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THE HINDU

GS 2 : Polity, Governance, International Relations

1. Issue of the oath of an elected representative

Context

Some Cabinet Ministers in Karnataka who took oath recently stood out from the rest. All these oaths run against the spirit of the Constitution.

Background of agnostic Constitution

- The public officials who took office under the **Government of India Act, 1935** had to take oath which had no mention of God.
- During the Constituent Assembly debate, B.R. Ambedkar proposed the Preamble, "We, the people of India...".
- H.V. Kamath moved an amendment to the Preamble, "In the name of God, we, the people of India...".
- To this proposal, another member, A. Thanu Pillai said that if this amendment is accepted **it would affect the fundamental right of freedom of faith.**
- He said that a man has a right to believe in God or not, according to the Constitution.
- H.N. Kunzru opposed Kamath's amendment stating that in a matter that vitally concerns every man individually, the collective view should not be forced on anybody.
- The amendment was defeated, thereby **excluding 'God' from the Preamble.**
- Thus, our founding fathers gave us an agnostic Constitution.

What are provisions in Consitution

- The public officials who took office under the Government of India Act, 1935 had to take oath which had no mention of God.
- However, the framers of the Indian Constitution rejected this conception of secularism.
- Constitution gives office-holders an **option to swear in God's name if they so wished.**
- The Supreme Court of India observed in 2012 that the oath by an elected representative should be taken "**in the name of God**" if the person is a believer or should be "**solemnly affirmed**" if the person is a non-believer.

- The Supreme Court said that the oath of an elected representative should be **in strict compliance with the wordings of the Constitution.**

Way forward

- As the Republic belongs to all the citizenry, irrespective of whether he is a theist, atheist or agnostic, and irrespective of his caste or religion, a person occupying a constitutional post should take oath in the format of “solemnly affirm”.
- The **Constitution should be amended accordingly.**

Conclusion

If a person takes the oath in the name of a God affiliated to a particular religion or caste, the citizenry cannot expect the absence of affection or ill-will from him. The allegiance of a person holding a constitutional post should only be to the Constitution.

2. CJI rues 'sorry state of affairs' in lawmaking

Context:

Chief Justice of India highlighted the “sorry state of affairs” of lawmaking and Parliamentary debate in India.

Details:

- He pointed out that there was a lot of **ambiguity in the laws** which was **triggering litigation and causing inconvenience** to citizens, courts and other stakeholders.
- He rued how the **standards of lawmaking had fallen** over the years.
- He stressed that in the absence of quality debate in the parliament, courts are unable to understand the intent and object of the new laws.

Background:

- The observations by the CJI follow closely after Parliament cleared the Tribunal’s Reforms Bill of 2021.
- The bill has sought the abolishment of as many as nine appellate tribunals, including the Film Certificate Appellate Tribunals.
- The bill has been criticised saying that the legislation undermines the independence of the judiciary.

- Besides, the Bill has also revived provisions of tenure and service of members of tribunals which were earlier struck down by the Supreme Court in a judgment.

3. Regional identity and being part of the mainstream

Context:

- The article authored by a former Chief Minister of the state of Karnataka discusses the recent **issues related to the centre-state relationship** in the Indian federalism set-up.

Concerns:

- The author criticizes the union government for intruding into the economic, political, cultural and educational autonomy of States.

Financial issues:

- The author rues the fact that states that have given special attention to population control measures are being penalized through lower tax devolutions to them given the **skewed preference to the 2011 population figures for horizontal allocation of tax resources**.
- Even special grants recommended by the Fifteenth Finance Commission for 2020-21 have been denied to such states.
- The implementation of the GST has only deepened the states' dependency on the centre for financial resources. The **denial of Goods and Services Tax compensation cess** as promised by the central government through the Goods and Services Tax (Compensation to States) Act, 2017 has only worsened the already troubled state finances.

Language issue:

- The author argues that the conduction of exams such as the Institute of Banking Personnel Selection in only English and Hindi languages deprives lakhs of non-Hindi medium candidates of an opportunity to enter government posts and professional courses.

