

www.vishnuias.com



MARCH

15.03.2021

CURRENT AFFAIRS

A MAGAZINE FOR CIVIL SERVICES PREPARATION

JOIN OUR TELEGRAM: <https://t.me/vishnuiasmentor>

**Articles of the day
THE HINDU & INDIAN EXPRESS**

UPSC

General Studies

Test Series

**Online &
Offline
classes**

**One-Stop
Solution**

**Free daily
materials**

THE HINDU

GS 1 : Heritage and culture ,Geography of the World and Society

1. Centre reconstitutes panel on mythical Sarasvati river

Context:

The Centre has reconstituted an advisory committee to chalk out a plan for studying the mythical Sarasvati river, after the earlier panel's term ended in 2019.

Details:

- The ASI had first set up the committee on December 28, 2017 for a period of two years.
- The committee would continue to be chaired by the Culture Minister.
- It includes officials from the Culture, Tourism, Water Resources, Environment and Forest, Housing and Urban Affairs Ministries; representatives of the Indian Space Research Organisation; officials from the governments of Gujarat, Haryana and Rajasthan; and an ASI official.
- There is a 27-member panel among the "non-official members".

River Saraswati - the mystery

- Scientists, geologists as well as scholars have identified the Saraswati with many present-day defunct rivers.
- The river originated from the Har-Ki-Dun glacier in Garhwal (Uttarakhand).
- Saraswati river **flowed through Haryana, Rajasthan and the northern part of Gujarat.**
- According to experts who have studied the map of underground channels, it also flowed through Pakistan before meeting the Western Sea through Rann of Kutch and was approximately 4,000 km in length.
- The report by the panel said:
 - The Himalayan-born Satluj "of the PAST", which flowed through the channels of present-day Ghaggar-Patialwali rivulets, represents the western branch of the ancient river.
 - On the other hand, it said, Markanda and Sarsuti represented the western branch of Saraswati, known as Tons-Yamuna.
- The confluence of the branches was near Shatrana, 25 km south of Patiala. And suddenly, it flows crossing the desert (Rann of Kutch) and meets the gulf of the western sea.

GS 2 : Polity, Governance, International Relations

2. Future force for future wars

Context

- Prime Minister Narendra Modi recently asked the country's top military leadership to develop the military into a future force while taking note of the rapidly changing technological landscape.

Background

- Earlier, wars used to be easy to define. One could say whether the country was engaged in war or was it at peace. We could identify whom we were fighting with and at which front.
- The character of war was demonstrated depending upon the norms and ideology of society, technology, and anonymity.
- Now, times have changed leading to what is called 'hyper', 'hybrid', 'compound', 'non-linear', 'fourth-generation', 'next-generation' and 'contactless' war.

Hybrid warfare

- It is an emerging, but ill-defined notion in conflict studies.
- It refers to the use of unconventional methods as part of a multi-domain warfighting approach.
 - Hybrid warfare also refers to using **non-military tools** to achieve dominance or damage, subvert or influence.
 - These tools include "information pollution, perception management and propaganda."

Traditional Idea

- The term hybrid warfare originally referred to irregular non-state actors with advanced military capabilities.
- For example, in the 2006 Israel-Lebanon War, Hezbollah employed a host of different tactics against Israel.

Modern hybrid war

- Practitioners apply "conventional capabilities, irregular tactics and formations, use of cyber warfare and terrorist acts including indiscriminate violence, coercion, and criminal activity" simultaneously.

- Under this model, war takes place in a variety of operating environments, has synchronous effects across multiple battlefields, and is marked by asymmetric tactics and techniques.
- These tactics are difficult to defeat for militaries that lack the flexibility to shift mindsets on a constant basis, especially since the interconnected nature of modern society is such that hybrid war takes place on distinct battlefields.

War, at its core, is organised violence, waged for political purposes. The real purpose is domination.

Third Offset Strategy

For peace to prevail or be enforced, the development of future force capability based on a **Third Offset Strategy** was announced by the U.S. in 2014.

- It deals with multi-threat and multi-actor security environment.
- It consists of cutting-edge technology, exploration of new operational concepts for utilising such technology, and retaining the best and brightest in human resource to achieve the objective of peace. Although still in its inchoate stages, it focuses on promising technology areas such as robotics and system autonomy, miniaturisation, Big Data, and advanced manufacturing.
- It provides for autonomous learning systems, collaborative decision-making between humans and machines, assisted human operations, advanced manned-unmanned systems operations, network-enabled autonomous weapons, and high-speed projectiles.

Way forward

- To prepare for accelerated future wars, countries need to master the 'hybridised effect' of warfare that our adversaries are increasingly adopting.
- Confluence technology and a whole-of-government approach, which are absent, need to drive new strategies and tactics.

3. Panel on air quality dissolved

What's in News?

The central government's Commission for Air Quality Management in Delhi and National Capital Region (NCR) has been shut down within five months of its formulation.

- The body came into being in October 2020 on the back of an ordinance (a temporary measure) and the law requires that a formal Bill be presented to

Parliament within six weeks of its reconvening (in this case – January 29 when the Budget Session began).

