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GS 2 : Polity, Governance, International Relations

1. Protecting the police

Context

- As the second wave of COVID-19 pandemic sweeps the country, health service workers are on the front line.
- But close behind them are police forces, which are often thrust into new roles as they engage and enforce new policies and laws.

Tasks performed

- The primary responsibility of implementing the lockdown through restricting public movement and ensuring physical distancing was shouldered by the police force during the pandemic.
- Police personnel was mobilized for a variety of tasks – to monitor check posts, monitor COVID-19 infection hotspots, and ensure lockdown as well as containment.
- In addition to this, police personnel also carried out a variety of unconventional duties, including creating social awareness, clarifying fake news, daily inspection of people in isolation or quarantine, assisting the health department in contact tracing activities, helping migrant workers to enter shelters, and helping the needy persons to access medical and other essential services.

Challenges for the police

- The police faced a tough time enforcing the rules that came with various lockdowns.
- In addition to enforcing lockdowns and maintaining order, the police continue to perform their regular duties as well.
 - In case an apprehended criminal is found COVID-19 positive, he needs to be quarantined before being produced before a magistrate.
 - In heinous offences like murder and rape, arrests cannot be deferred.
 - The probability of policemen who are effecting arrests catching the infection is very high.
- Many policemen have succumbed to COVID-19 and numerous others are getting infected while helping others.
- Their families remain at a higher risk.

- Concerns about carrying the infection to the family members may be a source of psychological distress.
- Police personnel are experiencing anxiety related to COVID-19 duties.
 - The concern about being infected from the community and workplace may be a source of fear among police personnel.
 - Fear of quarantine and social stigma are possible causes of distress.
 - There are sporadic incidents of suicide by police personnel associated with the fear.
- In addition to increased workload and exposure to infection with coronavirus, police personnel, when trying to maintain law and order, are exposed to aggressive assaults by the public.

This can result in a greater likelihood of police personnel developing a range of psychological problems such as burnout, emotional disturbances, psychological distress, sleep disturbances, anxiety, depression, and post-traumatic stress disorder.

Steps to be taken by the Government

- First, police leadership should deploy rest and rotation policies to reduce the likelihood of exhaustion.
- Second, they should assign desk duties to older police personnel and those with other health complications, as they are more susceptible to this virus. Training on technology usage to allow for working remotely will help.
- Third, if feasible, the police must consider shifting in-person services to teleservices to maintain social distancing. Such measures are being deployed in Canada and in some US States.
- Fourth, routine check-ups, peer support programmes and counselling support should be provided to deal with mental health issues.
- Fifth, a portion of the staff should be demarcated and deployed to continue with core policing duties.
- Finally, the current crisis should be used as an opportunity to push for long-pending reforms. The police headcount ratio needs to increase.

Conclusion

- Therefore, the scheme of special insurance cover of ₹50 lakh, notified for the medical fraternity in 2020 for a limited period of three months, must be revived and extended to all front-line workers (including the police) this time.

2. Another wave spells more nutrition loss

Context

- Growing levels of acute food insecurity.

Key facts

- The second wave of Covid-19 infections will likely pose a greater risk to the poor.
- Rural areas may face severe devastation as they have poor healthcare and hence will require closer examination and urgent policy attention.
- India has consistently ranked poorly in all international rankings on hunger (ranking 102 among 117 countries in the Global Hunger Index 2019).
- Surveys show among the poor and the marginalized, the quantity of food they consumed either 'decreased' or 'decreased a lot' compared to before the Covid.
 - Households reported cutting down on nutritious food such as milk, vegetables, pulses and oil.
 - The poorer, socially marginalised Dalits, and those with lesser access to food security schemes (such as migrants) faced more severe food insecurity.

Reduced income

- A large number of households reported no or lower levels of income.
- Households were also seeking loans for food, an indicator of the debilitating food and financial insecurities that poor households continue to face.

Migrants on the margins

- Migrants who have travelled to cities only months ago are again travelling back to their villages.
- There was limited support for migrants even in existing social protection schemes such as the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA).

Impact

- These reductions will undoubtedly further accelerate the impending effects on children's nutrition, as highlighted in the National Family Health Survey or NFHS-V (2019-20) and the Global Food Policy Report, 2021.
- The loss in nutrition may have come as a consequence of people losing their jobs and/or being pushed into lower income brackets over time.
- This indicates that households have not had a chance to rebuild, and with many completely exhausting their savings and facing massive debt, they are bound to be more severely hit than the first wave.

In the face of such a threat, including high unemployment that is steadily rising again, the state must ensure immediate, sustained action.

