

# DAILY CURRENT AFFAIRS

By



SOURCES



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## Important News Articles

### GS I

## 1. Extreme weather events lead to increase in child marriages: Study - Down to Earth

**Relevance:** Social

**News:**

- According to a recent study published in the journal International Social Work, **extreme weather causes an increase in the occurrence of child, early and forced marriage (CEFM).**
- It **intensifies the elements of structural oppression**, such as gender inequality and poverty.

#### Prelims Takeaway

- Child marriage
- Gender Inequality
- POCSO Act

**The Study**

- Researchers from the Ohio State University, US did a **review of 20 studies published from 2010-2022.**
- They **connected droughts, floods and other extreme weather events to increases in child, early and forced marriages** in low- and middle-income countries.
- **Focus Areas:** Bangladesh, India, Pakistan, Kenya, Indonesia, Malawi, Nepal, Tanzania, Vietnam and sub-Saharan Africa.

**Key Findings**

- **Gender-based violence (GBV) and inequities worsen** in extreme weather contexts.
- This has **adverse impacts on women and girls' resilience** during weather extremes and disasters.
- **Development initiatives might reproduce or ignore gender disparities**, without concerted efforts accounting for **gender and other social inequalities.**
- CEFM was used as an **adaptive coping strategy** to reduce economic vulnerabilities in extreme weather contexts.
  - In Bangladesh, daughters were married early after Cyclone Aila in 2009 to reduce their economic and food burden on the household.
  - In Kenya, young brides are sought to help with increased labour demands, such as walking long distances to find food and water.
  - In Malawi, girls exposed to drought were more likely to be married early compared to those living in non-drought areas.

**Role of dowry or bride price**

- An **important factor in the link between CEFM and extreme weather.**
- Girls in sub-Saharan Africa or Vietnam had an **increased probability of CEFM during droughts and rainfall shocks.**
  - As here the groom's family pays a bride price to the bride's family.
- But, in **regions where dowry is common** such as India, girls were **less likely to get married during a drought year.**
  - Since the bride's family could not afford the dowry payment.

**Other causes**

- Parents resorted to CEFM to **protect daughters from sexual violence and avoid family dishonour.**
  - Rates of sexual assault often escalate during times of crisis, particularly in evacuation camps or temporary shelters.

**Gender Inequality and CEFM**

- The main driver of child marriage is **gender inequality.**
- **Education and financial control** are key to **empowering women and girls** and allowing them to **make their own decisions.**
- **Educational attainment and CEFM** were **inversely associated** for girls in India and Malawi.
- The **incidence of CEFM decreased in India and Vietnam as parental education increased.**

### Worrying Figures

- Every year, **12 million girls get married before adulthood.**
- The **Global Slavery Index 2023** said **climate change**, along with other environmental factors, has **exacerbated modern slavery in Africa.**
  - More than 3.1 million Africans are in forced marriage and more than 3.8 million in forced labour.
- Girls in their **early or late adolescence** are **highly vulnerable to child marriage.**
- Ensuring that their **education goes uninterrupted** and they **receive adequate nutrition** can go a long way in breaking the cycle.

### Global Initiatives that address issue of Child Marriage

- The Convention on the Elimination of All Forms of Discrimination against Women covers the rights to protection from child marriage in Article 16.
- The Convention on Consent to Marriage, Minimum Age for Marriage and Registration of Marriages
- The African Charter on the Rights and Welfare of the Child
- The Protocol to the African Charter on Human and People's Rights on the Rights of Women in Africa.

## GS II

### 2. CJ asks petitioners if Article 370 is above Basic Structure and amending powers of Parliament - The Hindu

**Relevance:** Constitution of India —historical underpinnings, evolution, features, amendments, significant provisions and basic structure.