Transgression of state powers:

- The author argues that the **National Education Policy promotes centralisation with respect to education** and negates the spirit of the

Constitution which envisages division of subjects between the centre and states.

Specific issues:

- The author also argues against the central government's move not to grant official recognition to the Karnataka state flag.
 - Karnataka state government had requested the central government to include the Karnataka flag in the **schedule of the Emblems and Names (Prevention of Improper Use) Act, 1950.**
- The author argues that having a state flag would not be inconsistent with the objective of building a strong nation.

Conclusion:

- The author argues that in 1947 when India was a young nation, it was needed to be cautious of any divisive or secessionist tendencies and hence it made sense for India to become a Union of States with a strong Centre.
- However, **over the years India has been observed to be evolving from a Union of states into a federation of States.**
- The author argues that the **demands for greater federal autonomy and recognition of regional identity must not be seen as being inconsistent with national unity and integrity.** Given that modern India is conceptualised on the **idea of unity in diversity**, all efforts must be undertaken to strengthen it.
- The country should be moving toward **cooperative federalism and not coercive federalism.**

GS 3 : Economy, Science and Technology, Environment

4. PM announces National Hydrogen Mission

During his I-Day speech, the PM has announced a National Hydrogen Mission and said India will become the world's largest exporter of green hydrogen in the years to come.

National Hydrogen Mission

- The PM's announcement takes forward the proposal, made in the 2021 Budget, for the launch of NHM that would enable the generation of hydrogen "from green power sources".

- The added advantage of hydrogen is that, apart from transportation, it can be a “decarbonizing agent” for industries like chemicals, iron, steel, fertilizer and refining, transport, heat and power.
- While the details of the NHM are yet to emerge, India has taken several exploratory steps.
- India has been working on a pilot project on Blue Hydrogen, Hydrogen CNG (H-CNG), and Green Hydrogen.
- Several programs are focusing to blend hydrogen with compressed natural gas for use as a transportation fuel as well as an industrial input to refineries.

Hydrogen as a fuel

- Hydrogen is the fuel of stars and packs awesome energy. It is also the most abundant element in the universe.
- But on Earth it is found in complex molecules such as water or hydrocarbons.
- Hydrogen is not a source of energy, like fossil fuels or renewable sources like sunlight and air, but an energy carrier, which means it has to be produced, or extracted, and stored before it can be used.
- But no matter how it is used, the by-product the burning of hydrogen produces is water.

How is Hydrogen produced?

- There are several ways of extracting hydrogen and, depending on the method, the hydrogen produced is classified as ‘grey’, ‘blue’, or ‘green’ hydrogen.
- According to WEC, as of 2019, 96 percent of hydrogen is produced from fossil fuels via carbon-intensive processes.
- Hydrogen thus obtained is called ‘grey’ hydrogen as the process, though not as expensive as the other methods, releases a lot of carbon dioxide.

What Is Grey, Blue, Green Of Hydrogen?

- ‘Grey’ hydrogen becomes ‘blue’ hydrogen when the CO₂ given out during its production is locked up through carbon capture and storage (CCS) processes.
- But while the CO₂ output is lowered, this process is quite expensive.
- ‘Grey’ and ‘blue’ hydrogen, thus, are both produced by the same processes, the only difference for ‘blue’ hydrogen being that the CO₂ produced is sequestered.
- But it is ‘green’ hydrogen that governments are aiming at. This is any hydrogen that is produced from clean energy sources like renewables.

- ‘Green’ hydrogen is released via the electrolysis of energy from renewable sources. This process, though it gives rise to no CO₂ emissions, is expensive and not commercially viable yet.

Key challenges

- **Lack of infrastructure:** India does not have enough storage capacity for the current state of domestic consumption.
- **Safety concerns:** Hydrogen is highly inflammable.

Way ahead

- Developing technologies to produce ‘green’ hydrogen are cost intensive.
- However, falling renewable energy and fuel cell prices and stringent climate change requirements have provided an impetus for the investments in this area.
- In India, the IITs, IISc, Benaras Hindu University, Council for Scientific and Industrial Research laboratories etc. are exploring different aspects of hydrogen production.