Way forward

- The government will provide 5 kilogram of free food grains to millions of poor who are covered under the National Food Security Act, 2013, “due to economic disruptions caused by the Covid-19 outbreak in the country” for the months of May and June under the Pradhan Mantri Garib Kalyan Anna Yojana.
 - Prime Minister stressed that it is important that the poor of the country have nutritional support when the country is facing the second wave of coronavirus pandemic.
 - Experts suggest the programme should be further extended to six months because job recoveries will take time.
- The government needs to expand the current offering to include nutritious foods like pulses; address issues faced in existing schemes such as MGNREGA (like delays in wages and rationing); and new schemes such as a potential urban employment scheme should be explored.
- Social protection mechanisms for the poorest and most vulnerable people during and in the aftermath of the COVID-19 crisis need to be employed that incorporate provisions on the Right to Food, both in terms of quantity and nutritional quality.
- For migrants stuck in cities without work, community kitchens (such as Amma canteens) are required.

3. Undermining ‘vaccination for all’

Demand-supply mismatch

- This is because the vaccine has been expanded to cover a larger population in India. The largest supplier, SII, gave two explanations for its inability to meet its commitments.

Defense Production act

The first was that the United States Government had used a Cold War piece of legislation, the Defense Production Act.

- The Defense Production Act gives the power to control the distribution of products, to curb the export of raw materials critical for vaccine production.

- The raw materials affected by the US curbs include reagents, plastic tubing material, nano-filters and bioreactor bags, and the steps taken by the Biden administration ensure that American manufacturers get priority for these items.

Why did the US block the export?

- In November 2020, American pharmaceutical company Pfizer Inc. cut short its vaccine production target by half, citing a shortage of raw material.
- Pfizer, which is producing mRNA Covid-19 vaccines, had earlier planned to roll out over 1.2 billion shots in 2021 but reduced the target by half due to raw material shortage in the United States and Europe.
- The revised target was a major hindrance to Biden's poll promise of administering 100 million vaccination shots in his first 100 days in office.
- The US government has purchased 600 million doses of Covid-19 vaccines from both Pfizer Inc. and Moderna Inc., which will be delivered in regular increments through the end of July 2021.
- In order to accelerate vaccine production, the Biden administration decided to invoke the Defense Production Act for the short term.

Note:

- The United States has now clarified it would immediately provide raw materials required to manufacture Covid-19 vaccines, ventilators, and personal protective equipment to help India battle the second wave of the infection.

Second, the company complained that it lacked the financial capacity to expand its production, requesting a grant of ₹30 billion from the government.

- It is seeking the money to ramp up monthly production to more than 100 million doses by the end of May.

4. Modi, Biden discuss COVID-19, U.S. aid

TRIPS initiative:

- The Agreement on **Trade-Related Aspects of Intellectual Property Rights (TRIPS)** is an international legal agreement between all the member nations of the **World Trade Organization (WTO)**. It establishes minimum standards for the regulation by national governments of different forms

of **intellectual property (IP)** as applied to nationals of other WTO member nations.

- TRIPS is administered by the WTO.

Calls for temporary waiver:

- In 2020, **South Africa and India proposed that WTO grant a temporary waiver from TRIPS provisions** to enable faster production of COVID-19 vaccines and easier accessibility of diagnostics and treatments.
- The waivers would be in addition to the existing **flexibilities in TRIPS allowing countries to impose compulsory licenses**. Though over 100 developing nations supported the waiver, it was blocked by the G7 members.
 - Compulsory licensing is when a government allows someone else to produce a patented product or process without the consent of the patent owner or plans to use the patent-protected invention itself.

GS 3 : Economy, Science and Technology, Environment

5. Assam Rifles, IAF contain forest fires in Mizoram

Context:

- Forest fire in south Mizoram.

Details:

- Forest fires have continued to rage across Mizoram even 48 hours after its breakout.
 - According to a **satellite data assessment by the Forest Survey of India (FSI)**, there were as many as 2,671 forest fire points in the state between April 20 and 26, with over 400 points on 26th March alone. **NASA's Earth data website** also showed a very large concentration of fires in and around the state.
- The forest fire reportedly broke out at Saisih forest area in the outskirts of Lunglei town and spread to Lunglei town.
- The massive forest fires have affected several parts of Mizoram and damaged vast tracts of land. While **Lunglei is the worst affected, Serchhip, Lawngtlai and Hnahthial were also hit by the forest fire**.
- The Assam Rifles had deployed personnel and firefighting equipment to the district, while the Indian Air Force had deployed two Mi-17V5 helicopters, equipped with Bambi Buckets, to douse the fire.

- According to the officials concerned, the forest fires have been largely contained.
 - The fires in the residential areas were contained in the morning, while the forest fires continued.

Possible causes of the forest fire:

- Several factors may have led to the forest fires in south Mizoram.

Deficient moisture:

- According to the Indian Meteorological Department (IMD), the state of Mizoram recorded a **“large deficiency” in rainfall during the pre-monsoon period** from March 1 to April 26 at 74% below normal.

Strong winds:

- The prevalent **strong winds have made the flames very strong** and are aiding in the rapid spread of the forest fire.

Fuel load:

- The forests in Mizoram have large bamboo plantations and **bamboo leaves are highly inflammable.**
- When there is less moisture and high fuel load in the form of dry leaves and twigs on the forest floor, fire catches easily and spreads rapidly.

