization.
 - In 1960, the departure from the newly independent Democratic Republic of the Congo of nearly all foreign doctors created a massive emergency.
 - Working with the international Red Cross, WHO recruited 200 physicians and other health workers, and established a new fellowship program to enable scores of Congolese "medical assistants" to become fully qualified doctors.
 - In this period, fellowships for health-personnel development became a major WHO strategy in almost all countries.
 - WHO stimulated and **even collaborated with the world chemical industry in the 1960s** to develop new insecticides for fighting the vectors of onchocerciasis ("river blindness") and for treating schistosomiasis.
 - Demonstration that tuberculosis could be effectively treated, without expensive sanatorium care, was a great breakthrough of the late 1950s.
 - Even the mundane standardization of the nomenclature of diseases and causes of death was an important contribution of WHO to international health communications.
- **The third decade (1968-78) of WHO included the great victory of eradicating smallpox** from the earth.
 - In 1967, smallpox was still endemic in thirty-one countries, afflicting between 10 and 15 million people.
 - The work was done by teams of public health workers in all the countries affected, with WHO serving as leader, co-ordinator, and inspiration.
 - Millions of dollars were saved worldwide by this achievement, which overcame various national rivalries and suspicions.
 - The momentum of this great campaign added strength to another drive, for expanding the immunization of the world's children against six once-ravaging diseases: diphtheria, tetanus, whooping cough, measles, poliomyelitis, and tuberculosis (with BCG vaccine).
 - After long hesitation for political reasons, in this period WHO finally entered the field

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of family planning by promoting worldwide research and development on human reproduction.

- New efforts were also put into the control of malaria and leprosy.
- WHO also promoted the training of auxiliary health personnel, such as **China's "barefoot doctors" and India's traditional birth-attendants.**
 - Such training was a sounder investment in most developing countries than preparing physicians for predominantly urban medical practice.
- **The fourth decade (1978–88) was ushered in by a great world conference of WHO and UNICEF in Alma Ata, a city of the Asiatic part of the Soviet Union.**
 - In reaction against excessive attention to high-technology, the **Alma Ata conference emphasized the great importance of primary health care, preventive and curative, as the best approach to national health policy.**
 - This approach, **stressing community participation, appropriate technology, and intersectoral collaboration,** became the central pillar of world health policy.
 - Thirty years after its birth, 134 WHO member-states reaffirmed their commitment to equality, as embodied in the slogan **"Health for All."**
 - The provisions of the safe drinking water and adequate excreta disposal for all were the objectives of the **International Drinking Water Supply and Sanitation Decade (1981-90)** proclaimed by the UN General Assembly in 1980 and supported by WHO.
 - In this period, every country was encouraged to develop a list of "essential drugs" for use in all public facilities, instead of the thousands of brand-name products sold in world markets.
 - The WHO's condemnation of the promotion of **artificial infant-formula products** in developing countries also attracted widespread attention.
 - The worldwide control of **infantile diarrhea with oral rehydration therapy** was another great advance, based on very simple principles.
- **Networks:** A 1995 outbreak of Ebola virus in the Congo, which raged for three months unbeknownst to WHO, revealed a startling **lack of global public health surveillance and notification systems.**
 - **So in 1997, WHO (in collaboration with Canada) rolled out the Global Public Health Intelligence Network (GPHIN), which took advantage of information on the Internet to function as an early warning system for potential epidemics.**
 - The WHO supplemented this (GPHIN) in 2000 with the **Global Outbreak Alert Response Network (GOARN) to analyze events once they were detected.**
 - GOARN linked 120 networks and institutes with the data, laboratories, skills and experience to take action swiftly in a crisis.
- According to the WHO, most of the estimated **500000 maternal deaths each year are preventable through family planning**—to avoid illegal abortions—and hygienic education of traditional birth-attendants.
- The WHO has also mounted increasing **efforts against cancer**, which now takes as many lives in the developing countries as in the affluent ones.
- The fight against **tobacco**, the largest single cause of preventable death in both men and women, is part of WHO effort in every country.
- Disseminating the simple rules of diet, exercise, nonsmoking, prudent use of alcohol, and

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hygienic working conditions are **major objectives of health education** in WHO everywhere.

- The worldwide epidemic of AIDS (acquired immune deficiency syndrome) has presented another challenge to WHO in mounting global efforts to stem the spread of this lethal sexually transmitted virus disease.
 - **The WHO is working for the introduction of self-testing** so that more people living with HIV know their status and can receive treatment.

WHO and India

- India became a party to the WHO on 12 January 1948.
- Regional office for South East Asia is located in New Delhi.
- Smallpox
 - In 1967 the total number of smallpox cases recorded in India accounted for nearly 65% of all cases in the world. Of this 26,225 cases died, giving a grim picture of the relentless fight that lay ahead.
 - **In 1967, the WHO launched the Intensified Smallpox Eradication Programme.**
 - With a coordinated effort by Indian government with the World Health Organization (WHO), smallpox was eradicated in 1977.
- Polio
 - India began the battle against the disease in response to the **WHO's 1988 Global Polio Eradication Initiative** with financial and technical help from World Bank.
 - **Polio Campaign-2012:** The Indian Government, in partnership with UNICEF, the World Health Organization (WHO), the Bill & Melinda Gates Foundation, Rotary International and the Centers for Disease Control and Prevention contributed to almost universal awareness of the need to vaccinate all children under five against polio.
 - As a result of these efforts, India was removed from the list of endemic countries in 2014.
- It has also been instrumental in the country's transition from hospital-based to community-based care and the resultant increase in health posts and centres focusing on primary care.
- **The WHO Country Cooperation Strategy – India (2012-2017)** has been jointly developed by the Ministry of Health and Family Welfare (MoH&FW) and the WHO Country Office for India (WCO).

World Health Concerns & WHO

- **Air pollution and Climate Change**
 - Nine out of ten people breathe polluted air every day. In 2019, air pollution is considered by the WHO as the **greatest environmental risk to health**.
 - Microscopic pollutants in the air can penetrate respiratory and circulatory systems, damaging the lungs, heart and brain, killing 7 million people prematurely every year from diseases such as cancer, stroke, heart and lung disease.
 - The primary cause of air pollution (burning fossil fuels) is also a major contributor to climate change, which impacts people's health in different ways.

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- Between 2030 and 2050, climate change is expected to cause 250 000 additional deaths per year, from malnutrition, malaria, diarrhoea and heat stress.
- **Noncommunicable Diseases**
 - Noncommunicable diseases, such as diabetes, cancer and heart disease, are collectively responsible for over 70% of all deaths worldwide, or 41 million people.
 - The rise of these diseases has been driven by **five major risk factors: tobacco use, physical inactivity, the harmful use of alcohol, unhealthy diets and air pollution.**
 - These risk factors also exacerbate **mental health issues.** The **suicide** is the second leading cause of death among 15-19 year-olds.
- **Global Influenza Pandemic**
 - The WHO is constantly monitoring the circulation of influenza viruses to detect potential pandemic strains: 153 institutions in 114 countries are involved in global surveillance and response.
- **Fragile and Vulnerable Settings**
 - More than 1.6 billion people (22% of the global population) live in places where protracted crises (through a combination of challenges such as drought, famine, conflict, and population displacement) and weak health services leave them without access to basic care.
- **Antimicrobial Resistance**
 - It is the ability of bacteria, parasites, viruses and fungi to resist modern medicines which threatens to send us back to a time when we were unable to easily treat infections such as pneumonia, tuberculosis, gonorrhoea, and salmonellosis.
 - The inability to prevent infections could seriously compromise surgery and procedures such as chemotherapy.
 - In 2017, around 600 000 cases of tuberculosis were resistant to rifampicin – the most effective first-line drugs – and 82% of these people had multidrug-resistant tuberculosis.
 - **Drug resistance** is driven by the overuse of antimicrobials in people, but also in animals, especially those used for food production, as well as in the environment.
 - WHO is working with these sectors to implement a global action plan to tackle antimicrobial resistance by increasing awareness and knowledge, reducing infection, and encouraging prudent use of antimicrobials.
- **Ebola and Other High-Threat Pathogens**
 - In 2018, the Democratic Republic of the Congo saw two separate Ebola outbreaks, both of which spread to cities of more than 1 million people. One of the affected provinces is also in an active conflict zone.
 - **WHO's R&D Blueprint** identifies diseases and pathogens that have the potential to cause a public health emergency but lack effective treatments and vaccines.
 - This watchlist for priority research and development includes Ebola, several other haemorrhagic fevers, Zika, Nipah, Middle East respiratory syndrome coronavirus (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS) and disease X, which represents the need to prepare for an unknown pathogen that could cause a serious epidemic.