- Before a Bill is tabled in Parliament it needs to be approved by the Union Cabinet.
- However, in spite of several Cabinet meetings, it wasn't taken up for discussion due to which the tenure of the body expired, without ever making it to Parliament.
- It is still technically possible to revive the body during the ongoing Parliament session.
- The commission was headed by M.M. Kuttu, a former Secretary in the Ministry of Petroleum and Natural Gas.

4. Uzbek troops train on Sig Sauer rifles

What's in News?

India-Uzbek joint exercise Dustlik-II commenced at Ranikhet (Uttarakhand).

- At Dustlik-II, Uzbek troops learnt the handling of SIG-716 assault rifles, recently inducted into service by the Army and also got orientation in slithering from helicopters for heli-borne operations in a counter-terrorist environment.

Details:

- It is named after Dustlik, a town in the Jizzakh region of Uzbekistan.
- This is the Second Edition of the annual bilateral joint exercise of both armies.
- The first edition was held in Uzbekistan in 2019.

Note:

- Uzbekistan is important to India for security and connectivity to the Central Asian region and Iran.
- Good relations with Uzbekistan is important for India's security, connectivity and counter-terrorism efforts, in the backdrop of growing Chinese presence in the region.

SIG-716 assault rifles

- SIG-716 assault rifles are American LMGs.
- Light Machine Guns (LMGs) are designed to be employed by an individual soldier, with or without an assistant, as an infantry support weapon.

5. China, N. Korea threats loom as Blinken, Austin head to Asia

Context:

Biden administration's first Cabinet-level trip abroad as part of a larger effort to bolster U.S. influence in Asia.

Concerns:

- Threats from China and North Korea have a significant influence on the Biden administration's trip that among other things, aims to calm concerns about America's role in Asia.
- As part of that effort and to reduce the risks of escalation, efforts had been made to connect with the North Koreans since February 2021, including through what is known as the "New York channel."
- However, there has been no response from North Korea.
- Consultations with North Korea's neighbours, Japan, South Korea and China are all the more significant for America, as it has not received any response from the reclusive country.

Details:

- Biden has signalled his desire to return the **Asia-Pacific to the top** of the U.S. foreign policy agenda. This is in line with his broader diplomatic theme "America is back".
- The new administration is trying to strengthen partnerships with the two key regional allies, Japan and South Korea.
 - Relationships with both countries were transactional and often temperamental under the Trump administration.
- The U.S. and South Korean negotiators have overcome years of contentious discussions under Mr. Trump to reach a tentative deal on paying for the American troop presence in South Korea.
- Recently America took part in the Quad virtual leadership summit. It pledged to keep stability in the region at the core of its international initiatives.

6. Centre likely to allow residents to fill their NPR details online

What's in News?

The Centre will allow residents to fill the National Population Register (NPR) form on their own, through the online mode, a month before the door-to-door enumeration by Census officials starts.

National Population Register

- National Population Register is a register of the usual residents of the country.
- NPR is different from both the decennial census and the National Register of Citizens (NRC).
- The objective of the NPR is to create a comprehensive identity database of every usual resident in the country.
- It is mandatory for every usual resident of India to register in the NPR.
- The decision exempts the state of Assam from NPR-2020.
- For the purpose of the NPR, a usual resident is defined as a person who has resided in a local area for six months or more or a person who intends to reside in that area for the next six months or more.
- The database would contain demographic as well as biometric particulars.
- It will be the next round of recording biometric and family tree details of Indian citizens.
- The NPR earlier collated in 2010 and 2015 has an electronic database of more than 119 crore residents.
- It is prepared at the local (village and sub-town), sub-district, district, state and national levels under provisions of the Citizenship Act, 1955 and the Citizenship (Registration of Citizens and Issue of National Identity Cards) Rules, 2003.

Note:

- The NPR's link with the proposed National Register of Citizens (NRC) and the Citizenship Amendment Act (CAA), 2019, has been opposed by many states and civil society groups.
- The Citizenship Rules framed in the year 2003 say that the NPR is the first step towards the compilation of the National Register of Indian Citizens (NRIC), or the NRC.
- The CAA passed by the Parliament in 2019, allows citizenship on the basis of religion to six undocumented communities from Pakistan, Afghanistan and Bangladesh, who entered India on or before December 31, 2014.
- Though the government has denied that the CAA and the NRC are linked, there are apprehensions that the CAA followed by a countrywide NRC, will benefit non-Muslims excluded from the proposed citizens' register, while excluded Muslims will have to prove their citizenship.

GS 3 : Economy, Science and Technology, Environment

7. The job crunch and the growing fires of nativism

Context

- The Haryana government has recently passed legislation that mandates companies in Haryana to provide jobs to local Haryanvis first, before hiring people from outside the State thereby providing 75% reservation in the private sector to job seekers from the state.

A look at stats

- As per data from the Centre for Monitoring Indian Economy (CMIE), the unemployment rate in Haryana is the highest of all states in India.
- A whopping 80% of women in Haryana who want to work cannot find a job.
- More than half of all graduates in Haryana are jobless.★
- The jobs situation in Haryana is staggeringly dismal.

Provisions of the legislation

- According to the government, the Haryana State Employment of Local Candidates Bill, 2020 provides reservations to local people in private-sector jobs that offer a salary of less than Rs 50,000 a month. However, the reservation will initially apply for 10 years.
- The state government said the reservation law will discourage the influx of migrants seeking low-paid jobs.

Which companies are covered under the law?