Jhum Cultivation:

- Jhum cultivation is also another possible factor.
 - Jhum cultivation, also known as **slash and burn agriculture**, is the process of growing crops by first clearing the land of trees and vegetation and burning them thereafter.
- During this dry season, certain manmade factors may have led to extensive fires.

6. IMD predicts rain in several parts till month-end

Context:

- The **India Meteorological Department’s (IMD)** weather forecast for the pre-monsoon phase.

Details:

Heat waves:

- Heat wave conditions are very likely in isolated pockets over Gujarat and coastal Odisha.
 - A heat wave is a period of **excessively hot weather, which may be accompanied by high humidity**, especially in oceanic climate countries.
 - While definitions vary, a heat wave is usually **measured relative to the usual weather in the area and relative to normal temperatures for the season**. The Indian Meteorological Department (IMD) has given the following criteria for Heat Waves:
 - Heat Wave need not be considered till the maximum temperature of a station reaches at least 40°C for Plains and at least 30°C for Hilly regions.
 - When the normal maximum temperature of a station is less than or equal to 40°C, Heat Wave Departure from normal is 5°C to 6°C and Severe Heat Wave Departure from normal is 7°C or more.
 - When the normal maximum temperature of a station is more than 40°C, Heat Wave Departure from normal is 4°C to 5°C and Severe Heat Wave Departure from normal is 6°C or more.
 - When the actual maximum temperature remains 45°C or more irrespective of normal maximum temperature, heat waves should be declared.
 - In India, **heat waves typically occur from March to June**, and in some rare cases, even extend till July. On average, five-six heat wave events occur every year over the northern parts of the country.

Rainfall:

- The India Meteorological Department (IMD) has predicted a wet spell over several parts of the country, including central, south and northeast India, from April 26 to 30.
- The IMD has forecasted thunderstorms with lightning and gusty winds in isolated areas.

Western disturbance:

- A fresh feeble western disturbance is also likely to affect the **Western Himalayan region**, causing isolated rainfall/snowfall with thunderstorm and

gusty winds over Jammu, Kashmir, Ladakh, Gilgit, Baltistan, Muzaffarabad, Himachal Pradesh and Uttarakhand.

- A western disturbance is an extratropical storm originating in the Mediterranean region that brings sudden winter rain to the northern parts of the Indian subcontinent. It is a **non-monsoonal precipitation pattern driven by the westerlies.**

Trough formation:

- A north-south trough (low-pressure area) runs from Marathwada to south coastal Tamil Nadu across north interior Karnataka, Telangana and Rayalaseema in lower tropospheric levels. Under its influence, scattered to fairly widespread rainfall or thunderstorm is very likely over the associated regions.
 - A trough is an **elongated region of relatively low atmospheric pressure.** It is an extension of isobars from a low-pressure area in the surface levels.
 - Troughs may be at the surface, or aloft. **Near-surface troughs** sometimes mark a weather front **associated with clouds, showers, and a wind direction shift.**

7. 'Hasten vaccination, boost health infra'

Context:

- Article on the **state of the economy** in RBI bulletin.

Background:

- India is battling a spurt in new infections and mortalities in the **second wave of the COVID-19 pandemic.**

Challenges to the Indian economy:

- Observing that healthcare infrastructure and vaccine supplies are strained, **financial markets have been reeling and earnings forecasts are facing downgrades.**
- The resurgence in COVID-19, if not contained in time, risks protracted restrictions and **disruptions in supply chains with consequent inflationary pressures.**

Signs of resilience:

- The article argues that economic activity in India is holding up against COVID-19's renewed onslaught. It notes that apart from contact-intensive sectors, **activity indicators largely remained resilient** in March and grew beyond pre-pandemic levels.
 - The early results of **corporate performance** in January-March indicate strong growth in revenue and net profit, driven by a pick up in demand and order inflows.
 - The IT companies have been putting up a stellar performance owing to rising digitalisation.
 - The **electricity consumption**, a real-time indicator of economic activity has risen sharply in April on top of steady growth in seven preceding months.
 - **Merchandise exports** have posted robust growth in the first week of April.

Recommendations:

- The administration should **focus on speedier vaccination, ramping up of health infrastructure and observance of pandemic protocols.**
- The government must remain resolutely focussed on a post-pandemic future of strong and sustainable growth with macroeconomic and financial stability.

8. DRDO develops crystal blades for aero engines

Context:

- The **Defence Research and Development Organisation (DRDO)** has developed single crystal blade technology.

Background:

Grain boundary:

- During the normal casting of metal components, the **metal while solidifying forms grains.** Each grain has a different orientation of its crystal lattice from its neighbours.
- **A grain boundary is the interface between two grains, or crystallites, in a polycrystalline material.**
- The grain boundaries are **characterized by increased chemical activity, slippage under stress loading, and the formation of voids.** These conditions can lead to **creep**, the tendency of blade material to deform at a temperature-dependent rate under stresses well below the yield strength of the material.

- Corrosion and cracks also start at grain boundaries. Thus, **grain boundaries greatly shorten turbine vane and blade life**, and require lowered turbine temperatures with a concurrent decrease in engine performance.