#### News:

- The **Chief Justice, hearing the challenge to the repeal of Article 370** said petitioners were placing **Article 370 on a pedestal loftier than the Basic Structure Doctrine of the Constitution.**

#### Prelims Takeaway

- Basic structure of the Indian Constitution
- Separation of powers

#### Basic Structure Doctrine of the Constitution.

- The **Kesavananda Bharati judgement** introduced the **Basic Structure doctrine.**
- It **limited Parliament's power to make drastic amendments** that may affect the **core values** enshrined in the Constitution.
- The verdict upheld the power of the **Supreme Court to judicially review** laws of Parliament.
- It evolved the concept of **separation of powers among the three branches of governance** viz. legislative, executive and the judiciary.
- The following **four cases are important to understand the genesis of 'Basic structure' doctrine**
  - Shankari Prasad case
  - Golaknath case
  - Keshavananda Bharati case
  - Minerva mills case
- It held that the "basic structure of the Indian Constitution **could not be abrogated even by a constitutional amendment**".
- The **judgement listed some basic structures of the constitution** as:
  - Supremacy of the Constitution
  - Unity and sovereignty of India
  - Democratic and republican form of government
  - Federal character of the Constitution
  - Secular character of the Constitution
  - Separation of power
  - Individual freedom
- Any law or amendment that violates **these principles can be struck down by the SC on the grounds that they distort the Basic Structure.**

### 3. The Pradhan Mantri Dakshata Aur Kushalata Sampanna Hitgrahi (PM-DAKSH) Yojana - PIB

**Relevance:** Welfare schemes for vulnerable sections of the population by the Centre and States and the performance of these schemes; mechanisms, laws, institutions and Bodies constituted for the protection and betterment of these vulnerable sections.

**News:**

- The **Pradhan Mantri Dakshata Aur Kushalata Sampanna Hitgrahi (PM-DAKSH) Yojana**, a **Central Sector Scheme**, was launched during 2020-21.
- **Objective**
  - To enhance the competency level of the target groups
  - To make them employable both in self-employment
  - Wage-employment for their socio-economic development.
- **The target group**
  - SCs
  - OBCs
  - EBCs
  - DNTs Safai Karamcharis
  - Waste pickers.
- **The age criterion** : 18-45 years
- **Income criteria:**
  - No income limit for SCs, Safai Karamcharis Including waste picker and DNT.
  - The annual family income should be below Rs.3 lakh for OBCs
  - The EBCs (Economically Backward Classes) annual family income below Rs.1 lakh.
- The **Cost of the training** to trainees is **free of cost**.
- The **stipend** under this scheme **will also be given**.

#### Prelims Takeaway

- Pradhan Mantri Dakshata Aur Kushalata Sampanna Hitgrahi (PM-DAKSH) Yojana
- Central Sector Scheme

### GS III

### 4. Vikram lander does a hop, goes to sleep; goodnight till Sept. 22 - The Hindu/ Chandrayaan-3 lander hops on Moon, marks big leap for ISRO - Indian Express

**Relevance:** Achievements of Indians in science & technology; indigenization of technology and developing new technology.

**News:**

- Recently, the **Chandrayaan-3 mission's lander Vikram** achieved another significant milestone as it **successfully undertook a hop experiment**.

#### Prelims Takeaway

- Chandrayaan 3
- ISRO

#### The Hop Experiment

- The **lander underwent a hop experiment** and on command, **fired the engines, elevated itself** by about 40 cm and **landed safely at a distance**.
- It could have **significant bearing on the future missions** launched with an aim to **bring back samples from the moon** and also **future human missions to the moon**.
- Deployed **Ramp, ChaSTE and ILSA** were **folded back and redeployed successfully** after the experiment.

#### Key Findings on Moon

- One of the **payloads onboard the Vikram** while conducting in-situ measurements has indicated the **presence of plasma near the lunar surface**.
- **Two payloads** have detected and **confirmed sulphur in the moon's south polar region**.