5. What is Gati Shakti Master Plan?

In his I-day speech, the PM has announced a ₹100 lakh crore “Gati Shakti” infrastructure plan.

What is Gati Shakti Master Plan?

- The PM has pegged the project as a source of employment opportunities for the youth in the future.
- The plan will make a foundation for holistic infrastructure and give an integrated pathway to our economy.
- More details and the launch date of the project are awaited.

What are the focus areas of the project?

- The Gati Shakti plan will help raise the global profile of local manufacturers and help them compete with their counterparts worldwide.
- It also raises possibilities of new future economic zones.
- The PM also said that India needs to increase both manufacturing and exports.

Why need such a plan?

- The push for infrastructure is in line with the government's efforts to step up capital expenditure in infrastructure to promote economic growth.
- Infrastructure development has the ability to create a multiplier effect with every rupee invested, yielding much higher returns.

6. Al-Mohed Al-Hindi Exercise: India-Saudi Arabia

Why in News

Recently, **India and Saudi Arabia** started their **first-ever Naval joint exercise** called the **Al-Mohed Al-Hindi Exercise**.

- The decision on this Bilateral exercise was taken in the **Riyadh Summit** held in 2019.

Key Points

- **About:**
 - Indian Naval Ship (INS) Kochi is participating in the exercise. The exercise comprises **several coastal and sea-based exercises** between the two navies.
 - INS Kochi is the **second ship of Kolkata-class stealth guided-missile destroyers**, which was built by the Indian Navy under the code name **Project 15A**.
 - This ship is termed as a '**Network of Networks**' since it is equipped with sophisticated digital networks, an array of state-of-art weapons and sensors that can neutralise any maritime threat.
- **Aim:**
 - To carry out tactical manoeuvres, search and rescue operations, and an electronic warfare drill **to enhance interoperability**.
- **Significance:**
 - It reflects the **growing defense ties between the two countries** in the midst of rapidly changing developments in the Gulf region.
 - It will **enhance bilateral cooperation** and security in the **Indian ocean Region**.

THE INDIAN EXPRESS

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2. Congressional Gold Medal

Why in News

Recently, a resolution has been reintroduced in the US House of Representatives to posthumously award the Congressional Gold Medal to Mahatma Gandhi for his contributions made through **his methods of non-violence.**

- If given the award, Mahatma Gandhi **would become the first Indian to receive the Congressional Gold Medal,** which is the **highest civilian award in the US.**

Key Points

- **About the Award:**
 - The **US Congress (legislature) has commissioned gold medals as its highest expression of national appreciation** for distinguished achievements and contributions.
 - The **first recipients** of the medal were **participants of the American Revolution (1775-83), the War of 1812 and the Mexican War (1846-48).**
 - The scope was broadened to **include actors, authors, entertainers, musicians, explorers, athletes, humanitarians and foreign recipients** among pioneers in some other fields.

- It has been awarded to the 1980 US summer Olympics team, Robert F. Kennedy, Nelson Mandela and George Washington among many others.
- Most recently, the medal was **awarded to the US Capitol Police** and those who protected the US Capitol on 6th January 2021, the day of the siege.
- **Non-Violence:**
 - The principle of non-violence – also known as **non-violent resistance** – **rejects the use of physical violence in order to achieve social or political change.**
 - **From Mahatma Gandhi:** The essence of non-violent technique is that it seeks to **liquidate antagonisms but not the antagonists.**
 - Nonviolent action is a technique by which people who reject passivity and submission, and who see struggle as essential, can wage their conflict without violence.
 - There are **three main categories of non-violence action:**
 - Protest and persuasion, including marches and vigils,
 - Non-cooperation,
 - Non-violent intervention, such as blockades and occupation.
 - **2nd October is the International Day of Non-Violence**, which is observed on the birthday of Mahatma Gandhi.
- **Gandhian Strategy of Non-Violence:**
 - Gandhi **took the religious principle of ahimsa (doing no harm)** common to Buddhism, Hinduism and Jainism and turned it into a non-violent tool for mass action.
 - Gandhi called it "**satyagraha**" which means '**truth force.**'
 - In this doctrine, the aim of any non-violent conflict was to convert the opponent; to win over his mind and his heart and persuade him.
 - He used it to **fight not only colonial rule but social evils** such as racial discrimination and untouchability as well.
 - In **South Africa (1893-1915)**, he had **successfully fought the racist regime** with a novel method of mass agitation, which he called satyagraha.
 - Mahatma Gandhi's **first civil disobedience movement in India** was in support of the indigo cultivators **in Champaran, Bihar in 1917.**
 - **In 1919**, he decided to launch a **nationwide satyagraha** against the proposed **Rowlatt Act (1919).**
 - During the **Non-cooperation movement (1920-22)**, there was a massive upsurge of enthusiasm for Gandhi and his methods, with Indians from all political spectrum and religions joining the movement.