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▪ Weak Primary Health Care

- Primary health care is usually the first point of contact people have with their health care system, and ideally should provide comprehensive, affordable, community-based care throughout life.
- **Yet many countries do not have adequate primary health care facilities.** This neglect may be a lack of resources in low- or middle-income countries, but possibly also a focus in the past few decades on single disease programmes.

▪ Vaccine Hesitancy

- It is the reluctance or refusal to vaccinate despite the availability of vaccines – threatens to reverse progress made in tackling vaccine-preventable diseases.
- Measles, for example, has seen a 30% increase in cases globally. The reasons for this rise are complex, and not all of these cases are due to vaccine hesitancy.
- However, some countries that were close to eliminating the disease have seen a resurgence.
- The WHO has identified **complacency, inconvenience in accessing vaccines, and lack of confidence** as key reasons underlying hesitancy.

▪ Dengue

- It is a mosquito-borne disease that causes flu-like symptoms and can be lethal and kill up to 20% of those with severe dengue, has been a growing threat for decades.
- A high number of cases occur in the rainy seasons of countries such as Bangladesh and India.
 - Now, the dengue season in these countries is lengthening significantly (in 2018, Bangladesh saw the highest number of deaths in almost two decades),
 - and the disease is spreading to less tropical and more temperate countries such as Nepal, that have not traditionally seen the disease.
- **WHO's Dengue control strategy aims to reduce deaths by 50% by 2020.**

▪ HIV

- The progress made against HIV has been enormous in terms of getting people tested, providing them with antiretrovirals (22 million are on treatment), and providing access to preventive measures such as a pre-exposure prophylaxis (PrEP, which is when people at risk of HIV take antiretrovirals to prevent infection).
- Today, around 37 million worldwide live with HIV.
- Reaching people like sex workers, people in prison, men who have sex with men, or transgender people is hugely challenging. Often these groups are excluded from health services.
- A group increasingly affected by HIV are young girls and women (aged 15–24), who are particularly at high risk and account for 1 in 4 HIV infections in sub-Saharan Africa despite being only 10% of the population.
- **The WHO is working with countries to support the introduction of self-testing so that more people living with HIV know their status and can receive treatment (or preventive measures in the case of a negative test result).**

WHO's Organisational Challenges

- The WHO has been **dependant on donor funds** – mainly from rich countries and foundations like the Bill and Melinda Gates Foundation – rather than through secured

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funding from countries.

- As a result, currently 80% of WHO's funding is tied to programs that donors choose. Work programs that are vital to WHO's mandate remain under funded as they clash with the interests of big donors, especially of rich and developed countries.
- Consequently WHO's role as a leader in global health has been supplanted by other intergovernmental bodies such as the World Bank, and increasingly by big foundations.
- The organisation's efficacy has come under question, especially after its inadequate performance in containing West Africa's ebola epidemic of 2014.
- It was because of WHO's insufficient funding, structuring, staffing and bureaucracy.

Source: Web

Tribal rituals for lockdown

GS-I | 28 March, 2020

Tribal rituals for lockdown

Part of: GS Prelims and GS-I – Art and Culture

Who?

The term 'Scheduled Tribes' first appeared in the Constitution of India. **Article 366 (25)** defined scheduled tribes as "such tribes or tribal communities or parts of or groups within such tribes or tribal communities as are deemed under Article 342 to be Scheduled Tribes for the purposes of this constitution". **Article 342**, which is reproduced below, prescribes procedure to be followed in the matter of specification of scheduled tribes.

The essential characteristics of these communities are:

- Primitive Traits
- Geographical isolation
- Distinct culture
- Shy of contact with community at large
- Economically backward

Tribal communities live, in various ecological and geo-climatic conditions ranging from plains and forests to hills and inaccessible areas. Tribal groups are at different stages of social, economic and educational development. While some tribal communities have adopted a mainstream way of life, at the other end of the spectrum, there are certain **Scheduled Tribes, 75 in number known as Particularly Vulnerable Tribal Groups (PVTGs) 2019 PT**, who are

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characterised by

- pre-agriculture level of technology
- stagnant or declining population
- extremely low literacy
- subsistence level of economy

In News: Tribes in Arunachal Pradesh have revived indigenous lockdown rituals to contain the spread of COVID-19.

- The State of Arunachal Pradesh is geographically closest to **China's Hubei province** where the COVID-19 outbreak began.

Rituals by Different Tribes

Galos Tribe

- The **Galos**, which are one of the 26 major tribes of Arunachal Pradesh that dominate West Siang district practised the **Arr-Rinam ritual**.
 - The Galo community has been recognized as a **Scheduled Tribe** in the Amendment to the Constitution (ST), Order, 1950, Part-XVIII.
 - **Mopin** is the main festival in Galos which is celebrated for the prosperity of the villages. The Galos perform **Popir dance**.
- **Arr-Rinam** is the Galo equivalent of **lockdown** imposed by consensus for 48 hours whenever an epidemic strikes.
- The Arr-Rinam follows the **Ali-Ternam** (the word Ali means epidemic and Ternam means forestall) ritual **to ward off an epidemic**.
- These rituals were last performed almost four decades ago when a water-borne disease had affected many members of the community.
- However, these rituals have been performed periodically for **livestock, primarily the semi-wild animal mithun, that are prone to contagious diseases**.
- This is for the **first time in 30-40 years** that the rituals were performed for the **safety of humans**.
- The **Bos or deputy priests** performed the Ali-Ternam under the guidance of a **Nyibo (shaman)**.
- The ritual **ended with the community leaders sealing five major entry points of the district**.

Adi Tribe

- The Adi community also performed a similar ritual called the **motor or pator system** in the Adi (tribe) dialect.
- This is a customary **self-restriction**, where the locals lock down several villages by **erecting barricades** to prevent the entry of outsiders. No person is allowed to enter or leave the villages.
- They believe that this ritual lets shamans with legendary powers to locate wild herbs to combat an epidemic.

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Adi tribe

- The Adi tribe of Arunachal Pradesh is believed to have come from southern China in the 16th century.
- They are the **Tibeto-Burman language** speaking population..
- They reside in the far north inhabiting **East Siang and Lower Dibang Valley districts** of Arunachal Pradesh.
- The Adis are experts at **making cane and bamboo items**.
- **Solung** (harvesting festival where animal sacrifices and rituals are performed) and **Aran** (a festival where members of the family go for hunting) are two major festivals of the Adi tribes.

Nyishi Tribe

- In districts such as Papum Pare and East Kameng, the dominant Nyishi community observed **Arrue** involving **self-quarantine**.
- Nyishi Tribes also called **Bangni** are the tribal people of eastern Bhutan and Arunachal Pradesh (formerly North East Frontier Agency).
- Nyishi is a **Scheduled Tribe**. It is the **single largest tribe of Arunachal Pradesh**.
- They speak the **Tibeto-Burman language of the Sino-Tibetan family**.
- The Nyishi support themselves with **slash-and-burn agriculture and with hunting and fishing**.
- They live together in a longhouse without partitions but with a separate fireplace for each conjugal family.
- Aside from a patrilineal household there is **no formal social organization or village government**.
- Their religion involves **belief in spirits associated with nature**.



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Source: TH

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Global Antimicrobial Resistance Research and Development Hub – Antibiotic resistance

GS-III | 29 March, 2020

Global Antimicrobial Resistance Research and Development Hub – Antibiotic resistance

Part of: GS Prelims and GS-III- Health (S&T)

Antibiotic resistance is not a problem that can be solved by any one country or even one region. Since, we live in a connected world, where people, animals and food travel and microbes travel with them, a global action is essential to make progress in the long run. Increasing public awareness and understanding is therefore the most crucial pillar towards tackling antimicrobial resistance. AMR is an increasingly serious threat to the global public health that requires action across all government sectors and societies.

What is Antimicrobial resistance?