### Chandrayaan-3 Mission

- It is **India's third lunar mission** and **second attempt** at achieving a soft landing on the moon's surface.
  - The mission took off from the **Satish Dhawan Space Center (SDSC) in Sriharikota on July 14, 2023.**
  - **Objectives**
    - To demonstrate Safe and Soft Landing on Lunar Surface
    - To demonstrate Rover roving on the moon
    - To conduct in-situ scientific experiments
  - **Components**
    - Indigenous Lander module (LM), Propulsion module (PM) and a Rover.
    - The lander (Vikram) and rover payloads( Pragyán) of Chandrayaan-3 remain the same as the Chandrayaan-2 mission.
    - The lander and the rover will have a mission life of one lunar day (about 14 Earth days) as they work on solar energy.
  - **Launch Vehicle:** The LVM3 M4 launcher has been successfully utilized to launch Chandrayaan-3
- Payloads**
- The **scientific payloads** on the lander aim to **study various aspects of the lunar environment.**
  - These payloads include **studying lunar quakes, thermal properties of the lunar surface, changes in plasma near the surface and accurately measuring the distance between Earth and the moon.**
  - The **propulsion module** of Chandrayaan-3 features a new experiment called **Spectro-polarimetry of Habitable Planet Earth (SHAPE).**
    - SHAPE aims to search for smaller planets with potential habitability by analyzing reflected light.



The infographic displays various payloads for the Chandrayaan-3 mission, categorized into Lander, Rover, and Propulsion Module. It includes the ISRO logo in the top right corner.

Lander Payloads	
 <b>RAMBHA-LP</b> <b>Langmuir Probe</b> To measure the near surface plasma (ions and electrons) density and its changes with time.	 <b>ChaSTE</b> <b>Chandra's Surface Thermo-physical Experiment</b> To carry out the measurements of thermal properties of lunar surface near polar region.
 <b>ILSA</b> <b>Instrument for Lunar Seismic Activity</b> To measure seismicity around the landing site and delineating the structure of the lunar crust and mantle	
Rover Payloads	
 <b>APXS</b> <b>Alpha Particle X-Ray Spectrometer</b> To derive the chemical composition and infer mineralogical composition to further enhance our understanding of lunar surface.	 <b>LIBS</b> <b>Laser Induced Breakdown Spectroscopy</b> To determine the elemental composition (Mg, Al, Si, K, Ca, Ti, Fe) of lunar soil and rocks around the lunar landing site.
Propulsion Module Payload	
 <b>SHAPE</b> <b>Spectro-polarimetry of Habitable Planet Earth</b> An experimental payload to study the spectro-polarimetric signatures of the habitable planet Earth in the near-infrared (NIR) wavelength range (1-1.7 μm).	

## 5. CBDCs can make payments across borders efficient: Das - The Hindu/ 'Cross-border payments can be more efficient with CBDC' - Indian Express

**Relevance:** Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment

**News:**

- Recently, the **Reserve Bank of India (RBI)** said the **key challenges to existing cross-border payments continued to be high cost, low speed**, limited access and insufficient transparency.
- He emphasized **adoption of the Central Bank Digital Currencies (CBDCs)** can make cross-border payments efficient.

### Prelims Takeaway

- Central Bank Digital Currency
- Reserve Bank of India

### Central Bank Digital Currency

- CBDCs are a **digital form of a paper currency** and unlike cryptocurrencies that operate in a regulatory vacuum,
- These are **legal tenders issued and backed by a central bank**.
- It is the **same as a fiat currency** and is **exchangeable** one-to-one with the fiat currency.
- A fiat currency is a **national currency** that is not pegged to the price of a commodity such as gold or silver.
- The digital fiat currency or CBDC **can be transacted using wallets backed by blockchain**.
- Though the concept of CBDCs **was directly inspired by Bitcoin**
- It is **different from decentralised virtual currencies** and crypto assets, which are not issued by the state and lack the 'legal tender' status.

## 6. Gujarat Declaration' underlining outcome of the first WHO Traditional Medicine Global Summit 2023 released - PIB

**Relevance:** Health

**News:**

- The **World Health Organization (WHO)** has released the outcome document of the first WHO Traditional Medicine Global Summit 2023 in the form of "**Gujarat Declaration**".
- The **first global summit on Traditional Medicine** was organised by the **World Health Organization (WHO)** and co-hosted by the **Ministry of Ayush**, from August 17-18, 2023, at **Gandhinagar, Gujarat**.