- Other examples include **Salt Satyagraha (1930)** and **Quit India movement (1942)**.
- Many **people such as Martin Luther King, Nelson Mandella, Dalai Lama, Aung San Suu Kyi, etc. have followed the path** shown by Bapu and have brought prosperity to themselves and their societies.

3. Arunachal Pradesh ST List

The Parliament has passed a bill that seeks to amend the nomenclature of certain tribes from Arunachal Pradesh mentioned in the Constitution (Scheduled Tribes) Order, 1950.

What does the Bill amend?

- The Bill seeks to modify Part-XVIII of the Schedule to the Constitution (Scheduled Tribes) Order, 1950.
- Part-XVIII lists 16 tribes of Arunachal, in order: Abor, Aka, Apatani, Nyishi, Galong, Khampti, Khowa, Mishmi [Idu, Taroon], Momba, Any Naga tribes, Sherdukpen, Singpho, Hrusso, Tagin, Khamba, and Adi.
- The Bill corrects the names of tribes spelled incorrectly and adds names of a few tribes that were either named ambiguously or had their parent group named only.

Why is it significant?

- **Self-identification:** It is an essence for much-needed respect for small indigenous communities in the Northeast.
- **Indigenous nomenclature of tribes:** This has been a long-standing demand in Arunachal Pradesh for two reasons: for the recognition of individual identity and to do away with the ambiguity as a result of errors in their names.
- **Identity assertion:** For long, communities – whether civil society members or student leaders – have demanded that they must be known by their respective names.

4. SAMVAD Initiative

Why in News

Recently, the **Ministry of Women and Child Development** has launched the **2nd phase of the SAMVAD programme**. The second phase was **launched on the completion of one year of programme**.

- The programme is **aimed at mental health outreach for children** who are abandoned and orphaned, child survivors of trafficking, or in conflict with law.
- Earlier, the government had announced a special **“PM-CARES for Children” scheme** for all those orphaned due to **Covid-19**.

Key Points

- **Stands for: Support, Advocacy & Mental health interventions** for children in **Vulnerable circumstances and Distress (SAMVAD)**.
- **Funded By:** The initiative is funded by the Ministry of Women and Child Development.
- **Implementing Body:** It is led by the **National Institute of Mental Health and Neuro Sciences (NIMHANS)**.
 - The NIMHANS is the apex centre of mental health and neuroscience education. It operates autonomously **under the Ministry of Health and Family Welfare**.
 - Recently, on the request of the Ministry of Home Affairs, NIMHANS, issued a set of **guidelines on the management of mental health issues** of the **prisoners and prison staff**.
- **Purpose:**
 - It is a **national initiative and integrated resource** that works in child **protection, mental health and psychosocial care of children** in difficult circumstances.
 - It encompasses a **specialized training curriculum** on childhood trauma, interventions for children in conflict with the law, forensics in child and adolescent psychiatry and mental health.
 - **Education and mental health support** to children with special needs, protection and care in the context of adoption.
 - The initiative is providing coping mechanisms for children in distress by **training close to 1 lakh stakeholders** comprising Child Protection Functionaries, tele-counsellors, educators, law professionals among others.