Antimicrobial resistance (AMR or AR) is the ability of a microbe to resist the effects of medication that once could successfully treat the microbe. The term antibiotic resistance is a subset of AMR, as it applies only to bacteria becoming resistant to antibiotics. Antibiotics are medicines used to prevent and treat bacterial infections. Antibiotic resistance occurs when bacteria change in response to the use of these medicines.

Bacteria, not humans or animals, become antibiotic-resistant. These bacteria may infect humans and animals, and the infections they cause are harder to treat than those caused by non-resistant bacteria. Antibiotic resistance occurs naturally, but misuse of antibiotics in humans and animals is accelerating the process. A growing number of infections – such as pneumonia, tuberculosis, gonorrhoea, and salmonellosis – are becoming harder to treat as the antibiotics used to treat them become less effective. It leads to higher medical costs, prolonged hospital stays, and increased mortality.

PT PICKS: *Antimicrobial resistance (AMR)* is the ability of a microorganism (like bacteria, viruses, and some parasites) to stop an antimicrobial (such as antibiotics, antivirals and antimalarials) from working against it. As a result, standard treatments become ineffective, infections persist and may spread to others.

When an organism is **resistant to more than one drug, it is said to be multidrug-resistant.**

Key findings:

1. India is one of the top users of antibiotics.

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2. The private sector clocked high levels of antibiotic prescription rates (412 per 1,000 persons per year).
3. The highest rate was seen among children aged 0–4 years (636 per 1,000 persons) and the lowest in the age group 10–19 years (280 per 1,000 persons).
4. Per-capita antibiotic consumption in the retail sector has increased by around 22% in five years from 2012 to 2016.

Ways by which individuals become antibiotic resistant (2019 PT)

- **Inappropriate use of antibiotics** such as popping pills for mild ailments like common cold.
- **Rampant use of antibiotics in livestock and poultry animals.** Antibiotics used in animals to treat infections and for growth promotion are often passed on to humans who consume their meat.
- **Improper disposal of residual antibiotics that eventually enter the food chain.**
- **Prolonged illness**
- **Poor diagnosis**
- **Poor health and hygiene management in Hospitals (Fluid exchange)**
- **Globalisation**

Doctors' take on antibiotics

- Doctors believe that the inappropriate and sometimes rampant use of antibiotics has transformed **the healthy human intestinal gut flora into a reservoir of antibiotic resistance organisms.**
- At present organisms are resistant to low end antibiotics but if the misuse persists, these may become resistant to high end antibiotics as well.
- There are as many bacteria in a human body as the number of cells. They perform a host of functions to keep the body running for example, processing the food we eat and modulating the immune system. The antibiotic resistant bacteria aren't healthy so they cannot perform these functions well.
- The presence of antibiotic resistance in healthy individuals is a cause for concern because it signals that it will get more difficult to treat infections in the future.

India's action plan for AMR

- **A national policy for containment of AMR was introduced in 2011.** The policy aims to understand emergence, spread and factors influencing AMR.
- To set up an antimicrobial program to rationalize use of antimicrobials and to encourage the innovation of newer and effective antimicrobials.
- In addition, some major action points identified in the national policy are:
 - **Establishing an AMR surveillance system.**
 - To strengthen infection, prevention and control measures.
 - Educate, train and motivate all stakeholders in the rational use of antimicrobials.
 - Providing sanitation, clean water and good governance.
 - Increasing public health expenditure and better regulating the private health sector.

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WHO's take on antibiotic resistance

- As per the World Health Organization (WHO), antibiotic resistance is rising to dangerously high levels in all parts of the world.
- **The alarming rate at which bacteria are becoming resistant has led the World Health Organization (WHO) to identify AMR as one of the top ten threats to global health.**
- The world body recommends that countries must prioritize their national action plans to scale up financing and capacity building efforts, put in place a stronger regulatory systems and support awareness programmes for responsible and prudent use of antimicrobials by professionals in humans, animals and plants health.
- **In addition, countries must invest in ambitious research and development technologies to combat AMR.**
- The WHO also suggests a number of steps that can be taken at various levels to reduce the impact and also limit the spread of this resistance.

At individual level

- For individuals, the most important step towards preventing and controlling the spread of this antibiotic resistance is to **use antibiotics only when prescribed by a certified health professional**. Also, never sharing with anyone used leftover antibiotic.
- Preparing food hygienically and avoiding close contact with sick people.
- Practising safer sex and keeping vaccinations up to date.
- **Following the WHO's five keys to safer food** i.e. to keep clean, separate raw and cooked, cook thoroughly, keep food at safe temperatures, use safe water and materials and choose foods that have been produced without the use of antibiotics for growth promotion or disease prevention in healthy animals.

For Policymakers

- Policymakers must ensure that **a robust national action plan is in place to tackle antibiotic resistance**.
- Surveillance of antibiotic-resistant infections must be improved.
- Policies, programmes and implementation of infection prevention and control measures must be strengthened.
- It is required to regulate and promote the appropriate use of quality medicines.
- Information must also be made available on the impact of antibiotic resistance.

For Health Professionals

- Health professionals need to play a major role in preventing and controlling the spread of antibiotic resistance.
- The first and foremost thing that must be done is to **ensure that their hands, instruments and environment are clean**.
- They should **only prescribe and dispense antibiotics when they are needed**.
- They must immediately report antibiotic resistant infections to surveillance teams.

For different sectors

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- Sectors like healthcare and agriculture must also act to prevent and control the spread of antibiotic resistance.
- **The healthcare industry can invest in research and development of new antibiotics, vaccines, diagnostics and other tools.**
- **The agricultural sector must adhere to the guidelines such as giving antibiotics to animals only under veterinary supervision.**
- Antibiotics should not be used for growth promotion or to prevent diseases in healthy animals.
- Animals must be vaccinated to reduce the need for antibiotics and use alternatives to antibiotics when available.
- The agriculture sector should also promote and apply good practices at all steps of production and processing of food from animals and plants sources.
- In addition, they must also **improve biosecurity on farms and prevent infections through improved hygiene and animal welfare.**

RECENT STRATEGIES:

1. In 2015, WHO launched the global antimicrobial surveillance system (GLASS) to work closely with WHO collaborating centres and existing antimicrobial resistance surveillance networks.

- As members of GLASS, countries are encouraged to implement the surveillance standards and indicators gradually based on their national priorities and available resources.

2. Recently, the **United Nations (UN)** has begun considering the threat of antimicrobial resistance (AMR) to be at par with diseases like ebola, HIV.

3. The WHO has launched a global campaign that urges countries to adopt its new online tool aimed at guiding policy-makers and health workers to use antibiotics safely and more effectively.

AWARE Tool

The tool, known as 'AWaRe', classifies antibiotics into three groups:

Access — antibiotics used to treat the most common and serious infections

Watch — antibiotics available at all times in the healthcare system

Reserve — antibiotics to be used sparingly or preserved and used only as a last resort

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4. India has been called the epicenter of the global drug resistance crisis. Chickens in numerous poultry farm are being given **Colistin**, to protect them against diseases or to make them gain weight faster. Doctors call Colistin the 'last hope' antibiotic.

The World Health Organisation has called for the use of such antibiotics to be restricted to animals. These should be banned as growth promoters.

MCR-1 is one such gene discovered recently. It could be transferred within and between species of bacteria. This means that microbes did not have to develop resistance themselves, they could become resistant just by acquiring the MCR-1 gene. The resistance could be passed to bugs which are already multi-drug resistant. This could lead to untreatable infections. Another such gene is **New Delhi Metallo-beta-lactamase 1 (NDM-1)**, which makes bugs resistant to carbapenem antibiotics.

5. 2017 National Action Plan on Antimicrobial Resistance

1. For the first time, the 2017 National Action Plan on Antimicrobial Resistance talks about limiting antibiotics in effluent being dumped by drug makers into the environment
2. This is because when these drugs taint soil and water, the scores of microbes that live there grow drug-resistant
3. Until now, India's fight against antibiotic-resistance was focussed on getting people to cut down on unnecessary antibiotic consumption

Why is resistance among microbes a problem?