### Prelims Takeaway

- Gandhinagar Declaration
- World Health Organisation

### Key Outcomes

- It **reaffirmed global commitments** towards **indigenous knowledge, biodiversity and traditional, complementary and integrative medicine**.
- It reiterates that **India as host of the WHO Global Traditional Medicine Centre** at Jamnagar, Gujarat has an **important role in taking forward the summit action agenda** and other relevant priorities.
- The Gujarat Declaration will serve as a **catalyst to harness the potential of traditional medicine** through the lens of science.
- It will **focus on the integration of traditional medicines in national health systems** and help **unlock the power of traditional medicine**.
- It talks about **scaling up efforts to further implement**
  - Evidence-based TCIM (Traditional complimentary integrative medicine) interventions
  - Approaches in support of the goal of universal health coverage (UHC)
  - All health-related Sustainable Development Goals (SDGs)
- It mentions that **actions should be promoted and taken at all levels**
  - to safeguard, restore and sustainably manage biodiversity
  - to ensure the fair and equitable sharing of the benefits arising from the use of biodiversity resources, related genetic material and Indigenous knowledge.

## 7. Researchers discover how fungus helps destroy harmful food toxin - The Print

**Relevance:** Science and Technology- developments and their applications and effects in everyday life.

**News:**

- Recently, a research team from the **Tokyo University of Science (TUS)** in **Japan** discovered a **fungus** that helps **destroy a harmful food toxin, Patulin**.

### Prelims Takeaway

- TUS-MM1
- Patulin

**Key Findings**

- The team identified a **filamentous fungal (mold) strain, Acremonium sp. or "TUS-MM1,"** belonging to the **genera Acremonium**.
- They performed **various experiments** to shed light on the **mechanisms by which TUS-MM1 degraded patulin**.
- This involved **incubating the mold strain in a patulin-rich solution** and focusing on the substances that **gradually appeared both inside and outside its cells in response to patulin** over time.
- They found that TUS-MM1 cells **transformed any absorbed patulin into desoxypatulinic acid** by **adding hydrogen atoms** to it.
  - This compound is much less toxic than patulin.
- Some of the compounds secreted by TUS-MM1 cells can **transform patulin into other molecules too**.

**Patulin**

- Patulin (C<sub>7</sub>H<sub>6</sub>O<sub>4</sub>) is a **toxic mycotoxin** produced by **several types of fungi**.
- It is **harmful to a wide range of creatures**, including humans, mammals, plants, and microbes.
- It can grow on **damaged or decaying fruits, especially apples**.

**Impacts**

- It is responsible for a **wide variety of health hazards**.
  - It includes nausea, lung congestion, ulcers, intestinal haemorrhages,
  - It also includes even more serious outcomes such as DNA damage, immunosuppression and increased cancer risk.

**Treatment**

- It includes **oxygen therapy, immunotherapy, detoxification therapy, and nutrient therapy**

## 8. 37,000 'alien species' introduced by human activities, says report - Indian Express

**Relevance:** Conservation, environmental pollution and degradation, environmental impact assessment.

**News:**

- The Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES)** releases its new publication – the **"Assessment Report on Invasive Alien Species and their Control"**
- It was found that there are **37,000 alien species, including plants and animals, have been introduced by many human activities**

### Prelims Takeaway

- The Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES)
- Invasive alien species

**Highlights of the report:**

- Invasive alien species** have played a key role in **60% of global plant and animal extinctions recorded**.
- many invasive alien species have been **intentionally introduced** for their perceived benefits, "without consideration or knowledge of their negative impacts".
- The **water hyacinth is the world's most widespread invasive alien** species on land.
- The **brown rat and the house mouse** are also widespread invasive alien species.
- The **reduction of food supply** has been cited by the report as the most common impact of alien invasive species.



- Invasive alien species like *Aedes albopictus* and *Aedes aegyptii* **spread diseases such as malaria, Zika and West Nile Fever**
- **Climate change** is also predicted to increase the competitive ability of some invasive alien species
- Most countries (80%) have included **targets related to managing invasive alien species in their national biodiversity plans.**
- Nearly half of all countries (45%) do not invest in management of biological invasions.
- In December last year, governments agreed to reduce the rate of introduction and establishment of invasive alien species by at least 50% by 2030
- The governments revised the target under target 6 of the Kunming-Montreal Global Biodiversity Framework.