- **Integration with Local Bodies:** The initiative aims to foster care and integration of child protection and mental health in the Panchayati Raj systems in aspirational districts across the country to facilitate awareness generation and improve service delivery at the grassroot level.

Mental Health

- **About:**
 - According to the WHO, mental health is 'a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community.'
 - Like Physical health, Mental health is also important at every stage of life, from childhood and adolescence through adulthood.
- **Scenario in India:**
 - A report published in The Lancet Psychiatry in February 2020 indicates that in 2017, there were **197.3 million people with mental disorders in India**.
 - The **top mental illnesses** were depressive disorder (45.7 million) and anxiety disorder (44.9 million).
 - The contribution of mental disorders to the total **disability-adjusted life years (DALYs)** in India increased from 2.5% in 1990 to 4.7% in 2017.
- **Steps Taken by the Government:**
 - **National Mental Health Program (NMHP):** To address the huge burden of mental disorders and shortage of qualified professionals in the field of mental health, the government has been implementing the National Mental Health Program (NMHP) since 1982.
 - The Program was re-strategize in 2003 to include two schemes, viz. **Modernization of State Mental Hospitals and Up-gradation of Psychiatric Wings of Medical Colleges/General Hospitals**.
 - **Mental HealthCare Act 2017:** It guarantees every affected person access to mental healthcare and treatment from services run or funded by the government.
 - It has significantly **reduced the scope for the use of Section 309 IPC** and made the attempt to commit suicide punishable only as an exception.
 - The **Mental Health Care Act (MHCA) 2017** came into force in 2018 to meet the requirements of the **United Nations Convention on the Rights of Persons with Disabilities** which India ratified in 2007.
- **Other Initiatives:**

- **KIRAN:** The Ministry of Social Justice and Empowerment has launched a **24/7 toll-free helpline** to provide support to people facing anxiety, stress, depression, suicidal thoughts and other mental health concerns.
- **Manodarpan Initiative:** It is an initiative of the Ministry of Education under **Atmanirbhar Bharat Abhiyan**. It is aimed to provide psychosocial support to students, family members and teachers for their mental health and well-being during the times of Covid-19.

GS 3 : Economy, Science and Technology, Environment

5. Species in news: Greater Adjutant Storks

In a first, Bihar has decided to tag endangered greater adjutant storks (*Leptoptilos dubius*), locally known as 'Garuda', with GPS trackers to monitor their movement as a part of their conservation.

Greater Adjutant Storks

- Bhagalpur's Kadwa Diara floodplains area is the third-most-popular breeding centre for the greater adjutant stork in the world after Assam and Cambodia.
- Historically the range of the Greater Adjutant covered India and Southeast Asia, but today the endangered storks are mostly found in the Indian state of Assam and in Cambodia.
- In India, the Greater Adjutant is now confined to the northeastern state of Assam, their last stronghold.

Their conservation

- The greater adjutant is one of the most threatened stork species of the world and is widely considered to be a rare bird.
- However, the global population of the Greater Adjutant Stork is estimated to be roughly not more than 1,500 now.
- Hence it is classified as 'endangered' on the IUCN's Red List 2004 of threatened species and listed under Schedule IV of the Indian Wild Life (Protection) Act, 1972.
- The Bombay Natural History Society will help and work along with the state forest, environment, and climate change department to start the process of tagging greater adjutant storks with GPS tracker.

6. PM announces Rice Fortification Plan

PM in his I-day speech has announced the fortification of rice distributed under various government schemes, including the Public Distribution System (PDS) and mid-day meals in schools, by 2024.

What is Fortification?

- FSSAI defines fortification as “deliberately increasing the content of essential micronutrients in a food so as to improve the nutritional quality of food and to provide public health benefit with minimal risk to health”.

What is Fortified Rice?