- According to the state government, the reservation law covers private companies, societies, trusts, and partnership firms in the state.
- The Haryana reservation law also provides training to eligible local candidates when qualified people are not available.
- The law defines local candidates as those domiciled in the state. For the domicile status, a person should be born in Haryana or have lived there for at least 15 years.

Similar examples

- The cabinet of the government of Jharkhand approved similar legislation to reserve jobs for Jharkhand residents.

- The Dravida Munnetra Kazhagam (DMK) in Tamil Nadu announced a similar proposal to reserve jobs for Tamils in its manifesto.

States and key parameters

- Job creation is obviously an outcome of the performance of the larger economy.

When will a company invest in a State?

- If a company, for example, Amazon believes that the Indian economy is poised to grow robustly, it may choose to expand its operations in India.

Who gets to decide in which State the company has to invest?

- It is the management of the company which decides where the company will make its investments.
- It depends not only on the 'ease of doing business' parameters provided by the state government but also on multiple other factors.
- It includes:
 - Skilled manpower in the region.
 - It is a function of many decades of social progress of the State and cannot be retooled immediately.
 - The existence of what economists term as the 'agglomeration effect'.
 - The most critical factor in the choice of a location for a large business is the ecosystem of the supply chain, talent, good living conditions and so on.
 - A State with an already well-established network of suppliers, people, schools, etc. are at a greater advantage to attract even more businesses than the states that are left behind.

Inference

- Therefore, the Chief Minister of a State in India and the state government have limited control over the company operations.
- Even if State governments can compete to lure Amazon to their State and provide land at affordable prices, uninterrupted supply of electricity, water and other such 'ease of business' facilities for its expansion, it is the company that decides where they have to establish and expand their bases on the basis of market growth and competition in the region.

Taxes

- After the introduction of the Goods and Services Tax (GST), State governments in India have lost their fiscal autonomy and have no powers to provide any tax concessions to businesses.
- In America, states compete against each other vigorously using tax concessions and land offers to bring new jobs to their states.

Concerns

- This leads to a cycle of the more prosperous states growing even faster at the expense of the lagging states.
- The three richest large states (Maharashtra, Tamil Nadu and Karnataka) are three times richer than the three poorest large States (Bihar, Uttar Pradesh and Madhya Pradesh), in per-capita income, compared to 1.4 times in 1970.
- This gap between the richer and poorer states in India is only widening rapidly and not narrowing, due to the agglomeration impact of modern economic development paradigms.
- In the absence of a level playing field and with no fiscal autonomy, it is enormously difficult for developing states in India to attract new investments and create new jobs.

Conclusion

- Growing inter-state disparities, a 'rich states get richer' economic development model, an impending demographic disaster and shrinking fiscal autonomy for elected state governments in a politically and culturally diverse democracy will inevitably propagate nativistic sub-nationalism among the various states of India.
- Till we reduce the inter-state inequalities and offer the states more fiscal autonomy "don't protect but create jobs" will only remain a topic of a hollow lecture and moral sermons.

8. Forestalling a cyber Pearl Harbour

Context

- The article analyses the threats posed by the Chinese hacking groups which had targeted various Indian power centres.

Background

- Recorded Future is a private U.S. cybersecurity company. The company specializes in the collection, processing, analysis, and dissemination of threat intelligence.

- According to Recorded Future, the Mumbai power outage in October 2020 was part of a coordinated cyber-attack by China.

Details

- The firm found that in the lead up to the deadly clash along the Line of Actual Control (LAC), they noticed an increase in malware targeting the government, defence organisations and the public sector.
- Recorded Future has said the attackers (which it calls **RedEcho**) targeted at least “10 distinct power sector organisations” with malware known as **ShadowPad**.
 - ShadowPad is a network intrusion malware affiliated to both the Chinese Ministry of State Security and the People’s Liberation Army.
 - ShadowPad is depicted as a “back-door ‘Trojan’ malware which creates a secret path from a targeted system to a command and control server to extract information”.
- Recorded Future said that in the lead-up to the May 2020 border skirmishes, it observed a noticeable increase in the provisioning of **PlugX malware C2 infrastructure**, much of which was subsequently used in intrusion activity targeting Indian organisations.

Was the functioning of the power sector impacted?

- Hours after the disclosure made by the New York Times, the Union Power Ministry said it had received inputs from Indian agencies – first in November and then again in February 2021 – about the threat of infection from ShadowPad, prompting remedial measures.
- It said there was no impact on any of the functionalities carried out by the **Power Sector Operations Corporation (POSOCO)** due to the referred threat. No data breach/data loss has been detected due to these incidents.

Confusion

- State authorities in Maharashtra attributed the blackout to the attack by the Chinese cyber group, but authorities in Delhi blamed it on human error.

Inference

- More than the blame games and coming to a conclusion that it has not impacted the power sector, India should realize that the threat from China is real and that China had deployed cyber weapons to target India.
- The reported events are a wake-up call for India, and it would be a grievous error if India were to underestimate the extent of the cyber threat posed to it by China.

An analysis of Chinese offensive capabilities in cyberspace

- Across the world, Beijing does appear to be engaged in a major cyber offensive, directed not only against countries like India but against many advanced nations as well.

How is the attack initiated?