#### **The Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES)**

- IPBES is an **independent intergovernmental body** established to strengthen the science-policy interface for biodiversity and ecosystem services.
- It works in a **similar way to the IPCC**, which is the UN's climate science body



**Mentorship**  
India

## Editorials, Gists and Explainers

### 1. Toyota's flex-fuel prototype: How it will work, what advantages it offers - Indian Express

**Relevance:** Achievements of Indians in science & technology; indigenization of technology and developing new technology.

**Context**

- Recently, Toyota unveiled a **prototype of the Innova Hycross** with a **flex-fuel hybrid powertrain** claimed to be the **world's first BS6 Stage II-compliant flex-fuel vehicle**.

<p style="text-align: center;"><b>Hycross Prototype</b></p> <ul style="list-style-type: none"> <li>It has an Atkinson Cycle petrol engine coupled with an electric motor, the same as in the hybrid version of the standard Hycross.</li> <li>It can run on petrol with more than 20% ethanol blending, currently mandated in India.</li> <li>Also, its performance would be at par with the standard Hycross hybrid, even with ethanol-blended petrol.</li> <li>It would run 60% of the time in the electric vehicle mode using energy stored in the battery pack.</li> <li>It will achieve low carbon emissions "on a comprehensive well-to-wheel basis"</li> </ul>	<p style="text-align: center;"><b>Functioning of Flex Fuel Engine</b></p> <ul style="list-style-type: none"> <li>Most components in a flex fuel vehicle are the same as those in petrol-based cars.</li> <li>However, certain modifications are made to the fuel pump and fuel injection system.</li> <li>This is done to adjust to the different chemical properties and energy content in ethanol/ methanol.</li> <li>The engine control module (ECM) is also calibrated to accommodate the higher oxygen content of ethanol.</li> </ul> <p style="text-align: center;"><b>Flex Pros</b></p> <ul style="list-style-type: none"> <li>The use of ethanol blending sharply lowers harmful pollutants such as carbon monoxide, sulphur, and carbon and nitrogen oxides</li> <li>The blending will help cut back on oil imports to fuel vehicles.             <ul style="list-style-type: none"> <li>The expected implementation of E20 by April 2025 is estimated to result in annual savings of Rs 35,000 crore in India's oil import bill.</li> </ul> </li> <li>They have improved acceleration performance when operating on higher ethanol blends.</li> <li>Alternative fuels contribute towards economical and sustainable mobility.</li> </ul>
<p style="text-align: center;"><b>Flex-fuel Technology</b></p> <ul style="list-style-type: none"> <li>A flex-fuel vehicle typically has an internal combustion engine (ICE).</li> <li>However, unlike a regular petrol vehicle, it can run on more than one type of fuel, or a mixture of these fuels.</li> <li>The most common versions use a blend of petrol and ethanol or methanol. Flex-fuel vehicles such as the prototype Hycross can run on blends of ethanol that are far higher than the current standard 20% mix (E20).</li> <li>The flex engine push is part of the broader strategy to cut dependence on imported crude in the medium-to-long run.</li> </ul>	<p style="text-align: center;"><b>Flex Cons</b></p> <ul style="list-style-type: none"> <li>They typically take a 4-8% hit on fuel efficiency when using ethanol for motive power.</li> <li>Source crops such as sugarcane are usually very water-intensive.             <ul style="list-style-type: none"> <li>NITI Aayog report, 2019-200: More than 90% of the ethanol produced in the country came from sugarcane.</li> </ul> </li> <li>There is a need for flexibility of fuel mix to cope up with adverse situations.</li> <li>There is also a need for government subsidy to narrow the price gap of higher ethanol blends, in order to make the proposition viable.</li> </ul>

**Conclusion**

- To **overcome the challenges** of lower fuel efficiency of flex-fuel vehicles, **electrified flex-fuel vehicles** are being introduced.
- This offers the **advantages of both a flex-fuel engine and an electric powertrain**, as in the case with the **Hycross prototype**.