Single crystal technology:

- To offset the limitations imposed by grain boundaries in polycrystalline materials, metallurgists have sought to eliminate grain boundaries from turbine airfoils altogether, by inventing techniques to cast **single-crystal turbine blades and vanes**, and design alloys to be used exclusively in single-crystal form.
- By eliminating grain boundaries, **single-crystal airfoils have longer thermal and fatigue life, are more corrosion resistant and can also be cast with thinner walls.**

Details:

- The single-crystal high-pressure turbine (HPT) blades were manufactured using a **nickel-based superalloy**.
- The work was part of a programme taken up by the **Defence Metallurgical Research Laboratory (DMRL), a laboratory of the DRDO.**

Significance:

Technological breakthrough for India:

- This development marks a major technological breakthrough. Very few countries such as the U.S., the U.K., France and Russia have the capability to design and manufacture such single crystal components.

Impetus to indigenous defence production:

- Single-crystal technology is a **critical component in aero engines**.
- Helicopters need compact and powerful aero-engines for operating at extreme conditions and to achieve this, state-of-the-art single-crystal blades having complex shape and geometry, manufactured out of nickel-based superalloys **capable of withstanding high temperatures of operation** are used.
- DRDO has supplied 60 such single-crystal blades to the Hindustan Aeronautics Limited (HAL) as part of their **indigenous helicopter development programme for helicopter engine application.**

9. An idea on taxation that is worth a try

Context

- Treasury Secretary Janet Yellen has thrown the weight of the U.S. government behind a push for a global corporate minimum tax rate.

Why a global minimum tax?

- Major economies are aiming to discourage multinational companies from shifting profits – and tax revenues – to low-tax countries regardless of where their sales are made.
- Increasingly, income from intangible sources such as drug patents, software and royalties on intellectual property has migrated to these jurisdictions, allowing companies to avoid paying higher taxes in their traditional home countries.
- With a broadly agreed global minimum tax, the Biden administration hopes to reduce such tax base erosion without putting American firms at a financial disadvantage, allowing them to compete on innovation, infrastructure and other attributes.

The targets

- The proposal for a minimum corporate tax is tailored to address the low effective rates of tax shelled out by some of the world's biggest corporations, including digital giants such as Apple, Alphabet and Facebook, as well as major corporations such as Nike and Starbucks.
- These companies typically rely on complex webs of subsidiaries to Hoover profits out of major markets into low-tax countries such as Ireland or the Caribbean nations such as the British Virgin Islands or the Bahamas, or to central American nations such as Panama.

Global minimum corporate tax rate

- It is setting a minimum rate for corporations all over the world to pay regardless of which jurisdiction they are registered in.
- A global minimum rate would ensure that companies would have to pay wherever they were registered, with revenues being apportioned according to the extent of their activity in the respective countries.
- This is a move designed to tackle a worldwide phenomenon known as **Base Erosion and Profit Shifting (BEPS)**, wherein large corporations register in low-tax jurisdictions to avoid paying higher rates of corporate tax prevalent in the countries they actually operate in.

BEPS:

Base Erosion and Profit Sharing

Where are international tax talks?

The Paris-based Organization for Economic Cooperation and Development has been coordinating tax negotiations among 140 countries for years on two major efforts:

- Setting rules for taxing cross-border digital services and
- Curbing tax base erosion, with a global corporate minimum tax part of the latter.

How would a global minimum tax work?

- The global minimum tax rate would apply to companies' overseas profits.
- Therefore, if countries agree on a global minimum, governments could still set whatever local corporate tax rate they want.
- But if companies pay lower rates in a particular country, their home governments could "top-up" their taxes to the agreed minimum rate, eliminating the advantage of shifting profits to a tax haven.

The problems

- Apart from the challenges of getting all major nations on the same page, especially since this impinges on the right of the sovereign to decide a nation's tax policy, the proposal has other pitfalls.
- A global minimum rate would essentially take away a tool that countries use to push policies that suit them.
- Nations have used their freedom to set corporation tax rates as a way to attract such businesses. Smaller countries such as Ireland, the Netherlands and Singapore have attracted footloose businesses by offering low corporate tax rates.
 - The global minimum tax rate will finish off every opportunity for such countries whose only weapon to attract these companies is lower taxes.
 - A lower tax rate is a tool they can use to alternatively push economic activity.
- In a world where there are income inequalities across geographies, a minimum global corporation tax rate could crowd out investment opportunities.

Impact on India

- India has already been proactively engaging with foreign governments in double taxation avoidance agreements, tax information exchange agreements, and multilateral conventions to plug loopholes. This proposal of a common tax rate, thereby, adds no further benefits to India.
- To address “the challenges posed by the enterprises who conduct their business through digital means and carry out activities in the country remotely”, the government had introduced the ‘Equalisation Levy’ in 2016.
- A lower tax rate is a tool for India to alternatively push economic activity.