- Rice can be fortified by adding a micronutrient powder to the rice that adheres to the grains or spraying of the surface of ordinary rice grains with a vitamin and mineral mix to form a protective coating.
- Rice can also be extruded and shaped into partially precooked grain-like structures resembling rice grains, which can then be blended with natural polished rice.
- Rice kernels can be fortified with several micronutrients, such as iron, folic acid and other B-complex vitamins, vitamin A and zinc.
- These fortified kernels are then mixed with normal rice in a 1:100 ratio, and distributed for consumption.

What is the plan announced by the PM?

- Malnutrition and lack of essential nutrients in poor women and poor children poses major obstacles in their development.
- In view of this, it has been decided that the government will fortify the rice given to the poor under its various schemes.
- Be it the rice available at ration shops or the rice provided to children in their mid-day meals, the rice available through every scheme will be fortified by the year 2024.

Why such a move?

- The announcement is significant as the country has high levels of malnutrition among women and children.
- According to the Food Ministry, every second woman in the country is anemic and every third child is stunted.

- India ranks 94 out of 107 countries and is in the ‘serious hunger’ category on the Global Hunger Index (GHI).
- Fortification of rice is a cost-effective and complementary strategy to increase vitamin and mineral content in diets.
- According to the Food Ministry, seven countries have mandated rice fortification – the USA, Panama, Costa Rica, Nicaragua, Papua New Guinea, Philippines, and Solomon Islands.

Advantages offered

- **Health:** Fortified staple foods will contain natural or near-natural levels of micro-nutrients, which may not necessarily be the case with supplements.
- **Taste:** It provides nutrition without any change in the characteristics of food or the course of our meals.
- **Nutrition:** If consumed on a regular and frequent basis, fortified foods will maintain body stores of nutrients more efficiently and more effectively than will intermittently supplement.
- **Economy:** The overall costs of fortification are extremely low; the price increase is approximately 1 to 2 percent of the total food value.
- **Society:** It upholds everyone’s right to have access to safe and nutritious food, consistent with the right to adequate food and the fundamental right of everyone to be free from hunger

Issues with fortified food

- **Against nature:** Fortification and enrichment upset nature’s packaging. Our body does not absorb individual nutrients added to processed foods as efficiently compared to nutrients naturally occurring.
- **Bioavailability:** Supplements added to foods are less bioavailable. Bioavailability refers to the proportion of a nutrient your body is able to absorb and use.
- **Immunity issues:** They lack immune-boosting substances.
- **Over-nutrition:** Fortified foods and supplements can pose specific risks for people who are taking prescription medications, including decreased absorption of other micro-nutrients, treatment failure, and increased mortality risk.

Adhering to FSSAI standard

The Food Safety and Standards Authority of India (FSSAI) sets standards for food items in the country.

- According to FSSAI norms, 1 kg fortified rice will contain iron (28 mg-42.5 mg), folic acid (75-125 microgram) and Vitamin B-12 (0.75-1.25 microgram).

- In addition, rice may also be fortified with micronutrients, singly or in combination, with zinc (10 mg-15 mg), Vitamin A (500-750 microgram RE), Vitamin B1 (1 mg-1.5 mg), Vitamin B2 (1.25 mg-1.75 mg), Vitamin B3 (12.5 mg-20 mg) and Vitamin B6 (1.5 mg-2.5 mg) per kg.

7. Karez System of Irrigation

The Taliban are set to seize Kabul, but some expert believes they will spare the age-old Karez system of underground aqueducts in the country given its importance.

What is a Qanat / Karez?

- This system of underground vertical shafts in a gently sloping tunnel that is built from an upland aquifer to ground level.
- Some historians and archaeologists have attributed people in the southeast Arabian Peninsula as the first developers. Others, however, ascribe it to the ancient Persians.
- The Qanat / Karez system, wherever it was developed, soon spread to many Persian, Arab and Turkic lands.
- It even came to the Indian Subcontinent during the 800-year-old Islamic Period.