### 2. Emerging countries need women-led climate action - The Hindu

**Relevance:** Social

**Context**

- Gender equality and environmental goals** are mutually reinforcing.
- They create a **virtuous circle** that will help **accelerate the achievement of the Sustainable Development Goals**.

#### Impacts of Climate Change

- It has profound consequences for humans and has emerged as one of the biggest global challenges in recent decades.
- The effects of climate change vary according to location, socioeconomic status, and gender.
- **International Labour Organization study (2019)**
  - In 2030, 2.2 percent of total working hours worldwide will be lost to high temperatures.
  - This is a productivity loss equivalent to 80 million full-time jobs.
- **United Nations (2009)**
  - Across genders, women are considered to be highly vulnerable and disproportionately affected by climate change than men.

#### Felt more in Low-income countries

- Women in developing and less developed countries (especially in low-income areas) are more vulnerable to climate change.
- This is because of their dependence on natural resources and labour-intensive work for their livelihood.
- Women are more likely to live in poverty than men that makes them more susceptible to the effects of climate change.
  - However, this is just one of several social, economic, and cultural variables that makes them more susceptible to the effects of climate change.
- They are more at risk because they are more responsible for food, water, and other homely unpaid work.
- Women may be at increased risk for health and safety because they must travel long distances every day to collect water and fuel.
- Women in low-income countries engage in climate-vulnerable occupations such as farming and other labour-intensive work.
- **International Labour Organization (ILO) Report**
  - Over 60% of working women in southern Asia and sub-Saharan Africa are still in agriculture, where they are often underpaid and overworked.
  - Despite being the backbone of the food production system, women own only about 10% of the land used for farming.

#### Gender Specific Issues

- According to a UN study, most (80%) of those displaced by climate-related disasters are women and girls.
- Women, especially those from vulnerable communities, face particular difficulties during and after natural disasters.
- When women are uprooted, they are more susceptible to prejudice and exploitation.
  - After the earthquake in Nepal in 2015, the United Nations Population Fund (UNFPA) found women were more exposed to trafficking and exploitation.
- Some gender-specific issues women face are
  - Separation from social networks
  - A higher risk of gender-based violence
  - Decreased access to employment, education, and essential health services like sexual and reproductive health care and psychosocial support

#### Impacts on Agriculture and Food security

- Climate change impacts agricultural productivity negatively and significantly.
- Heat stress affects workers a lot in this sector, especially in South Asia and Africa.
- Changing precipitation patterns and more frequent extreme weather events are just the beginning of the problems.
- Their effects on crop production and food security fall disproportionately on the people, who already face significant challenges in obtaining resources, expertise, and technology.
- Women engaged in agriculture do not have access to quality inputs and possess low education and technical knowledge.
- Various studies also reflect how flooding has increased water scarcity and also violence against and the exploitation of women.

#### Invest in Women's Education and Training

- Climate change impacts can particularly exacerbate poverty and socioeconomic vulnerabilities among women.
- According to estimates, 130 million people could be pushed into poverty by 2050 due to climate change risks, natural disasters, and food inflation, impacting women's inequality.
- Investments in women's education, training, and access to resources are essential if we are to be resilient to the impact of climate change.
- There is a need to teach them how to practise sustainable agriculture, water management and energy generation.
  - In India, the Self-Employed Women's Association (SEWA) teaches women farmers how to respond to shifting climate patterns to support themselves better financially.

#### Conclusion

- **Women's participation in climate policy decision-making** at all levels is **crucial** for **effective climate change mitigation and adaptation strategies** as well as **getting decent employment**.
- As women face greater risks in climate change, gender parity in decision-making bodies is essential.

## Quick Look

### 1. Tilapia Fish

- It is a common name used for certain species of fishes belonging to the family Cichlidae (order Perciformes), represented by numerous, mostly freshwater species native to Africa.
- It has emerged to be one of the most productive and internationally traded food fish in the world.
- The culture of tilapia has become commercially popular in many parts of the world.
- Experts have dubbed the tilapia as “aquatic chicken” due to its quick growth and low maintenance cultivation.