1. The answer lies in the intimacy shared between environmental bacteria and human pathogens
2. A pathogen, say *Klebsiella pneumoniae* (*K. pneumoniae*), that causes pneumonia, can take two routes to antibiotic resistance
3. The first is for its own genes to mutate spontaneously to help fight the drug
4. The second route, a shortcut known as horizontal gene transfer, is for the bug to borrow resistance genes from its neighbours
5. Scientists believe that many human pathogens today picked up their resistance genes from the environment through this shortcut

Phenomenon of anti-microbial resistance not new

1. Phylogenetic studies suggest that the earliest antibiotic-resistance genes in nature are millions of years old
2. But when humans started manufacturing antibiotics in the 1950s, a dramatic shift occurred
3. Large doses of these drugs seeped into the environment through poultry and human excreta, and waste water from drug makers and hospitals
4. This led to an explosion of resistance genes in soil and water microbes

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6. European project ANSWER

It stands for 'Antibiotics and mobile resistance elements in wastewater reuse applications: risks and innovative solutions'. This project studies technologies to remove antibiotic-resistance germs from wastewater along with other research.

6. India's Red line campaign: (launched in Feb 2016) is finding recognition, and could be adopted globally. It should be considered as starting point of restriction over use of antibiotics.

Aim: To decrease the use of Red line antibiotics without prescription, create awareness of danger of taking antibiotics.

7. Recently, India has joined the Global Antimicrobial Resistance (AMR) Research and Development (R&D) Hub as a new member.

- Working with AMR(R&D) Hub would help India to expand existing capabilities, resources and collectively focus on new R&D intervention to address drug-resistant infections present in the country.
- **Global Antimicrobial Resistance (AMR) Research and Development (R&D) Hub** is a collaboration of 16 countries, the European Commission, two philanthropic foundations and four international organizations (as observers).
- It was launched in **2018** during the **71st** session of the **World Health Assembly**, following a call from **G20 Leaders in 2017**.
- It is supported through a **Secretariat**, established in **Berlin, Germany**.
- It aims to further improve the coordination of international efforts and initiatives to tackle **Antimicrobial Resistance** while further increasing investments into R&D for AMR.
- The work of the Global AMR R&D Hub will be aligned to the priorities set by
 - **World Health Organization (WHO)**
 - **Food and Agriculture Organization of the United Nations (FAO)**
 - **World Organisation for Animal Health (OIE).**
- It enforces the **One Health Approach** by including environmental aspects and veterinary medicine against antimicrobial resistance.
- It integrates **human and animal health, worldwide food safety and environmental factors**.



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Source: TH/Aspire notes/WHO

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PM-CARES Fund

GS-II | 29 March, 2020

PM-CARES Fund

Part of: GS Prelims and GS-II- Governance

Newly instituted PM-CARES Fund.

Background:

- In India, the spread of coronavirus has been increasing and is posing serious **challenges for the health and economic security of millions of people.**
- There have been calls for **citizen donations to support the government** in the wake of this emergency with people from all walks of life expressing their desire to donate to India's war against COVID-19.

Details:

- Catering to the need for having a **dedicated national fund** with the primary objective of dealing with any kind of emergency or distress situation, and to provide **relief to the affected**, a new fund has been set up.
- The fund will be a public charitable trust under the name of **Prime Minister's Citizen Assistance and Relief in Emergency Situations Fund (PM CARES Fund).**
- **Prime Minister is the Chairman of this trust** and its Members include Defence Minister, Home Minister and Finance Minister.
- The new fund will not only cater to the immediate crisis posed by COVID-19 but also similar distressing situations if they occur in the future.
- PM-Cares Fund **accepts micro-donations too.**

Contribution to PM - CARES Fund will Qualify as CSR Expenditure

- The Ministry of Corporate Affairs has clarified that contributions by companies towards the PM-CARES Fund **will count towards mandatory Corporate Social Responsibility (CSR) expenditure.**
- Under the Companies Act, 2013, companies with a **minimum net worth of Rs 500 crore or turnover of Rs 1,000 crore, or net profit of Rs 5 crore** are required to spend at **least 2% of their average profit for the previous three years** on CSR activities **every year.**
- The term "Corporate Social Responsibility" in general can be referred to as a corporate initiative to assess and take responsibility for the company's effects on the environment and impact on social welfare.
- **Existing Similar Fund: Prime Minister's National Relief Fund (PMNRF)**
 - This fund was **instituted in 1948** by then Prime Minister Jawaharlal Nehru, to assist displaced persons from Pakistan. The fund is **currently used primarily to tackle**

UPSC "PT" DNA (Daily News Analysis)

natural calamities like floods, cyclones and earthquakes. The fund is also used to **help with medical treatment** like kidney transplantation, cancer treatment and acid attack.

- The fund **consists entirely of public contributions and does not get any budgetary support**. It accepts voluntary contributions from Individuals, Organizations, Trusts, Companies and Institutions etc.
- The corpus of the fund is also invested in various forms with scheduled commercial banks and other agencies. **Disbursements are made with the approval of the Prime Minister**.
- The **fund is recognized as a Trust under the Income Tax Act** and the same is managed by the Prime Minister or multiple delegates for national causes.
- Contributions towards PMNRF are notified for **100% deduction from taxable income under section 80(G) of the Income Tax Act, 1961**.

Source: TH

Can drugs for Ebola be used to treat COVID-19?

GS-III | 29 March, 2020

Can drugs for Ebola be used to treat COVID-19?

Part of: GS Prelims and GS-III- S&T

Medical research towards the development of drugs and vaccines against the coronavirus infection – COVID 19.

Background:

- The virus, **SARS-CoV-2**, according to the World Health Organization (WHO), has caused the **world's largest pandemic**. Over six lakh are infected and nearly 29,000 dead globally.
- **In India, the number of cases is growing** despite the unprecedented measures put in place by the Central and State governments.

Details:

Medical strategy:

- Given **the long gestation period in the development of a vaccine** and WHO observations that it would take over 18 months to be ready for use, "vaccination" as an immediate solution has been ruled out.

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- 15% of COVID-19 needs hospitalized care and of these 5% need ICU care. Now with time running out rapidly for the entire world, **re-purposed drugs are being aimed at to contain the problem**, reducing hospital load, freeing critical hospital beds and allowing people to swiftly return to normal work.
- WHO and other health agencies are re-looking at the **efficacy of known therapies and drugs to treat COVID-19**. They are considering re-purposed drugs.
- Recently, India **has approved the use of the anti-malarial drug, hydroxychloroquine, as a preventive medication** for people at high risk, such as health workers and immediate contacts of a person who has tested positive for COVID-19.

WHO-led Solidarity trials:

- WHO Director-General, recently announced the launch of '**Solidarity**', a **giant multinational trial for testing therapies** that researchers have suggested may be effective against COVID-19.
- This coordinated push would help **generate robust, high-quality scientific evidence** from across the world in a short frame of time.
- **India too has joined the study** after staying away due to its small sample size.

Potential drugs:

- WHO is considering some of the most promising therapies including the following drugs:
 - A combination of two **HIV drugs, lopinavir and ritonavir**.
 - The combination drug, ritonavir/lopinavir, was introduced two decades ago to treat HIV infections.
 - Doctors in Wuhan, China have used this combination.
 - Although the drug is generally safe it may interact with drugs usually given to severely ill patients, and doctors have warned it could cause **significant liver damage**.
 - Anti-malaria medications, **chloroquine and hydroxychloroquine**.
 - Hydroxychloroquine is being looked at in India and the ICMR has said that it is currently studying the drug action in the Indian population with respect to COVID-19.
 - Its usage in some patients has shown a **significantly reduced viral load** in nasal swabs.
 - Hydroxychloroquine, in particular, is known to have a **variety of side-effects**, and can in some cases harm the heart.
 - An experimental antiviral compound called **remdesivir**.
 - This drug was developed to **treat Ebola and related viruses**.
 - It works by shutting down the viral replication.
 - Studies have pointed out that the drug shows that it can be **used in high doses without causing toxicities**.
- Another combination under testing is **interferon-beta**, which WHO has cautioned might be risky.
- Agencies are also looking at unapproved drugs that have performed well in animal studies with the other two deadly coronaviruses, which cause Severe Acute Respiratory

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Syndrome (SARS) and Middle East Respiratory Syndrome (MERS). Given the fact that the novel coronavirus hails from a family on which extensive research work has already been done worldwide after SARS and MERS is a significant advantage.