THE INDIAN EXPRESS

GS 2 : Polity, Governance, International Relations

1. Complexities of herd immunity

What is herd immunity

- The herd immunity concept is based on lowering the number of susceptible individuals.
- If sufficient individuals in the population are immune either through vaccination or a prior exposure, then the number of susceptible individuals drops.
- For example, if the **immune population is 70%**, then the susceptible population is 30%.

Does herd immunity really protect from subsequent waves?

- The number of daily cases depends on three factors: **The number of infectious people** in the population, the **number of susceptible individuals**, and the **rate of transmission** of the virus.
- The rate of transmission is dependent on the nature of the virus and the extent of contact between individuals.
- So, if the rate of transmission increases due to change in social behaviour and increased contact then **even with a large percentage of the immune population, a significant number of daily cases can result.**

- The “herd immunity” **number is not a static number** but it changes depending on the rate of transmission of the virus and the extent of virus present.

Estimating exposures in metro cities

- Serosurveys indicated that Covid had touched 56% of population in Delhi by January; 75% in some slums Mumbai in November, and about 30% in Bengaluru in November.
- The population touched by Covid can also be estimated by the Infection Fatality Rate (IFR).
- This is the total number of deaths divided by the total people infected. In India, the estimate is 0.08%.
- So this number can be used to back-calculate the number of infections based on the number of deaths in the different cities.
- The table given below shows the number of people exposed to Covid in some metros until January 31 using the method above.

What are the reasons behind the recent surge

- The reasons behind the recent surge are not fully understood.
- The one factor that is not in doubt, however, is that interaction and contact with the population has increased since February.
- Such increased contact increased the virus in circulation and led to increased cases in the susceptible population.

2. An unquiet neighbourhood

Tale of two conflicts in neighbourhood

- Efforts to end two major conflicts in India’s neighbourhood have become intense.
- To the west, **a peace summit on Afghanistan**, seeking to end decades of conflict there, was also scheduled to take place in Istanbul over the weekend.
- To the east, the Association of Southeast Asian Nations (ASEAN) has produced **a diplomatic opening with Myanmar’s military leadership**.
- Afghan conflict go back to the late 1970s; since then we have seen different phases of the conflict.
- Although the crisis in Myanmar appears recent, the tension between civil-military relations is not new.
- Back in 1988, the army annulled the huge mandate won by Aung San Suu Kyi and unleashed massive repression.

3 Common Themes in the effort at peace and reconciliation

1) Ending violence

- The first is about ending violence.
- In Afghanistan it has been near impossible to get a resurgent Taliban to agree to stop its attacks on government forces or the civilian population.
- The ASEAN initiative in Myanmar calls for an immediate cessation of violence and utmost restraint from all sides.
- The opposition demanding restoration of democracy might find this rather ironic, since it is the army that is employing violence and has shown scant restraint.

2) Dialogue among all parties

- The second theme in the ASEAN initiative – “**constructive dialogue among all parties**” to “seek a peaceful solution” – is also common to all peace processes.
- The Taliban found all kinds of excuses to delay a dialogue with the Kabul government that it always saw as illegitimate. So far, it has avoided one.
- In Myanmar, the army might be ready to engage the opposition in a prolonged dialogue and defuse international pressure; but it will be hard for the victims of the coup to accept a dialogue on the army’s terms.

3) Third-party mediator

- The Afghan conflict **has long been internationalised**.
- All major powers, including regional actors and neighbours, have **acquired stakes in the way the Afghan conflict is resolved**.
- This unfortunately makes the construction of an internal settlement that much harder.
- In Myanmar, the ASEAN has set the ball rolling by agreeing that a special envoy will be traveling to the region and will engage with all parties to the conflict.

Cost-benefit in diplomacy

- The US is hoping that the Taliban will moderate some of its hardline positions given its need for **significant international economic assistance for reconstruction, political legitimacy**.
- In Myanmar, too, the international community will hope the military would want to avoid the risks of political isolation and economic punishment.
- But how the Taliban and the Myanmar army calculate these costs and benefits could be very different.

- Both have long experience of surviving external pressure and enduring sanctions.

Conclusion

Few civil wars have seen the kind of massive external effort to change the internal dynamics as in Afghanistan; but to no avail. In Myanmar, it is not clear how far the international community might go. The prospects for positive change in Afghanistan and Myanmar, then, do not look too bright in the near term.

GS 3 :Economy, Science and Technology,Environment

3. India third highest military spender in 2020: SIPRI

What the SIPRI database says

- India was the **third largest military spender** in the world in 2020, behind only the US and China.
- The US accounted for **39 per cent of the money spent on military globally**, China accounted for 13 per cent, and India accounted for **3.7 per cent of the globe's share**.
- The US spent a total of \$778 billion in 2020, China spent \$252 billion and **India's military expenditure was \$72.9 billion**.
- The United States' military spending was **3.7 per cent of its GDP** while the corresponding numbers for China and India were 1.7 per cent and **2.9 per cent respectively**.
- The other top spenders included Russia with \$61.7 billion, the UK at \$59.2 billion, Saudi Arabia at \$57.5 billion, followed by Germany and France at just under \$53 billion each.