### 2. Lake Victoria

- It is the world’s second-largest freshwater lake.
- Location: East Africa, bordered by Tanzania, Uganda, and Kenya.
- It is a source of the White Nile River, which flows northward and eventually joins the Blue Nile in Sudan to form the Nile River.

### 3. Green Rating for Integrated Habitat Assessment (GRIHA) norms

- It is a rating tool that helps people assess the performance of their building against certain nationally acceptable benchmarks.
- It evaluates the environmental performance of a building holistically over its entire life cycle.
- The rating system, based on accepted energy and environmental principles, seeks to strike a balance between the established practices and emerging concepts.
- It is developed by TERI (The Energy and Resources Institute).
- This tool has been adopted by the Ministry of New and Renewable Energy.
- It assesses a building out of 34 criteria and awards points on a scale of 100.
- In order to qualify for GRIHA certification, a project must achieve at least 50 points.
- Certain criteria / sub-criteria are mandatory and have to be complied with for the project to be at all eligible for rating.

### 4. Nagarhole Tiger Reserve

- It is situated in the districts of Mysore and Kodagu in Karnataka.
- The reserve is named after a small river, ‘Nagarahole’.
- It is flanked by the Bandipur Tiger Reserve on its southeastern side and the Wayanad Wildlife Sanctuary of Kerala on the southwest.
- The habitat also forms part of the Nilgiri Biosphere Reserve.
- The forests of Nagarahole are primarily deciduous.
- Towards the west, with the increase in rainfall, the vegetation changes to tropical moist and semi-evergreen forests.
- The forests are interspersed with swampy fallows called ‘hadlu’, which are dominated by grasses and sedges favoured by wild herbivores.
- Commercially important rosewood, teak, sandalwood, and silver oak are the main trees here.
- Fauna: Tiger, Leopard Asiatic, Wild Dog, Sloth Bear, Asiatic Elephant, Gaur, Sambar Chital Muntjac, Four Horned Antelope etc.

### 5. Hypersonic Missiles

- A hypersonic missile is a weapon system that flies at least at the speed of Mach 5 i.e.. five times the speed of sound and is manoeuvrable.
- These missiles are extremely fast and far harder for surface-to-air missile defence systems to target.

**Prelims Track Question**

**Q1. Consider the following statements regarding the Protection of Children from Sexual Offences (POCSO) Act, 2012**

1. It was enacted in consequence to India's ratification of the UN Convention on the Rights of the Child.
2. A victim can report an offence within a year after the abuse has been committed only.

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

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q2. What does the Basic Structure Doctrine in Indian constitutional law refer to?**

- (a) A set of fundamental rights that cannot be amended.
- (b) The core principles and values of the Constitution that cannot be altered.
- (c) A doctrine related to separation of powers in the Indian Constitution.
- (d) The principles associated with Indian judicial review.

**Q3. Which of the following statements most aptly define the Pradhan Mantri Dakshata Aur Kushalata Sampanna Hitgrahi (PM-DAKSH)?**

- (a) A government initiative to promote digital literacy among rural youth.
- (b) A scheme aimed at enhancing the employability of several groups including SCs, OBCs among others.
- (c) A program to provide skill training and employment to disabled individuals.
- (d) A campaign for improving healthcare infrastructure in rural areas.

**Q4. Consider the following statements**

1. A hop test refers to a scientific experiment in which a lander elevates itself from the celestial body surface and lands again.
2. It is a significant test for the sample return and human mission.

3. Recently, Chandrayaan-3's Vikram Lander successfully underwent a hop experiment.

**How many of the statements given above is/are correct?**

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

**Q5. Consider the following statements regarding Central Bank Digital Currency (CBDC)**

1. CBDCs are cryptocurrencies like Bitcoin or Ethereum.
2. CBDCs are issued and regulated by commercial banks.
3. CBDCs are a digital form of a country's national currency.

**How many of the statements given above is/are correct?**

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

**Q6. Consider the following statements regarding the Gujarat Declaration seen in the news recently.**

1. It is the outcome document of the first WHO Traditional Medicine Global Summit 2023.
2. It reaffirmed global commitments towards indigenous knowledge, biodiversity and traditional, complementary and integrative medicine.
3. It will focus on the integration of traditional medicines in national health systems.