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Source: TH

Kerala sought a relaxation of FRBM rules

GS-III | 29 March, 2020

Kerala sought a relaxation of FRBM rules

Part of: GS Prelims and GS-III- Economics

Kerala is seeking relaxation from the provisions of the **Fiscal Responsibility and Budget Management (FRBM) Act**.

Kerala Economic package:

- **Kerala had announced an economic package of 20,000 crore rupees** to mitigate the impact on livelihoods and overall economic activity from the steps taken to battle the COVID-19 pandemic.
- To help fund the emergency relief package, Kerala proposes to **borrow as much as 12,500 crore rupees from the market**.

Details:

Fiscal Responsibility and Budget Management (FRBM) Act:

- The FRBM Act was **enacted in August 2003**.
- The FRBM Act is aimed at making the Central government responsible for **ensuring inter-generational equity in fiscal management and long-term macro-economic stability**.
- The Act envisages the setting of **limits on the Central government's debt and deficits** as well as mandating greater **transparency in fiscal operations** of the Central government and the conduct of fiscal policy in a medium-term framework.
 - Every Budget of the Union government includes a **Medium-Term Fiscal Policy Statement** that specifies the annual revenue and fiscal deficit goals over a three-year horizon.
 - The act envisages a **longer-term glide path to achieve the key objective of**

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reducing the fiscal deficit to 3% of GDP within a specified time frame. Currently, the government has set a **deadline of March 2023** for ensuring a fiscal deficit target of 3.1%.

- To ensure that the States too are financially prudent, the **12th Finance Commission's recommendations in 2004 linked debt relief to States with their enactment of similar FRBM acts.**
 - The States have since enacted their **own respective Financial Responsibility Legislation**, which sets the same 3% of Gross State Domestic Product (GSDP) cap on their annual budget deficits.

Kerala seeking flexibility under the FRBM:

- Kerala's current fiscal position means that it can borrow about ₹25,000 crores during the financial year 2020-21.
- Given that Kerala proposes to raise ₹12,500 crore through borrowings in April 2020 itself, it could be **severely constrained in its borrowing and spending ability** over the remaining 11 months of the financial year, due to the stringent borrowing cap under the fiscal responsibility laws.
- This could affect **the State's socio-economic programs** as well as the post-pandemic recovery apart from undermining the state's continued mitigation efforts against COVID-19.
- Kerala has urged the Centre to provide Kerala with flexibility under the Fiscal Responsibility and Budget Management (FRBM) Act.

Relaxation under the FRBM act:

- The FRBM act does contain provisions for relaxation from FRBM clauses. This is commonly referred to as an **'escape clause'**.
- Under **Section 4(2) of the Act**, the Centre can exceed the annual fiscal deficit target citing grounds that include:
 - National security,
 - War,
 - National calamity,
 - Collapse of agriculture,
 - Structural reforms and
 - A decline in real output growth of a quarter by at least three percentage points below the average of the previous four quarters.

Past precedents of relaxing FRBM norms:

- There have been **several instances of the FRBM goals being reset.**
 - Recently, the **Budget for 2020-21** had cited the recent reductions in **corporate tax as structural reforms**, triggering the escape clause.
 - This enabled the government to recalibrate the fiscal deficit target for 2019-20 to 3.8%, from the budgeted 3.3%. It also changed the deficit target goal for 2020-21 from 3% to 3.5%.
- **The most significant FRBM deviation happened in 2008-09**, in the wake of the

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global financial crisis, with the Centre resorting to a fiscal stimulus.

- Tax relief was provided to boost demand
- Public expenditure was increased to create employment and public assets, to counter the fallout of the global slowdown.
- This led to the **fiscal deficit climbing to 6.2%**, from a budgeted goal of 2.7%.
- Simultaneously, the deficit goals for the States too were relaxed.

Arguments in favor of suspending Fiscal targets:

- The following two aspects could be used for suspending both the Centre's and States' fiscal deficit targets.
 - Given the extraordinary circumstances, **COVID-19 pandemic could be considered as a national calamity.**
 - The ongoing pandemic in conjunction with the ongoing lockdown will cause a **severe contraction in economic output.**
- This would allow both the Union government and States including Kerala to undertake the **much-needed increases in expenditure** to meet the extraordinary circumstances.
- Given the past precedents and the unprecedented nature of the pandemic and its devastating impact on the global economy, another significant deviation from the FRBM norms is very likely in the current and next fiscal years.

NK Singh FRBM review committee

The FRBM Review Committee headed by former Revenue Secretary, NK Singh was appointed for the implementation of FRBM. In its report submitted in January 2017, titled, 'The Committee in its Response to the Framework for 21st Century India', the Committee suggested that a rule based fiscal policy by limiting revenue deficits to certain targets is good for fiscal consolidation in India.

Why a rethinking on FRBM was needed?

After nearly twelve years into running of the FRBM (2003) legislation, there was a big debate on whether to have a deficit target or not. One group argued that in a developing country, government has to make lot of expenditure to reduce government involvement. The opposite group countered that loosening of the target will lead to excess inflation and several other macroeconomic problems besides creating intergenerational inequality. The Committee thus was to suggest a way out. Specifically, the Committee has to make suggestions on a deficit range than a fixed target (like 3% of GDP). Similarly, the committee should suggest changes required to deal with global uncertainties.

The general perspective of the FRBM Review Committee

Before going into the point-by point presentation of the NK Singh Committee's suggestions, it is important to understand the perspective adopted by it about borrowing run (fiscal deficit) government budget in the Indian context.

The FRBM Review Committee's philosophy is visible in its report throughout and is that in a country like India, by accommodating populist pressures, activist or discretionary fiscal policy with high fiscal deficit has limited scope.

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"The maxim that "you cannot spend your way to prosperity" is now widely accepted. Fiscal policies must be more restrained than exuberance. In restraint than profligacy." The Committee cited evidences that in the recent past, the government made high expenditure by shooting over the FRBM targets.

At the same time, when some crisis like the 2007-08 appears, fiscal policy should have some flexibility. A carefully crafted escape clause allowing higher fiscal deficit. This escape clause is 'rule based' (S). Following are the main recommendations of the NK Singh Committee.

1. Public debt to GDP ratio should be considered as a medium-term anchor for fiscal policy in India. The ratio of the centre and states should be brought down to 60 per cent by 2023 (comprising of 40 per cent for the centre against the existing 49.4 per cent, and 21 per cent respectively).

2. Fiscal deficit as the operating target: The Committee advocated fiscal deficit as the operating target. For fiscal consolidation, the centre should reduce its fiscal deficit from the current 3.5% (2017) to 2.5% by 2023.

Justifying the target of 2.5% to be realized in the next six years, the Committee observed that debt sustainability for the central government suggests such a target (for fiscal deficit) will help to achieve the public debt target.

3. Revenue deficit target

The Committee also recommends that the central government should reduce its revenue deficit steadily each year, to reach 0.8% by 2023, from a projected value of 2.3% in 2017.

The Committee advised government to follow the golden rule here i.e., not to finance government borrowings. Revenue deficit implies financing of government's day today activities from borrowings.

Table: Fiscal roadmap for 2023 and the targets for the Centre (figures are as a percent of GDP) Fiscal deficit.

Year	Debt/GDP	FD	RD
2017	49.4	3.5	2.3
2023	38.7	2.5	0.80

Source: NK Singh Committee Report

4. Formation of Fiscal Council to advice the government.

The Committee advocated formation of institutions to ensure fiscal prudence in accordance with the FRBM Act. It proposed an independent Fiscal Council. The Council will provide several advisory functions. It will forecast key macro variables like GDP growth, tax buoyancy, commodity prices. Similarly, it will do a monitoring role, besides advising the government. It will also specify a path of return.

5. Escape Clause to accommodate counter cyclical issues:

The NK Singh Committee points out that there are disadvantages with set fiscal deficit target if some emergency arises.

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crisis affects the Indian economy. For example, the government has to spend more during the time of crisis to restrict its borrowing to keep the fiscal deficit target. Hence, the committee advocates countercyclical capital flows in the FRBM.

Here, the committee recommends fiscal flexibilities to go above or below the fiscal deficit targets in exceptional circumstances. The Committee set 0.5% as escape clause for fiscal deficit target.

What is escape clause?