- Software companies from western countries may have deliberately left open a loophole that they may use at an opportune time for their advantages and gains.
- These loopholes are now being exploited by the Chinese, and the companies are now at the receiving end of such antics, having 'left vulnerabilities for future exploitation'.

Examples:

- Chinese cyber espionage sets no limitations on targets. Hacking groups aligned with the Chinese have been sending out malicious email attachments that were directed to disturb vaccine distribution supply chains around the world.
 - Their objective seems to have been targeting vaccine research, gaining future access to corporate networks, and seeking sensitive information relating to COVID-19 vaccine distribution.
- Several thousands of U.S. organisations were hacked in an unusually aggressive Chinese espionage campaign. The Chinese group, Hafnium, which has been identified as being responsible for this breach, exploited a series of flaws in the Microsoft software, enabling attackers to gain total remote control over affected systems.

Cyberwarfare by others

- The West, the United States, and Russia may also act similarly to what China is accused of doing.
 - The focus currently might be on China but other western countries do engage in cyber espionage but little is publicized.
- The U.S. in the past has criticized Russia for related acts of cyber reconnaissance.
 - Russia's cyber interference in the U.S. presidential elections in 2016.
 - Russia is the prime suspect in one of the greatest data breaches concerning the U.S. Federal government, involving the Departments of Defence, Energy, State, Homeland Security, Treasury, etc.

- The 'SolarWinds hack' is one where the hackers secretly broke into SolarWind's systems and added malicious code into the company's software system.

Way forward

- Nations should be aware of and be warned about how cyber-attacks can bring a nation to its knees.
- Unprecedented hack of Ukraine's Power Grid:
 - The attacks were carried out by skilled cybersecurity professionals, who had planned their assaults over many months, testing the quality of the malware, carrying out detailed logistics planning, and conducting a very sophisticated operation.
 - The Ukraine example should be a wake-up call for India and the world.

There are three reasons for China to maintain and utilize aggressive cyber capability:

- to deter other states by infiltrating their critical infrastructure;
- to gain increased knowledge through espionage in cyberspace, which makes it possible for it to advance more quickly in their military development;
- to make economic gains where technological progress has been achieved – for example, through industrial espionage.

Part of Beijing's world view

- 'Cyber' could well be one of China's main threat vectors employed against countries that do not fall in line with China's world view.
- China's 2021 Defence Budget (amounting to \$209 billion) gives special weightage to the Strategic Support Force (SSF), which embraces cyber warfare – an ominous portent that bodes little good for countries that posit a challenge to China's ambitions, such as India.

Conclusion

- If indeed the future is digital, and if China has indeed embarked on an all-out offensive, India needs to adopt comprehensive measures to forestall a potential 'Cyber Pearl Harbour', as far as India is concerned.

THE INDIAN EXPRESS

GS 2 : Polity, Governance, International Relations

1. India-Japan Space Ties

In news

- Bilateral meeting between the Indian Space Research Organisation (ISRO) and the Japan Aerospace Exploration Agency (JAXA) was held virtually.

Key takeaways

- Both space agencies reviewed cooperation in earth observation, lunar cooperation and satellite navigation.
- They also agreed to explore opportunities for cooperation in space situational awareness and professional exchange programmes.
- Both agencies signed an Implementing Arrangement for collaborative activities on rice crop area and air quality monitoring using satellite data.

2. BRICS Contact Group on Economic and Trade Issues (CGETI)

In news

- The BRICS Contact Group on Economic and Trade Issues (CGETI) held their first meeting under India's Chairship from 9-11 March 2021.

Key takeaways

- **Theme:** BRICS@15: Intra BRICS Cooperation for Continuity, Consolidation, and Consensus.
- **The deliverables proposed are on:** (1) BRICS Cooperation on Multilateral Trading system including cooperation for the TRIPS Waiver proposal at WTO; (2) Framework for Consumer Protection in E-Commerce; (3) Non-Tariff Measures (NTM) Resolution Mechanism; (4) Sanitary and Phyto-Sanitary (SPS) etc.
- **BRICS** is the acronym for five nations: Brazil, Russia, India, China, and South Africa.

3. SC's rule over State Election Commissioners

In news

- The Supreme Court has held that independent persons and not bureaucrats should be appointed as State Election Commissioners.

Key takeaways

- Giving government employees the additional charge of State Election Commissioners is a “mockery of the Constitution”.
- It directed that the States should appoint independent persons as Election Commissioners all across India.

Important value additions

Article 243K

- Article 243K deals with the Elections to the Panchayats.
- It states that The superintendence, direction and control of the preparation of electoral rolls for, and the conduct of, all elections to the Panchayats shall be vested in a State Election Commission.
- It shall consist of a State Election Commissioner to be appointed by the Governor.
- The conditions of service and tenure of office of the State Election Commissioner shall be such as the Governor may by rule determine.
- The State Election Commissioner shall not be removed from his office except in like manner and on the like ground as a Judge of a High Court.
- The conditions of service of the State Election Commissioner shall not be varied to his disadvantage after his appointment.

4. Joe Biden's Afghanistan peace plan

Context: The Joe Biden administration has proposed a new peace plan to the Afghan government and the Taliban, seeking to bring violence to a halt and form an interim government.

What is the American proposal?