Increase in spending in the year of pandemic

- SIPRI said that the total "global military expenditure rose to **\$1981 billion** last year, an **increase of 2.6 per cent** in real terms from 2019.
- 2.6 per cent increase in world military spending came in a year" when the global GDP shrank by 4.4 per cent largely due to the economic impacts of the Covid-19 pandemic.
- Military spending as a share of GDP – the military burden – reached a global average of 2.4 per cent in 2020, which is the biggest year-on-year rise in the military burden since the global financial and economic crisis in 2009.

4. Covid fear and anxiety spread, cash back in favour with public

Increase in currency with the public

- During the fortnight ended April 9, currency with the public jumped by Rs 30,191 crore to hit a **new high of Rs 27,87,941 crore**.
- In the six-week period between February 27 and April 9, **currency with the public rose by Rs 52,928 crore**, show RBI data.
- Experts said the increase in currency with the public is on account of the fear of imposition of lockdowns by state or central governments.

How currency with public is arrived at

- According to the RBI, currency with the public is arrived at after **deducting the cash with banks from the total currency in circulation**.
- Currency in circulation, which includes notes in circulation, rupee coins, and small coins, refers to cash or currency within a country that is physically used to conduct transactions between consumers and businesses.
- It effectively means the currency that individuals across the country hold with themselves.

M3 has gone up

- Money supply in the economy - or M3 - has gone up over the last couple of months.
- **M3, which includes currency with public, current deposits, savings deposits, and fixed deposits**, has increased by 11.3 per cent, or Rs 19.17 lakh crore, to a new high of Rs 189.07 lakh crore as on April 9, 2021.

5. PowerGrid Infrastructure Investment Trust

Why in News

The **Power Grid Corporation of India (PGCIL)** launched its **Infrastructure Investment Trust (InvIT) - PowerGrid Infrastructure Investment Trust (PGInvIT)**.

Key Points

- **About PGInvIT:**

- This is the **first time a state-owned entity (PGCIL) is monetizing its infrastructure assets through the InvIT route.**
- This will be **only the third InvIT to be listed in the Indian markets,** after IRB InvIT and India Grid Trust, both of which went public in 2017.
- The InvIT route was **proposed by the Centre as an alternative fundraising route** for state-run companies to manage funding requirements without having to depend on government support.

Power Grid

- It is a **public limited company** under the administrative control of the **Ministry of Power.**
- It is the **largest power transmission company in India.**
- It started its commercial operation in the year 1992-93 and is today, a **Maharatna company.**
- **About Infrastructure Investment Trust (InvIT):**
 - It is a **collective investment scheme similar to a mutual fund,** which enables **direct investment** of money from **individual and institutional investors in infrastructure projects** to earn a small portion of the income as return.
 - InvITs **can be treated as the modified version of REITs (real estate investment trusts)** designed to suit the specific circumstances of the infrastructure sector.
 - It is **created to hold income-generating and operational infrastructure assets** such as roads, power transmission lines, gas pipelines, etc.
 - These assets have long-term contracts with strong counterparties that provide a steady cash flow over the long term – typically 15-20 years.
 - The InvITs are **regulated by the SEBI (Infrastructure Investment Trusts) Regulations, 2014.**
 - An InvIT **consists of four elements:**
 - **Trustee** has the responsibility of inspecting the performance of an InvIT.
 - **Sponsor(s)** are promoters of the company that set up the InvIT.
 - **Investment Manager** is entrusted with the task of supervising the assets and investments of the InvIT.
 - **Project Manager** is responsible for the execution of the project.
 - Units of InvITs **can be listed and traded on a stock exchange,** providing them liquidity.
 - Or they **can be private and unlisted,** in which case they are not publicly traded and largely invested in by institutional investors.

- **Advantages of Setting up InvITs:**
 - For sponsors (infrastructure developers), InvITs **provide a convenient route to monetize revenue-generating assets, unlock equity gains, and deleverage their balance sheets** (i.e. to reduce debts).
 - InvITs also **present a more tax-friendly structure**. Being a trust, all income received by the InvIT from underlying assets receives a pass-through treatment and is not taxable at the InvIT level.
 - For investors such as banks, financial institutions, pension funds, insurance companies, and even retail investors, InvITs **provide a good low-risk investment opportunity**.
- **Disadvantages of InvITs:**
 - InvITs are **sensitive to changes in regulatory and tax law**.
 - Infrastructure **assets are not inflation-linked in India**.
 - A high rate of inflation has a significant impact on the performance of InvITs.

6. Crop Diversification

Why in News

Recently, a top agriculture economist has suggested that the best chance of Crop Diversification is through **animal agriculture/animal husbandry**.

Key Points

- **About:**
 - Crop diversification refers to the **addition of new crops or cropping systems to agricultural production** on a particular farm taking into account the different returns from value-added crops with complementary marketing opportunities.
 - **Cropping System:** It refers to the crops, crop sequences and management techniques used on a particular agricultural field over a period of years.
 - **Types:** Major cropping systems in India are sequential-cropping, **monocropping, intercropping, relay Cropping, mixed-cropping** and alley cropping.
 - Many farmers also use the **mixed crop-livestock system** to increase their standards of living and income.
 - Animal husbandry or Animal Agriculture is the branch of science **dealing with the practice of breeding, farming and care of farm animals (livestocks)** such as cattle, dogs, sheep and horses by humans for advantages.