The flexibility to adjust with cyclical fluctuations (boom/recession) is incorporated under the "escape clause" where temporary and moderate deviations can be made from the baseline fiscal path. This clause is invoked in exceptional circumstances and in reaction to external shocks. To ensure that these "escape" clauses are not mis-used, the committee has laid down specific guidelines. The escape clause can be used only during the time of following essential circumstances:

- Over-riding consideration of national security, acts of war, calamities of national proportion or other circumstances affecting farm output and incomes.
- Far-reaching structural reforms in the economy with unanticipated fiscal implications.
- Sharp decline in real output growth of at least 3 percentage points below the average for the previous three years.

Deviation from the stipulated fiscal deficit target shall not exceed 0.5 percentage points in a year.

The Escape Clauses can be invoked:

- (a) by the Government after formal consultations and advice of the Fiscal Council.
- (b) with a clear commitment to return to the original fiscal target in the coming fiscal year.

6. Buoyancy: What the government has to do with fiscal deficit target when higher economic growth occurs

The Committee also advocates that the policy responses to sharp changes in output growth should be guided by the escape clause). This implies that during higher economic growth, fiscal deficit should be reduced accordingly. (If the fiscal deficit target can be raised using the escape clause).

7. Fiscal consolidation responsibility for states

The Committee observes that state government's fiscal position is important after greater resource allocation (like the Commission award). Now, total state expenditures (as a percent of GSDP) is now even greater than the central government. They should also be made by the states. They should bring down their debt target to 20% of GDP from the current 25%.

8. Congruence of Fiscal and Monetary Policy

The FRBM Review Committee observed that both monetary and fiscal policies must ensure growth and employment in a complementary manner. For this, the Inflation Targeting (IT) regime and Fiscal Rules (FRs) have to interact.



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Source: TH

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Convalescent Plasma Therapy and COVID-19

GS-III | 30 March, 2020

Convalescent Plasma Therapy and COVID-19

Part of: GS Prelims and GS-III- S&T

- **Basis of the Therapy:**
 - The convalescent plasma therapy seeks to make **use of the antibodies developed in the recovered patient** against the coronavirus.
 - The **whole blood or plasma** from such people is taken, and the plasma is then injected in critically ill patients so that the **antibodies are transferred** and boost their fight against the virus.
- **Time Period for Infusion:**
 - A study in The Lancet Infectious Diseases stated that a COVID-19 patient usually **develops primary immunity against the virus in 10-14 days**.
 - Therefore, if the plasma is **injected at an early stage**, it can possibly help fight the virus and prevent severe illness.
- **Infusion into COVID-19 Patients:**
 - The plasma can be infused into two kinds of COVID-19 patients— those with a **severe illness, or individuals at a higher risk of getting the virus**.
 - However, while plasma transfers immunity from one person to another, it is **not known if it can save lives** in COVID-19 infection.
 - The treatment could be **effective for patients in the age group 40-60**, but may be **less effective for people aged beyond 60 years**.
- **Previous Application of the Convalescent Plasma Therapy:**
 - The **United States** used plasma of recovered patients to treat patients of **Spanish flu (1918-1920)**.
 - **Hong Kong** used it to treat **SARS (Severe Acute Respiratory Syndrome)** patients in **2005**.
 - In **2009**, the **swine flu (H1N1)** patients were treated with plasma.
 - A study in Oxford University's journal Clinical Infectious Diseases found that "convalescent plasma reduced respiratory tract viral load, serum cytokine response, and mortality" in H1N1 patients.
- **WHO Guidelines (2014):**
 - WHO guidelines in 2014 mandate a **donor's permission before extracting plasma**.
 - Plasma from **only recovered patients must be taken**, and donation must be done from people not infected with HIV, hepatitis, syphilis, or any infectious disease.
 - If whole blood is collected, the plasma is separated by sedimentation or centrifugation, then injected in the patient.
 - If plasma needs to be collected again from the same person, it must be done after 12 weeks of the first donation for males and 16 weeks for females.
- **Application in India:**
 - Currently, India **has facilities for removing 500 ml of plasma** from a donor.
 - For this experimental therapy, the Drug Controller General of India will first have to

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grant blood banks approval for removal of plasma from recovered COVID-19 patients.

- In India, the **special care of the risk of infection during transfusion** needs to be taken care of.

Relapse in Patients Recovered from COVID-19

- Patients who test positive for COVID-19 develop protective antibodies. Theoretically, **there can be a relapse even in patients who have antibodies**. There are various reasons for such relapsing of COVID-19, some of them are:
 - **Mutation of the Virus:**
 - The **probable mutations**, is one of the major reasons for making an individual vulnerable to reacquire the COVID-19 infection.
 - **Unknown Behaviour of the Virus:**
 - Since the exact behaviour of the novel coronavirus is still being studied, **immunity against it is not fully understood**.
 - At this stage, it is not fully understood as to **how long the antibodies provide protection** against the viral infection.
 - Also, in the **absence of any vaccination**, it is not known whether the **immunity acquired by the persons is permanent**.
 - **False RT-PCR test (Reverse Transcription Polymerase Chain Reaction) Test:**
 - It has been observed that a "false negative" **RTPCR test** — the RNA test being conducted to diagnose COVID-19 infection — can lead to a patient testing positive a second time after testing negative in between.



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Source: TH

Improved Air Quality during COVID-19

GS-III | 30 March, 2020

Improved Air Quality during COVID-19

Part of: GS Prelims and GS-III- Environment

The nationwide **lockdown**, to prevent **COVID-19**, has led to minimal air pollution in over 90 cities including Delhi.

- Environmentalists have welcomed the reduction in pollution and have urged the

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government to treat it as a wake-up call and stop the development at the cost of the environment.

Key Points

- During the lockdown, the government has asked the people to **avoid unnecessary travel** which has **significantly reduced the traffic** movement.
- Other factors which have contributed to the improved air quality are **shutting down of industries and construction sites and rains**.
- According to the **centre-run System of Air Quality and Weather Forecasting and Research (SAFAR)**, the measures against COVID-19 have led to a drop in:
 - **PM2.5**
 - It is an atmospheric **Particulate Matter** of **diameter of less than 2.5 micrometres**, which is around 3% of the diameter of a human hair.
 - It causes respiratory problems and also reduces visibility. It is an endocrine disruptor that can affect insulin secretion and insulin sensitivity thus contributing to diabetes.
 - **Nitrogen Oxide (NOx)**
 - NOx pollution is mainly caused due to a high motor vehicle traffic and can increase the risk of respiratory conditions.
- Generally in March, pollution is in the moderate category in the Air Quality Index while currently, it is in the satisfactory or good category.
 - Under the **good category**, **pollution** is considered to be at the **lowest** and the **air** is believed to be the **healthiest to breathe**.
- According to the **Central Pollution Control Board (CPCB)** data:
 - Air quality in the National Capital Territory of **Delhi** is presently in the **good** category.
 - **Kanpur**, which has high pollution levels normally, is in the **satisfactory** category.
 - 92 other cities with CPCB monitoring centres have recorded minimal air pollution, with the air quality ranging between good and satisfactory.

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AQI	Remark	Color Code	Possible Health Impacts
0-50	Good		Minimal impact
51-100	Satisfactory		Minor breathing discomfort to sensitive people
101-200	Moderate		Breathing discomfort to the people with lungs, asthma and heart diseases
201-300	Poor		Breathing discomfort to most people on prolonged exposure
301-400	Very Poor		Respiratory illness on prolonged exposure
401-500	Severe		Affects healthy people and seriously impacts those with existing diseases

Observations and Suggestions:

- The low AQI and the blue skies prove that **air pollution was mostly anthropomorphic** (man-made), which **can be reduced** by conscious efforts.
- Reducing air pollution by rapidly slowing down the economy is not an ideal way so **mindful use of technologies** and **low-emission alternatives** can be opted to minimise the pollution.
- It was also emphasised that air pollution weakens the lungs so **countries like India with higher pollution and lower nutrition levels** will be **more affected by COVID-19** leading to higher morbidity and deaths.