- **Involving other Stakeholders:** US has proposed a UN-led conference of representatives of Russia, China, Pakistan, Iran, India and the U.S. “to discuss a unified approach to support peace in Afghanistan”.

- **Written Proposal to enhance Trust:** US will share written proposals with the Afghan leadership and the Taliban to accelerate talks.
- **Comprehensive Ceasefire and Inclusive government:** US has urged both sides to reach a consensus on Afghanistan's future constitutional and governing arrangements; find a road map to a new "inclusive government"; and agree on the terms of a "permanent and comprehensive ceasefire".
- **Negotiations in third country:** US has also proposed a senior level meeting of the Afghan government and the Taliban in Turkey to discuss power sharing, reduction of violence and other specific goals.

Why the U.S. is making this peace push?

- **Review of Strategy:** The Biden administration is currently reviewing its Afghan strategy. While the review is not completed, there is a consensus within the administration that "accelerating the peace process" is the best way to advance the shared interests of the U.S. and the Afghan government.
- **Doha Agreement (US Withdrawal plan):** According to the agreement the U.S. signed with the Taliban in February 2020, American troops - currently some 2,500 troops are in Afghanistan - are set to leave the country by May 1. The Taliban have warned that if the U.S. troops are not out by the deadline, they will step up fighting.
- **Slow pace of peace talks:** The Taliban and the Afghan government started peace talks in Doha in September 2020 but reached no breakthrough. The Biden administration is concerned about the slow pace of the talks.
- **Restraining Taliban and Regional Stability:** The U.S. assessment is that if American troops are pulled out of Afghanistan, the Taliban would make quick gains and the security situation will worsen. It hopes that the best way to prevent a complete Taliban takeover is a regional peace process and an interim unity government. The Taliban are yet to respond to America's proposal.

What is the Afghan government's stand?

- **Critical of US's direct talks with Taliban:** The Ghani administration has consistently been critical of the U.S.'s direct outreach to the Taliban. The Trump administration held direct talks with the Taliban, excluding the government. Later, US put pressure on Kabul to release Taliban prisoners as part of Doha agreement.
- **Against making concession to Taliban:** Even when the Doha talks between the Taliban and the Afghan government were under way, Mr. Ghani made it

clear that he, as elected President, is the only legitimate representative of the Afghan people and he resisted making concessions to the Taliban.

- **Democratic Process and Internal Interference:** President Ghani reiterated his opposition to any transfer of power except through elections. Afghanistan Vice President Amrullah Saleh, a hardline critic of the Taliban, said the U.S. “can make a decision on their troops, not on the people of Afghanistan”.

What’s next?

- While the Afghan government’s opposition to sharing power with the Taliban is well known, it is not clear whether Mr. Ghani could continue to resist American pressure, especially if the U.S. brings regional powers, including India, on board.
- If the US decides to stick to the Taliban deal and withdraw troops by May, Mr. Ghani would be in a tougher spot. He doesn’t have any good options. If he rejects the American offer, the war will continue forever.
- The Taliban have already taken over much of the country’s hinterlands and are breathing down the neck of its cities.
- If Afghanistan President Ghani accepts the proposal, he will have to share power with the Taliban and discuss amendments to the Constitution and the future governance framework.
- Either way, the Taliban are set to make gains.

Connecting the dots:

- India’s projects in Afghanistan – Salma Dam
- Moral impact of deal on anti-India terrorist groups

GS 3 :Economy, Science and Technology,Environment

5. Bhadar Dam: Gujarat

Why in News

Recently, the **Dam Safety Organisation of the Central Water Commission** has recommended replacement of floodgates of **Bhadar dam** which were damaged in the **flash flood of 2015**.

Key Points

- **About Bhadar Dam:**

- Bhadar dam is **located in Rajkot** and is **second largest in Saurashtra region after Shetrunji dam**.
- Bhadar dam is on the **Bhadar River** in Saurashtra region in Gujarat.
- **Bhadar River:**
 - The Bhadar is one of the major rivers of **Kathiawar (Saurashtra) peninsula** in Gujarat.
 - It **originates** near **Vaddi in Rajkot district** at an elevation of 261 m above mean sea level.
 - It flows through the Saurashtra region and finally confluence **with Arabian sea at Naviobandar (Porbandar)**.
 - The total length of this river is 198 km. It drains about 1/7th of the area of Saurashtra.

Flash Flood

- Flash floods are typically associated with **short, high-intensity rainstorms**.
- These are **sudden surges in water levels** during or following an intense spell of rain.
- These are **highly localised events of short duration** with a very high peak and usually have less than six hours between the occurrence of the rainfall and peak flood.
- The flood situation worsens in the presence of choked drainage lines or encroachments obstructing the natural flow of water.

Central Water Commission (CWC)

- The Central Water Commission is the **apex technical organisation** in the country for **development of water resources** and is an attached organization of the **Ministry of Water Resources**.
- The Commission is responsible for **initiating, coordinating and furthering, in consultation** with the State Governments, the schemes for control, conservation, development and utilization of water resources throughout the country for the purpose of irrigation, flood management, power generation, navigation etc.

6. Growth in Bank Credit & Deposits: RBI

Why in News

Recent data released by the **Reserve Bank of India (RBI)** showed that **Bank credit and deposits grew** and were higher in February 2021 than January 2021.

- The credit and deposits for February 2021 were even higher than the pre-pandemic data of February 2020.