Karez in India

- The system was brought in the Indian Subcontinent during the Bahamani Sultanate, founded by Alaudin Bahman Shah.
- It later broke into five other Sultantates: Bijapur, Golconda, Ahmadnagar, Bidar and Berar.
- The Bahamani Sultanate was Persianate in nature and encouraged many things Persian, among them, the Karez.
- They was built in the city of Bidar during the reign of Bahamani Sultan Ahmad Shah Wali (1422-1436), who shifted the capital from Gulbarga to Bidar.
- By the 15th century, Bijapur city had a network of pipelines. Everyone got 24×7 supply of water.
- It also worked as confidence-building measure between the Sultan and his subjects since the Karez was built the state.

8. IndiGau: India's first Cattle Genomic Chip

The National Institute of Animal Biotechnology (NIAB), Hyderabad has launched a chip called IndiGau.

IndiGau

- IndiGau is India's first Cattle Genomic Chip for the conservation of pure varieties of indigenous cattle breeds like, Gir, Kankrej, Sahiwal, Ongole etc.
- It is purely indigenous and the largest cattle chip in the world.
- It has 11,496 markers more than that placed on 777K Illumina chip of US & UK breeds.
- The manufacturing of this chip is in synergy with Rashtriya Gokul Mission and is a great example of Atmanirbhar Bharat.

Utility of IndiGau

- Indigenous bovines are robust and resilient and are particularly suited to the climate and environment of their respective breeding tracts,
- Their productivity is less likely to be impacted by the adversities of climate change.
- The milk of indigenous animals is high in fat and SNF (solids-not-fat) content.

Prelims Practice Questions

1. Which of the following are the depositional landforms of glaciers?

1. Cirques
2. Horns and Serrated
3. Moraines
4. Eskers

Select the correct answer using the code given below:

- A 1 and 2 only
B 2 and 3 only
C 3 and 4 only
D 1, 2 and 4

Answer : C

Explanation

- Glacier is a large, perennial accumulation of crystalline ice, snow, rock, sediment, and water that originates on land and moves down slope under the influence of its own weight and gravity.
- **Depositional Landforms:**
 - **Glacial Till:** The unassorted coarse and fine debris dropped by the melting glaciers is called glacial till..
 - **Moraines:** They are long ridges of deposits of glacial till.
 - **Eskers:** These are ridges made of sands and gravels, deposited by glacial meltwater flowing through tunnels within and underneath glaciers, or through meltwater channels on top of glaciers.
 - **Drumlins:** They are smooth oval shaped ridge-like features composed mainly of glacial till with some masses of gravel and sand.
- **Erosional Landforms of Glaciers:**
 - **Glacial Valleys/Troughs:** These valleys are trough-like and U-shaped with broad floors and relatively smooth, and steep sides.
 - **Cirques:** Often are found at the heads of glacial valleys, these are the most common of landforms in glaciated mountains.
 - **Horns and Serrated:** Ridges Horns form through headward erosion of the cirque walls.

2. With reference to the Glacial lake outburst flood, consider the following statements:

1. It occurs when the water dammed by glacier moraine is released suddenly.
2. Climate change is slowing the occurrence of glacial lake outburst flood.

Which of the above statements is/are correct?

- A 1 only
- B 2 only
- C Both 1 and 2
- D Neither 1 and 2

Answer : A

Explanation

- A **Glacial Lake Outburst Flood (GLOF)** refers to the flooding that occurs when the **water dammed by a glacier or a moraine** (accumulations of dirt and rocks fallen onto the glacier surface) is released suddenly.
 - When glaciers melt, the **water in glacial lakes accumulates** behind loose, natural “glacial/moraine dams” made of ice, sand, pebbles and ice residue.
 - Unlike earthen dams, the **weak structure of the moraine dam leads to the abrupt breach of the dam on top of the glacial lake** which could cause flash floods in the downstream areas. **Hence, statement 1 is correct.**
- According to NDMA, glacial retreat due to climate change occurring in most parts of the Hindu Kush Himalaya has given rise to the **formation of numerous new glacial lakes**, which are the major cause of GLOFs. **Hence, statement 2 is not correct.**

3. Consider the following statements:

1. International Youth Day is observed to commemorate the birth anniversary of Swami Vivekananda.
2. International Youth Day is commemorated every year by the United Nations on 12th August.