Air Quality Index

- The AQI is an index for reporting **daily air quality**.
- It focuses on health effects one might experience within a few hours or days after breathing pollutants.
- AQI is **calculated for eight major air pollutants**:
 - Ground-level ozone**
 - It is also found in the **stratosphere** and **protects from ultraviolet (UV) rays**, while it acts as a **pollutant**.
 - It is not a primary pollutant but a secondary one.
 - Ground-level ozone is not emitted directly into the air but is **created by chemical reactions between nitrogen (NOx) and volatile organic compounds (VOC) in the presence of sunlight**.
 - PM10
 - PM2.5
 - Carbon monoxide

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- Sulfur dioxide
 - Nitrogen dioxide
 - Ammonia
 - Lead
- **Ground-level ozone and airborne particles** are the two pollutants that pose the **greatest threat**

Source: TH

Himalayan Ibex and Endemic species

GS-III | 30 March, 2020

Himalayan Ibex

Part of: GS Prelims and GS-III- Environment

A recent study by scientists of the **Zoological Survey of India (ZSI)** has proved that **Himalayan Ibex is a distinct species from the Siberian Ibex**.

Key Points

- The study was funded through the **National Mission on Himalayan Studies**.
 - The National Mission on Himalayan Studies is **implemented by the Ministry of Environment, Forest and Climate Change**.
 - It targets to provide much needed focus, through holistic understanding of system's components and their linkages, in addressing the key issues relating to conservation and sustainable management of natural resources in Indian Himalayan Region (IHR).
- The study was based on **genetic analysis** conducted with the inclusion of the sequences available from all across the distribution ranges of Siberian Ibex.
- The study revealed that **Siberian Ibex was estimated to have diverged from Alpine Ibex during the Pleistocene epoch** (2.4 million years ago) rather than during the Miocene-Pliocene boundary (6.6 million years ago).
- Scientists presume that the '**montane systems**', formed by a series of climatic oscillations and temporal topographic metamorphosis, **have broken up the contiguous distribution of the species** and accelerated **allopatric speciation**.
 - **Allopatric speciation** means speciation because of geographic and reproductive isolation.
- The study also reveals that Siberian ibex is a **polytypic species**, plausibly formed by lumping of at least 2 species and or 3 to 4 sub-species.
 - **Polytypic species** are species that contain two or more subspecies.

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Siberian Ibex (*Capra sibirica*)

- Siberian Ibex is a species of **wild goat**.
- It is distributed in **diverse habitats**, ranging from **cold deserts, rocky outcrops, steep terrain, high-land flats and mountain ridges to low mountains and foothills**.
- From **Mongolia**, its distribution extends towards **Altai, Hangai, Gobi-Altai, the Hurukh mountain ranges** as well as **Sayan Mountains near Russia** and scattered populations in the small mountains of **Trans-Altai Gobi**.
- In Asia, Ibex is distributed in the **Montane habitats**, ranging in elevations from 500 m to 6,700 m in countries like India, Kazakhstan, Tajikistan, Mongolia, Pakistan, Southern Siberia and China.
- Its **IUCN status** is **least concerned**.

Himalayan Ibex (*Capra sibirica hemalayanus*)

- Earlier the **Himalayan Ibex** was regarded as a subspecies of the Siberian Ibex (*Capra sibirica*)
- The Himalayan Ibex is distributed mainly in the **trans-Himalayan ranges** of the **Union Territories of Ladakh and Jammu and Kashmir and Himachal Pradesh**.

Zoological Survey of India (ZSI)

- The ZSI was established on 1st July, 1916. It has its genesis in the establishment of the **Zoological Calcutta** in 1875.
- It is headquartered at **Kolkata**.
- It functions under the Ministry of **Environment, Forest and Climate Change**.
- It acts as the premier Indian organisation in zoological research and studies to promote the survival of fauna in the country.

PT "PICKSUP"

Endemic species are those that are found in just one region and nowhere else in the world. For example, kangaroos are originally endemic to Australia and are found nowhere else in the world. The cases where they have been spotted outside their natural habitat is due to humans introducing them when the animal was in captivity.

There are also other marsupials that are endemic only to Australia and its surrounding islands. The Tasmanian Tiger is one such animal that was endemic to Australia, Tasmania and New Guinea. But now, it is extinct.

Endemic Species of India

A list of the endemic species of India is mentioned below:

Asiatic Lion, Gir Forest

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Asiatic Lion is also known as the Indian Lion and can be only found in and around Gir Forest National Park of Gujarat. These are listed as endangered species. These are one of the five big cats found in India, the others being Indian Leopards and Bengal Tigers.

Kashmir Stag, Kashmir Valley

Also known as Hangul, Kashmir Stag is found in the dense forests of Dachigum National Park, Kashmir Valley and Chamba district, Himachal Pradesh.

Lion-Tailed Macaque, Western Ghats

It is the rarest and the most threatened and endangered primate species found only in the Western Ghats of Southern India.

Purple Frog, Western Ghats

The purple frog, also known as Pignose frog is only found in the rainforests of western ghats in India. It spends most of its life underground.

Sangai Deer, Loktak Lake

It is also known as Brow Antlered Deer exclusively found in Keibul Lamjao National Park of Manipur. This park is a marshy wetland located in the southern parts of Loktak lake.

Nilgiri Tahr, Nilgiri Hills

It is a wild sheep species, endangered and endemic to the Nilgiri Hills of Western Gats.

Other endemic species of India include:

- Pygmy Hog, Assam
- Bronzeback Vine Snake, Western Ghats
- Nilgiri Blue Robin, Nilgiri Hills
- Malabar Civet, Western Ghats
- Anaimalai Gliding Frog, Anaimalai Hills
- Namdapha Flying Squirrel, Arunachal Pradesh
- Indian Giant Squirrel
- Bonnet Macaque

Name some plant species that are endemic.

Some of the endemic plant species include- Nevada primrose, Waxflower, Pennell's whitlowgrass, Intermountain wavewing, Mt. Wheeler sandwort, etc.

Examples of Endemic species

There are several ways in which a species may come to be endemic to a particular area. A broadly distributed population may disappear from several habitats due to changes which have

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occurred in their natural habitat. The changes could be an influx of predators, human activities, and climate changes.

All other species that were widely distributed around the world starts to die out until the species becomes forcefully restrained to just one region.

For example, Endemic species, such as the tortoises of the Galápagos and the lemurs of Madagascar can be found small islands. Big islands also provide the same isolation but on a larger scale.

Antarctica Hawaii and Australia are all huge land masses where we can find a lot of endemic species. Kangaroos, koalas, and polar bears are all endemic to these places.

In the case of endemic plants, sometimes species become endemic due to habitat destruction as discussed above.

The Redwood Forest on the West Coast of the United States has become endemic as it is now almost entirely limited to California. While there was a time when Redwoods used to cover much of the United States but have been destroyed by logging and are now limited to a small conservation area.

Diseases, on the other hand, can also be endemic. An endemic disease may be geographically isolated or it may be isolated to a certain group. Malaria is an example of an endemic disease because it is mostly limited to small pockets of infection in Africa.

Source: TH/WEB

National Teleconsultation Centre (CoNTeC) and COVID-19

GS-II | 30 March, 2020

National Teleconsultation Centre (CoNTeC) and COVID-19

Part of: GS Prelims and GS-II- Institution

Recently, the Union Minister of Health & Family Welfare launched the **COVID-19 National Teleconsultation Centre (CoNTeC)**.

Key Points

- The CoNTeC is a **Telemedicine Hub** established by AIIMS, New Delhi, wherein **expert doctors from various clinical domains will be available 24x7** to answer the

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multifaceted questions from specialists from all over the country.

- Doctors worldwide are using different protocols to treat COVID-19 patients. The goal of the facility is to **at least connect the doctors in the country** together to discuss amongst themselves the protocols undertaken and provide the best treatment accordingly.
- It is a **multi-modal telecommunications hub** through which 2 way audio-video and text communications can be undertaken from any part of the country as well as the world at large.
- The CoNTeC is also fully integrated with the **National Medical College Network (NMCN)** to conduct a full fledged Video Conference (VC) between the 50 Medical Colleges connected through the NMCN with its National Resource Centre located at Sanjay Gandhi Post Graduate Institute of Medical Sciences (SGPGI), Lucknow.
- Under CoNTeC, the **patient management advice** offered will be standardized as per the national guidelines supplemented protocols developed by the team at AIIMS.

National Medical College Network (NMCN) Scheme

- Under the NMCN scheme, **50 Govt. Medical Colleges are being inter-linked** with the purpose of tele-education, e-Learning and online medical consultation by utilising the connectivity provided by **National Knowledge Network (NKN)**.
- Under this initiative a virtual layer of specialty/super specialty doctors from these medical colleges is created for providing online medical consultation facilities to citizens similar to OPD facilities through a web/portal.