Key Points

- **Bank Related Data by RBI:**
 - At the end of **February 2021:**
 - Bank credit grew by **6.63%** to **Rs.107.75 lakh crore** which in **February 2020** stood at **Rs.101.05 lakh crore**.
 - Bank deposits grew by **12.06%** to **Rs.149.34 lakh crore** which in **February 2020** stood at **Rs.133.26 lakh crore**.
- **Reason for Credit Growth:**
 - The growth in bank credit is driven by an **increase in retail loans**.
 - **Retail loans** include a vast range of different loans. **Personal loans such as car loans, mortgages, signature loans and credit cards** all fall into the category of retail loans, but business loans can also fall into the category of retail loans.
 - The overall **retail credit growth**, which is currently at 9% is expected to accelerate further, led by mortgages (contributing 51% of retail loans) and back-end support by **unsecured** (cards/personal loans) and **vehicle loans**.
- **Bank Credit:**
 - Banks and financial institutions **make money from the funds they lend out to their clients**.
 - These funds come from the money clients deposit in their accounts or invest in certain investment vehicles such as **certificates of deposit (CDs)**.
 - A CD is a product offered by banks and credit unions that **provides an interest rate premium in exchange for the customer agreeing to leave a lump-sum deposit untouched for a predetermined period of time**.
 - Bank credit consists of the **total amount of combined funds that financial institutions advance to individuals or businesses**. It is an agreement between banks and borrowers where banks make loans to borrowers.
- **Bank Credit In India:**
 - The Bank credit in India refers to credit lending by various **scheduled commercial banks (SCBs)** to various sectors of the economy.
 - The bank credit is categorized into **food credit** and **non-food credit**.
 - The food credit indicates the lending made by banks to the **Food Corporation of India (FCI)** mainly for procuring foodgrains. It is a small share of the total bank credit.

- The major portion of the bank credit is the **non-food credit** which comprises credit to various sectors of the economy (**Agriculture, Industry, and Services**) and also in the form of **personal loans**.
- The data on bank credit is collected on a monthly basis by the RBI.
- **Bank Deposits:**
 - Bank deposits consist of **money placed into banking institutions for safekeeping**. These deposits are made to deposit accounts such as savings accounts, current accounts, and money market accounts.
 - The account holder has the **right to withdraw deposited funds**, as set forth in the terms and conditions governing the account agreement.
 - **Bank Deposits in India:** In India there are **four major types** of Bank Deposits
 - **Current Account:**
 - A current account is a **special type of account** that has **lower restrictions** than a savings account when it comes to withdrawals and transactions.
 - It is also known as a **demand deposit account** and it is meant for businessmen to conduct their business transactions smoothly.
 - Banks also offer **overdraft facilities** on these, i.e., they let account-holders withdraw more money than there is in the account.
 - **Savings Accounts:**
 - It offers **high liquidity** and is very **popular among the masses**. It does, however, have cash withdrawal and transaction limits to promote **digital payments**.
 - Banks provide an **interest rate which is only slightly higher than inflation**, so it is not very optimal for investment.
 - **Recurring Deposits:**
 - It is a **special type of term deposit** where you do not need to deposit a lump sum savings rather a person has to deposit a fixed sum of money every month.
 - There are **no premature withdrawals** allowed in the account, but for a penalty, you can close the account before the maturity date of the deposit.
 - **Fixed Deposits:**
 - It is an **investment avenue** offered by banks, financial institutes and **Non-Banking Financial Companies (NBFCs)** that offers **guaranteed returns**.
 - It gives a **higher interest than a regular savings account** and offers a wide range of tenures ranging from 7 days to 10 years.

7. National Non-ferrous Metal Scrap Recycling Framework

Why in News

The **Ministry of Mines** has issued a **National non-ferrous metal scrap recycling framework, 2020** in a bid to **cut down the scrap imports**.

- It also seeks to use a **life cycle management approach** for better efficiency in the mineral value chain process.

Key Points

- **Objectives of the Recycling Framework:**
 - To work towards **economic wealth creation, job creation and increased contribution to GDP** through metal recycling.
 - To promote a **formal and well organized recycling ecosystem** by adopting energy efficient processes.
 - To **minimize the effect of end of life products** on landfills and environmental pollution by promoting an environmentally sound recycling system.
 - To evolve a **responsive ecosystem** by involving all stakeholders.
- **Implementation Guidelines:**
 - The framework envisages setting up of a **central Metal Recycling Authority to facilitate recycling** of metals.
 - The government will work towards establishing **standards for Quality of scrap** used for recycling.
 - A mechanism for registration of segregators, dismantlers, recyclers, collection centers etc. will be developed to promote recycling to an organized sector
 - It is proposed to set up **Urban Mines**, envisaged as a **location to collect and hold large quantities of similar materials**.
 - An Online market platform/ exchange platform for recycled/secondary metal will be developed.
 - Recyclers may explore the possibility of entering into collection contracts with industrial and commercial establishments.
- **Roles/ Responsibilities of Stakeholders:**
 - **Responsibility of Manufacturer:** To ensure that any **Extended Producer Responsibility (EPR)** guidelines/Regulations be strictly adhered to.
 - Designing products that are easier to recycle and reuse in an efficient and environmentally sound manner.