- It refers to **livestock raising and selective breeding**. It is a **branch of agriculture**.
- **Benefits:**
 - **Increase Income on Small Land Holding:**
 - At present, **70-80% farmers have land below 2 hectare**. To overcome this, existing cropping patterns must be diversified with high value crops such as maize, pulses, etc.
 - The Government of Haryana has also supported this by announcing that farmers switching to other alternate crops instead of paddy will be paid Rs. 7000 per acre incentive (**Mera Pani - Meri Virasat Scheme**).
 - **Economic Stability:**
 - Crop diversification **can better tolerate the ups and downs in price of various farm products** and it may ensure economic stability of farming products.
 - **Mitigating Natural Calamities:**
 - Sudden adverse weather conditions like erratic rainfall, drought, hail, incidence of insect and pest disease. Under this situation, **crop diversification through mixed cropping may be useful**.
 - **Balance Food Demand:**
 - Most of the Indian population suffers from **malnutrition**. Most of the girl children have **anemia**. Including crops like pulses, oilseed, **horticulture**, and vegetable crops can improve socio economic status by adding quality to the food basket and also improve soil health with the aim of food safety and nutritional security.
 - The Government of India has now targeted to increase the area under pulses and oilseeds through **National Food Security Mission (NFSM)**.
 - **Conservation:**
 - Adoption of crop diversification **helps in conservation of natural resources like introduction of legume in rice-wheat cropping system**, which has the ability to fix atmospheric Nitrogen to help sustain soil fertility.
 - **Soil Health Card (SHC)** provides information to farmers on nutrient status of their soil along with recommendations on appropriate dosage of nutrients to be applied for improving soil health and its fertility.
- **Challenges:**
 - Majority cropped area in the country is completely **dependent on rainfall**.

- Sub-optimal and **over-use of resources** like land and water resources, causing a negative impact on the environment and sustainability of agriculture.
 - **Animal agriculture** is the **second largest contributor** to human-made **Greenhouse Gas (GHG)** emissions after fossil fuels and is a leading cause of deforestation, water and air pollution and biodiversity loss.
- **Inadequate supply of seeds and plants** of improved cultivars.
- Fragmentation of land holding **less favouring modernization and mechanization of agriculture.**
- **Poor basic infrastructure** like rural roads, power, transport, communications etc.
- Inadequate post-harvest technologies and **inadequate infrastructure for post-harvest handling** of perishable horticultural produce.
- Very **weak agro-based industry.**
- Weak research - extension - farmer linkages.
- **Inadequately trained human resources** together with persistent and large scale illiteracy amongst farmers.
- Host of **diseases and pests** affecting most crop plants.
- **Poor database** for horticultural crops.
- **Decreased investments in the agricultural sector** over the years.
- **Other Related Initiatives:**
 - **Refrigeration System Pusa-FSF**
 - **Sub-Mission on Agroforestry Scheme**
 - **Pradhan Mantri Fasal Bima Yojana**
 - **Mega Food Parks**
 - **Seed-Hub Centres**

Way Forward

- Although there are challenges which can not be ignored, crop diversification provides an opportunity to **double farmers income** and create **food security** for the nation.
- Therefore, the **government must promote crop diversification** by purchasing crops produced other than wheat and rice at **Minimum Support Price**. This could also help conserve the dwindling supply of underground water.
- **Agricultural emissions can also be limited** through smarter livestock handling, technology-enabled monitoring of fertilizer application, simple changes in field layout and other, more efficient agricultural techniques.

Prelims Practice Questions

1. Consider the following statements:

1. The Constitution of India recognises both religious and linguistic minorities.
2. The Government of India has declared six religions as religious minorities in India.

Which of the statements given above is/are correct?

- A 1 only
- B 2 only
- C Both 1 and 2
- D Neither 1 nor 2

Answer : C

Explanation

- In 1992, with the enactment of the National Commission for Minorities (NCM) Act, 1992, the NCM became a statutory body and was renamed as the NCM.
- In 1993, the first Statutory National Commission was set up and five religious communities viz the Muslims, Christians, Sikhs, Buddhists and Zoroastrians (Parsis) were notified as minority communities.
 - In 2014, Jains were also notified as a minority community.
- The **Government of India has declared six religions** namely, Muslims, Christians, Sikhs, Buddhists and Parsis (Zoroastrian) and Jain as **religious minorities in India. Hence, statement 2 is correct.**
- National Commission for Minority Education Institution (NCMEI) Act, 2004:
 - It gives the minority status to the educational institutions on the basis of six religious communities notified by the government.
- The term "minority" is not defined in the Indian Constitution. However, the **Constitution recognises** religious and linguistic minorities. **Hence, statement 1 is correct.**

2. The 'Deep Time' project, that aimed at studying how people adapt to extreme changes in living conditions and environment caused by isolation and darkness, was held recently in which country?