Source: TH

Members of Parliament Local Area Development Scheme â€œMPLAD

GS-II | 30 March, 2020

Members of Parliament Local Area Development Scheme – MPLAD

Part of: GS Prelims and GS-II- Governance

The Members of Parliament Local Area Development Scheme (MPLADS) is an ongoing Central Sector Scheme which was launched in 1993-94. The Scheme enables the Members of Parliament to recommend works for creation of durable community assets based on locally felt needs to be taken up in their constituencies in the area of national priorities namely drinking water, education, public health, sanitation, roads etc.

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The Ministry of Statistics and Programme Implementation has been responsible for the policy formulation, release of funds and prescribing monitoring mechanism for implementation of the Scheme.

Features

1. The MPLADS is a Plan Scheme fully funded by Government of India. The annual MPLADS fund entitlement per MP constituency is Rs. 5 crore.
2. MPs are to recommend every year, works costing at least 15 per cent of the MPLADS entitlement for the year for areas inhabited by Scheduled Caste population and 7.5 per cent for areas inhabited by S.T. population.
3. In order to encourage trusts and societies for the betterment of tribal people, a ceiling of Rs. 75 lakh is stipulated for building assets by trusts and societies subject to conditions prescribed in the scheme guidelines.
4. Lok Sabha Members can recommend works within their Constituencies and Elected Members of Rajya Sabha can recommend works within the State of Election (with select exceptions). Nominated Members of both the Rajya Sabha and Lok Sabha can recommend works anywhere in the country.
5. All works to meet locally felt infrastructure and development needs, with an emphasis on creation of durable assets in the constituency are permissible under MPLADS as prescribed in the scheme guidelines. Expenditure on specified items of non durable nature are also permitted as listed in the guidelines.

Implementation

1. A Member of Parliament shall give his/ her choice of Nodal District in a prescribed format to the Ministry of Statistics and Programme Implementation with copy to the State Government and to the District Magistrate of the chosen District.
2. The annual entitlement of Rs 5 crore shall be released, in two equal instalments of Rs 2.5 crore each, by Government of India directly to the District Authority of the Nodal District of the Member of Parliament concerned.
3. Each MP shall recommend eligible work on the MP's letter head duly signed by the MP to the district authority.
4. The District Authority shall identify the Implementing Agency capable of executing the eligible work qualitatively, timely and satisfactorily. It shall be responsible for timely and effective implementation of such works. All recommended eligible works should be sanctioned within 75 days from the date of receipt of the recommendation, after completing all formalities. The District Authority shall, however, inform MPs regarding rejection, if any, within 45 days from the date of receipt of recommendations, with reasons thereof.
5. MPLAD Scheme can be converged in individual/stand-alone projects of other Central and State Government schemes provided such works of Central/State Governments Schemes are eligible under MPLADS. Funds from local bodies can similarly also be pooled with MPLADS works. Wherever such pooling is done, funds from other scheme sources should be used first and the MPLADS funds should be released later, so that MPLADS fund

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results in completion of the project.

6. As soon as a work under the Scheme is completed, it should be put to public use. For greater public awareness, for all works executed under MPLADS a plaque (stone/metal) carrying the inscription 'Member of Parliament Local Area Development Scheme Work' indicating the cost involved, the commencement, completion and inauguration date and the name of the MP sponsoring the project should be permanently erected.
7. **One MP - One Idea** : In order to foster a grass-root bottoms-up approach to innovation and development and to arrive at solutions for local problems, which are sustainable and scalable, there is a need for seeking out and campaigning for ideas that have the potential to solve challenges. Accordingly, based on the innovative ideas received from the local people regarding developmental projects, a 'One MP – One Idea' Competition may be held in each Lok Sabha constituency annually to select the three best innovations for cash awards and certificate of appreciation for next five best innovations.

Source: Vikaspedia/web

Migrant workers to be stopped, quarantined at borders: Centre

GS-II | 30 March, 2020

Migrant workers to be stopped, quarantined at borders: Centre

Part of: GS Prelims and GS-II- Governance

Migrant workers trying to move out of the cities to their villages in the light of the nationwide lockdown.

Details:

Strict enforcement of the lockdown:

- The Union Home Ministry has termed the **movement of migrant workers** to reach their home towns a **violation of the lockdown measures on maintaining social distance**.
- The Centre has asked the States and UTs to **strictly enforce the 21-day lockdown by prohibiting movement of people across cities and highways**. Directions have been given to seal the district and State borders and allow **only the movement of goods**.

Catering to the needs of the migrants:

- The migrant workers who have moved out of their work spots must be **quarantined in the**

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nearest shelter after proper screening for a minimum period of 14 days as per standard health protocol.

- The Union Home Ministry has directed State and Union Territory (UT) governments to **provide temporary shelters, food and other essentials to the poor and needy**, including migrant labourers. The states are allowed to **use the State Disaster Response Fund**.
- In order to mitigate the economic hardship of migrants, the Home Ministry has directed the State and UT governments to ensure that all **employers pay wages without deduction** at workplaces, on the due date and for the period their commercial establishments remain closed during the lockdown.
- **Landlords have been directed not to demand one month's rent from workers**, including migrant workers. If any landlord is forcing labourers and students to vacate their premises, they will be liable for action under the Disaster Management Act.

Essentials exempted:

- The transportation of all goods, **without distinction of essential and non-essential**, has been allowed.
- The entire milk supply and newspaper delivery chains have also been allowed.

Source: TH

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Mass Disinfectant Bath – Ethical issue COVID-19

GS-IV | 31 March, 2020

Mass Disinfectant Bath – Ethical issue COVID-19

Part of: GS Prelims and GS-III S&T

Recently, migrant labourers returning to their homes from urban centres were forced to take an open bath with disinfectant before they were allowed to enter **Bareilly (Uttar Pradesh)**.

- It was done in order to **prevent COVID-19 from spreading** even further in the town.

Key Points

- The nodal officer in-charge of **COVID-19** in the district confirmed that the disinfectant was only chlorine mixed with water and not a chemical solution.
- However, the Medical Officer of Bareilly has informed that **sodium hypochlorite solution** was sprayed on the migrants.
- The solution is also **being used in Gujarat, Maharashtra and Punjab** for disinfecting buildings and solid surfaces in a bid to wash away any presence of novel coronavirus.
- It was argued that the move was initiated for the safety of the incoming migrants who arrived in special buses run by the government as it was necessary to eradicate the possible spread of the disease.
- The District Magistrate has ordered action against officials who recklessly forced migrants to take bath with the disinfectant without knowing its harmful effects on humans.
 - In Delhi, a 1% sodium hypochlorite solution was used in the spray applied on migrant workers' belongings.
 - A **1% solution can cause damage to the skin** of anyone who comes in contact with it.

Sodium Hypochlorite

- Sodium hypochlorite is commonly used as a **disinfectant**, a **bleaching agent**, and also to **sanitise swimming pools**.
- It **releases chlorine**, which is a disinfectant and big quantities of chlorine can be harmful.
- Uses:**
 - A **normal household bleach** usually is a **2-10%** sodium hypochlorite solution.
 - At a much lower **0.25-0.5%**, this chemical is used to **treat skin wounds** like cuts or scrapes.
 - An even **weaker solution (0.05%)** is sometimes used as a **handwash**.
- Harmful effects on human beings:**
 - Sodium hypochlorite is **corrosive**, and is meant largely to clean hard surfaces.
 - If it gets inside the body, it can cause **serious harm to lungs**.
 - Even a 0.05% solution could be very **harmful for the eyes**.
 - It can cause **itching or burning** and is not recommended to be used on human beings, certainly not as a spray or shower.
- Effect on the novel coronavirus:**

UPSC "PT" DNA (Daily News Analysis)

- The **World Health Organization** (WHO), and the US Centers for Disease Control and Prevention, **recommend homemade bleach solutions** of about 2-10% concentration to clean hard surfaces to **disinfect them from coronavirus**.
- A Michigan State University tutorial says that cleaning hard surfaces with this solution can disinfect them not just from novel coronavirus but also **help prevent flu, food borne illnesses, and more**.
- However, it advises to **always use the bleach in a well-ventilated area and wear gloves** when handling the product or solution.

Source: TH

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