- **Role of Public:** Public should responsibly dispose of scrap at **designated scrap collection centers** for their effective and environmentally sound processing.
- **Role of Government:** MoEF&CC to streamline the regulatory requirements, eliminating multiple clearances wherever feasible, for the recycling units.
- **Role of Recycling Authority:** Developing technical, safety and environmental norms and SOPs for handling and processing of scraps in consultation with **MoEF&CC, CPCB, BIS**, etc.
- **Challenges Faced By the Non-ferrous Metals Recycle Industry:**
 - A major challenge is its **heavy dependence on import** of metal scrap.
 - Lack of an organized / systematic scrap recovery mechanism.
 - Lack of sustained implementation of existing regulations on waste collection and recycling.
 - Lack of standardization of recycled products adversely affecting market adoption.
 - Lack of specific skill sets on responsible methods and technologies.
- **Government Initiatives For Recycling**
 - The Ministry of Environment, Forest and Climate Change (MoEF&CC) is in the process of formulating **National Resource Efficiency Policy (NREP)** which **aims to mainstream resource efficiency across all sectors, wherein Aluminium sector** has been considered as a priority sector.
 - The Ministry of Steel has brought out a **Steel Scrap Recycling Policy** which envisages a framework to facilitate and promote establishment of metal scrap recycling centers.
 - **NITI Aayog** is proposing a comprehensive **“National Material Recycling Policy”** to drive concerned and coordinated national and state level programs, plans and actions towards ramping up material recycling in India in a formal and organized manner.

Non-Ferrous Metal

- The Non-ferrous metals can be classified in broad categories as
 - **Base metals** (e.g. aluminium, copper, zinc, lead, nickel, tin)
 - **Precious metals** (e.g. silver, gold, palladium, other platinum group metals)
 - **Minor metals including refractory metals** (e.g. tungsten, molybdenum, tantalum, niobium, chromium) and
 - **Specialty metals** (e.g. cobalt, germanium, indium, tellurium, antimony, and gallium).
- Aluminium is the **second most used metal** in the world **after Iron**.
- Copper is the **third most important base metal by value**.

- Zinc is the **fourth most widely used metal across the globe.**

8. Seabuckthorn Plantation in the Cold Desert

Why in News

The **Himachal Pradesh** government has decided to start **planting seabuckthorn in the cold desert areas** of the state.

Key Points

- **About Seabuckthorn:**
 - It's a **shrub** which produces an **orange-yellow coloured edible berry.**
 - In India, it is found **above the tree line in the Himalayan region,** generally in **dry areas** such as the **cold deserts of Ladakh and Spiti.**
 - In Himachal Pradesh, it is locally called **chharma** and **grows in the wild** in Lahaul and Spiti and parts of Kinnaur.
 - A major part is covered by this plant in **Himachal Pradesh, Ladakh, Uttarakhand, Sikkim and Arunachal Pradesh.**
- The Seabuckthorn Plantation has many **Ecological, Medicinal and Economical benefits.**
 - **Ecological Benefits:**
 - Seabuckthorn is a **soil-binding plant** which **prevents soil-erosion, checks siltation in rivers** and helps **preserve floral biodiversity.**
 - In the Lahaul valley, where willow trees are dying in large numbers due to pest attack, this hardy shrub is a good alternative for protecting the local ecology.
 - Grows well in dry regions and becomes much more important especially in the light of reduced water flow from Himalayan glaciers.
 - **Medicinal Benefits:**
 - As a folk medicine, seabuckthorn has been widely used for **treating stomach, heart and skin problems.**
 - Its fruit and leaves are **rich in vitamins, carotenoids and omega fatty acids** and it can help troops in acclimatising to high-altitude.
 - In the last few decades, scientific research worldwide has backed many of its traditional uses.
 - **Economical Benefits:**
 - Seabuckthorn also has commercial value, as it is used in **making juices, jams, nutritional capsules** etc.

- It is an important source of fuelwood and fodder.
- However, **wild Seabuckthorn cannot sustainably supply raw material** to the industry, and the **plant needs to be cultivated** on a large scale as is being done in China.

Cold Desert in India

- The Cold Desert of India is situated in the Himalayas and **stretches from Ladakh in the north to Kinnaur (in the state of Himachal Pradesh)** in the south.
- The region has **harsh climatic conditions** such as very low rainfall and very high elevation (ranging from 3000 – 5000m Above Sea Level)] that adds to the **coldness** in its environment.
- Blizzards, snowstorms and avalanches are common.
- The soil is not very fertile and the climatic conditions allow very short growing seasons making it a bare landscape.
- Water resources are minimal and comprise glacier-fed streams.

Tree Line

- The tree line is the edge of the habitat at which trees are capable of growing. It is found **at high elevations and high latitudes**.
- Beyond the tree line, trees cannot tolerate the environmental conditions (usually cold temperatures, extreme snowpack, or associated lack of available moisture).