- a. Switzerland
- b. France
- c. USA
- d. Germany

Answer: b

Explanation:

- Deep Time project was held in the Lombrives Cave in France.
- Deep Time project investigated how a lack of external contact would affect the sense of time.
- It aimed at studying how people adapt to drastic changes in living conditions, environments.

3. Siachen Glacier is situated to the

- a. East of Aksai Chin
- b. East of Leh
- c. North of Gilgit
- d. North of Nubra Valley

Answer: d

Explanation:

- The Siachen Glacier is a glacier located in the eastern Karakoram range in the Himalayas.
- It is situated to the North of Nubra Valley.

4. How did the Defense Production Act of the USA affect India during the pandemic?

- a. US violated India's EEZ under its provisions.
- b. US raised the prices of defence exports to India.

- c. US placed export controls on raw materials for COVID-19 vaccines.
- d. US withdrew from joint defence production projects with India.

Answer: c

Explanation:

- Defense Production Act of USA was passed in 1950 in response to the Korean War.
- The act grants emergency powers that allow the U.S. government to control private-sector production decisions.
- As a consequence of the U.S.'s Defense Production Act, federal government purchase orders have to be prioritised over foreign orders.
- During the COVID-19 pandemic, the US placed export controls on raw materials for COVID-19 vaccines.
- Exports of critical raw materials used in the production of some Covid-19 vaccines were blocked by the US as a result of Biden's decision to invoke the US Defense Production Act.
- The US restrictions hit the output of major suppliers for the world. This includes vaccines like Covishield and Covovax, which the Serum Institute of India was expected to supply.

5. Consider the following statements:

1. Mahavira was born in the Vajji kingdom.
2. The teachings of Mahavira were called Jain Agamas.

Which of the statements given above is/are correct?

- A 1 only
- B 2 only
- C Both 1 and 2
- D Neither 1 nor 2

Answer : C

Explanation

- **Mahavira was born** to King Siddhartha of Kundagrama and Queen Trishala, a Lichchhavi princess in the year 540 BC **in the Vajji kingdom**, identical with modern day Vaishali in Bihar. **Hence, statement 1 is correct.**
- Mahavira belonged to the Ikshvaku dynasty.
- Lord Mahavir was named Vardhamana, which means “one who grows”.
- He abandoned worldly life at the age of 30 and attained ‘kaivalya’ or omniscience at the age of 42.
- Mahavira taught ahimsa (non-violence), Satya (truth), asteya (non-stealing), brahmacharya (chastity) and aparigraha (non-attachment) to his disciples and his **teachings were called Jain Agamas. Hence, statement 2 is correct.**
- Ordinary people were able to understand the teachings of Mahavira and his followers because they used Prakrit.
- It is believed that the Mahavira passed away and attained moksha (liberation from the cycle of birth and death) at the age of 72 in 468 BC at a place called Pavapuri near modern Rajgir in Bihar.

6. E-2025 Initiative is launched by which of the following Organizations?

- a. Ministry of Health and Family Welfare
- b. Ministry of AYUSH
- c. World Health Organization
- d. Office of the Principle Scientific Advisor

Answer : c

E-2025 Initiative

- In 2017, WHO launched the E-2020 initiative to support a group of countries to achieve zero indigenous cases of malaria by 2020.
- Some 21 countries across five regions were identified as having the potential to reach the milestone of eliminating malaria.
- The report ‘Zeroing in on malaria elimination’ brings out the progress made through the E-2020 initiative of WHO.
- Building on the successes of the E-2020, WHO has identified a new group of 25 countries that have the potential to stamp out malaria within a 5-year timeline.

- The E-2025 countries will receive technical and on-the-ground support by WHO and its partners.
- In return, they are expected to audit their elimination programmes annually, participate in elimination forums, conduct surveillance assessments, and share malaria case data periodically.
- The new countries were selected based on four criteria:
 1. The establishment of a government-endorsed elimination plan;
 2. Meeting the threshold of malaria case reductions in recent years;
 3. Having the capacity of malaria surveillance and a designated governmental agency responsible for malaria elimination; and
 4. Being selected by the WHO Malaria Elimination Oversight Committee.

Mains Practice Questions

1Q. As a rising China projects its economic and military power into the Indian Ocean, any strategy for regional balance by the government in India would necessarily involve the economic and military development of the Andaman & Nicobar Islands. Examine.

Approach:

- Briefly explain Andaman and Nicobar Islands' location and significance.
- Connect the significance of the islands to its geopolitical location. Explain its significance for the trade and security.
- Suggest measures to be taken for its military and economic development.
- Conclude by linking its importance to India's Act East and Neighbourhood First policy.

2Q. What is the difference between attitude and aptitude? Among the two, which one do you think is more important for a civil servant.

Approach:

- List the differences between the attitude and aptitude.
- Explain with examples the need for both attitude and aptitude for a civil servant.