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 :B

Explanation

- Every year, International Youth Day is observed on **12th August to recognise and bring attention to the problems faced by the youth.**
 - **National Youth Day** is held every year on **12th January** to observe the birth anniversary of Swami Vivekananda. **Hence, statement 1 is not correct.**
- In 1999, the **United Nations decided to commemorate International Youth Day** every year on this day. **Hence, statement 2 is correct.**
 - It was based on a recommendation made by the World Conference of Ministers Responsible for Youth in Lisbon to the UN General Assembly.
 - The first International Youth Day was observed on 12th August, 2000.

4. Consider the following statements:

1. Assam is the only known breeding ground of Greater Adjutant Storks in India.
2. Greater Adjutant Storks are listed as endangered in the IUCN Red List.

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 : B

Explanation

- The Greater Adjutant is a member of the stork family, Ciconiidae.
 - There are about 20 species in the family.
 - They are long-necked large birds.
- Once found across South and Southeast Asia, the Greater Adjutant is one of the most threatened stork species in the world.
 - There are only **three known breeding grounds** - one in **Cambodia** and two in India (**Assam and Bihar**). **Hence, statement 1 is not correct.**

- Protection Status:
 - IUCN Red List: **Endangered. Hence, statement 2 is correct.**
 - Wildlife (Protection) Act 1972: Schedule IV

5. Consider the following statements:

1. A ballistic missile is a rocket-propelled self-guided strategic-weapons system.
2. India is signatory to the Hague Code of Conduct against Ballistic Missile Proliferation (HCOG).

Which of the statements given above is/are not correct?

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

Answer : D

Explanation

- A **Ballistic Missile is a rocket-propelled self-guided strategic-weapons system** that follows a ballistic trajectory to deliver a payload from its launch site to a predetermined target. **Hence, statement 1 is correct.**
 - It can carry conventional high explosives as well as chemical, biological, or nuclear munitions.
- The International Code of Conduct against Ballistic Missile Proliferation (ICOC), now known as the **Hague Code of Conduct against Ballistic Missile Proliferation (HCOG)**, is a political initiative aimed at globally curbing ballistic missile proliferation.
 - **India is a signatory** to this convention. **Hence, statement 2 is correct.**
- Established in April 1987, the voluntary Missile Technology Control Regime (MTCR) aims to limit the spread of ballistic missiles and other unmanned delivery systems that could be used for chemical, biological, and nuclear attacks.
 - India has joined the MTCR.

6. DB Shekatkar Committee sometimes seen in the news recently was constituted for which of the following purposes?

- a. To review the implementation of clause 6 of the Assam Accord
- b. To enhance combat capability and rebalance defence expenditure of the armed forces
- c. To review levies, including Spectrum Usage Charge (SUC), and promote ease of doing business
- d. To review the regulatory guidelines and supervisory framework of Core Investment Companies (CIC)

Answer: b

Explanation:

- Defence Minister Rajnath Singh has recently approved the abolition of 9,304 posts in the Military Engineering Service.
- An official statement said that there was a proposal of Engineer-in-Chief of Military Engineering Services (MES) for optimisation of more than 9,300 posts in the basic and industrial workforce.
- It is in line with the recommendations of the **DB Shekatkar Committee**.
- The Committee of Experts (CoE) constituted by the Ministry of Defence under the chairmanship of **Lt. Gen (Retd) DB Shekatkar** was mandated to recommend measures **to enhance combat capability and rebalance defence expenditure** of the armed forces.
- It submitted its report in December 2016.

Mains Practice Questions

1. In the effort to secure a global consensus around this target, India must first “green” its fossil fuel energy basket. This can be done by increasing the share of natural gas. Discuss.

Approach

- Start the answer by briefly mentioning the context of net zero carbon emissions targets.
- Discuss how natural gas can act as a suitable transition option for India.
- Conclude suitably.

2. Corporate social responsibility envisages ethical corporate governance. Discuss.

Approach

- Start the answer by briefly defining the concept of Corporate social responsibility.
- Discuss Corporate social responsibility & Corporate Governance linkage.
- Conclude Suitably.