Prelims Practice Questions

1. Which of the following is the largest cell in the human body?

- a. Egg cell
- b. Bone cell
- c. Nerve cell
- d. Fat cells

Answer: a

Explanation:

- Egg cells are the largest cells in the body.
- A new study deciphers how these cells grow to such sizes. 'Nurse' cells, connected to the oocyte, dump their contents into the oocyte (egg cell), thereby causing it to expand

2. Which of the following statement/s is/are correct with respect to Mudumalai National Park?

1. It is part of the Western Ghats Nilgiri Sub-Cluster.
2. It is also a declared tiger reserve

Options:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer: c

Explanation:

- The Mudumalai National Park and Wildlife Sanctuary also a declared tiger reserve, lies on the northwestern side of the Nilgiri Hills in Tamil Nadu, India. It shares its boundaries with the states of Karnataka and Kerala.
- The protected area is home to several endangered and vulnerable species including Indian elephant, Bengal tiger, gaur and Indian leopard. There are at

least 266 species of birds in the sanctuary, including critically endangered Indian white-rumped vulture and long-billed vulture.

- The Western Ghats Nilgiri Sub-Cluster of 6,000 square kilometres including all of Mudumalai National Park, is under consideration by the UNESCO World Heritage Committee for selection as a World Heritage Site.

3. Which of the following statement/s is/are correct with respect to the United Nations Human Rights Council (UNHRC)?

1. It has 47 members elected for staggered three-year terms on a regional group basis.
2. It is headquartered at Geneva, Switzerland.
3. India is currently a member.

Options:

- a. 1 only
- b. 1 and 2 only
- c. 1, 2 and 3
- d. 1 and 3 only

Answer: c

Explanation

- The United Nations Human Rights Council (UNHRC) is a United Nations body whose mission is to promote and protect human rights around the world. The UNHRC has 47 members elected for staggered three-year terms on a regional group basis. The headquarters of UNHRC is in Geneva, Switzerland.
- The UNHRC was established by the UN General Assembly to replace the UN Commission on Human Rights. The UNHRC works closely with the Office of the High Commissioner for Human Rights (OHCHR) and engages the UN's special procedures

4. Which of the following statements is/are correct regarding Wolbachia?

1. It is natural bacteria present in insect species.
2. It is used for controlling dengue.

Select the correct answer using the codes given below:

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

Answer : C

Explanation

- **Wolbachia** are natural bacteria present in up to 60% of insect species, including some mosquitoes. **Hence, statement 1 is correct.**
 - However, Wolbachia is not usually found in the *Aedes aegypti* mosquito, the primary species responsible for transmitting human viruses such as Zika, dengue, chikungunya and yellow fever.
- Wolbachia is safe for humans, animals and the environment.
- Researchers from the World Mosquito Program have used mosquitoes infected with Wolbachia bacteria to successfully control dengue in Yogyakarta city of Indonesia. **Hence, statement 2 is correct.**

5. Which of the following are Particularly Vulnerable Tribal Group (PVTG) of Andaman and Nicobar island:

1. Jarawas
2. Onges
3. Shompens
4. North Sentinelese
5. Juang
6. Koyas

Select the correct from the code given below?

- A 1, 2 and 3
- B 1, 2, 3 and 4
- C 1, 2 and 4
- D 1, 3, 4, 5 and 6

Answer : B

Explanation

- **Particularly Vulnerable Tribal Group (PVTG)** of the Andaman and Nicobar islands are **Great Andamanese, Jarwas, Onges, Shompens and North Sentinelese. Hence, option B is correct.**
- Shompen is the only PVTG in the region with Mongoloid features. The other PVTGs have negroid features. Some of them interact with 'Great Nicobarese' - a Scheduled Tribe.
- The population of Andaman and Nicobar Islands' primitive tribes has rapidly declined over the years. The epidemics and crippling health crises of the past have been seen to disproportionately impact these indigenous tribal groups.
- Juang tribe is PVTG of Orisha and Koyas is a tribe of Lakshadweep islands.

6. Which of the following are main reasons responsible for the occurrence of Landslides:

1. Construction and developmental activities in the region
2. Shifting cultivation
3. Characteristics of the material

Select the correct answer using the code given below:

- A 1 and 2 only
- B 1 and 3 only
- C 2 and 3 only
- D 1, 2, and 3

Answer : D

Explanation

- Landslide is defined as the movement of a mass of rock, debris, or earth down a slope.
- They are a type of mass wasting, which denotes any downward movement of soil and rock under the direct influence of gravity.
- Landslides are caused due to three major factors: **Geology, Morphology, and Human activity.**
 - Geology refers to **characteristics of the material.** The earth or rock might be weak or fractured, or different layers may have different strengths and stiffness.
 - Morphology refers to the structure of the land. For example, slopes that lose their vegetation to fire or drought are more vulnerable to landslides.

- Vegetation holds soil in place, and without the root systems of trees, bushes, and other plants, the land is more likely to slide away.
- **Human activity** which includes agriculture (including **Shifting agriculture**) and **construction and developmental activities** increase the risk of a landslide. **Hence, option D is correct.**



Mains Practice Questions

1Q. Including more women in science and applied technologies is critical for the advancement of society. Discuss.

Approach

- Start the answer by mentioning the status of gender equality in India.
- Discuss the status of women in Science, Technology, Engineering, Mathematics (STEM) fields.
- Suggest some measures to improve women's participation in STEM fields.
- Conclude Suitably.

2Q. What do you understand by DeepFake? Discuss the challenges posed by DeepFake. (150 words)

Approach

- Explain how the deepfake works.
- Highlight some challenges posed by deepfake technology.
- In conclusion highlight some measures to overcome these challenges