**How many of the statements given above is/are correct?**

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

**Q7. What is "Patulin" seen in the news recently?**

- (a) A toxic compound found in certain molds.
- (b) A rare gemstone found in South Asia

- (c) An essential nutrient in human diets.
- (d) A type of medicinal herb used in traditional Indian medicine

**Q8. Consider the following statements on The Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES)**

1. It is an NGO established to strengthen the science-policy interface for biodiversity and ecosystem services.
2. It works in a similar way to the IPCC, which is the UN's climate science body.

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

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q9. Consider the following statements with reference to Flex-fuel Technology**

1. It is a technology that allows vehicles to run on multiple types of fuel.
2. It is primarily used in aviation to power commercial aeroplanes.

**How many of the statements given above is/are correct?**

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q10. Consider the following statements**

1. Almost 80% of those displaced by climate-related disasters are women and girls.
2. Women in developing and less developed countries (especially in low-income areas) are more vulnerable to climate change.

**Which of the statements given above is/are correct?**

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Prelims Track Answer****Ans. 1 Option B is correct****Option B is correct****Explanation**

- POCSO Act, 2012 was enacted in 2012 in consequence to India's ratification of the UN Convention on the Rights of the Child in 1992. **Hence, statement 1 is correct.**
- Objective: To protect children from sexual assault, sexual harassment and pornography offences and to provide for the establishment of Special Courts for the trial of such offences.
- It defines a child as any person below the age of 18 years.
- The Act provides punishment as per the gravity of offence.
- The Act recognizes that both girls and boys can be victims of sexual abuse.
- Non-reporting has been made a specific offence under the Act.
- A victim can report an offence at any time, even a number of years after the abuse has been committed. **Hence, statement 2 is incorrect.**
- It prohibits disclosure of the victim's identity in any form of media, except when permitted by the special courts established under the act.

**Ans. 2 Option B is correct****Explanation**

- The Kesavananda Bharati judgement introduced the Basic Structure doctrine.
- It limited Parliament's power to make drastic amendments that may affect the core values enshrined in the Constitution. **Hence, Option B is correct.**
- It held that the "basic structure of the Indian Constitution could not be abrogated even by a constitutional amendment".

**Ans. 3 Option B is correct****Explanation**

- The Pradhan Mantri Dakshata Aur Kushalata Sampanna Hitgrahi (PM-DAKSH) Yojana, a Central Sector Scheme, was launched during 2020-21.
- Objective
  - To enhance the competency level of the target groups
  - To make them employable both in self-employment

- Wage-employment for their socio-economic development.

- The target group includes SCs, OBCs, EBCs, DNTs Safai Karamcharis and Waste pickers.
- The age criterion : 18-45 years
- The Cost of the training to trainees is free of cost.
- The stipend under this scheme will also be given.

**Ans. 4 Option C is correct****Explanation**

- Recently, the Chandrayaan-3 mission's lander Vikram achieved another significant milestone as it successfully undertook a hop experiment. **Hence, statement 3 is correct.**
- The lander underwent a hop experiment and on command, fired the engines, elevated itself by about 40 cm and landed safely at a distance. **Hence, statement 1 is correct.**
- It could have significant bearing on the future missions launched with an aim to bring back samples from the moon and also future human missions to the moon.
- **Hence, statement 2 is correct.**
- Deployed Ramp, ChaSTE and ILSA were folded back and redeployed successfully after the experiment.

**Ans. 5 Option A is correct****Explanation**

- CBDCs are digital forms of a country's national currency issued and regulated by the central bank and not commercial banks. **Hence, statement 2 is incorrect and statement 3 is correct.**
- They are different from cryptocurrencies like Bitcoin or Ethereum. **Hence, statement 1 is incorrect.**

**Ans. 6 Option C is correct****Explanation**

- The World Health Organization (WHO) recently released the outcome document of the first WHO Traditional Medicine Global Summit 2023 in the form of the "Gujarat Declaration". **Hence, statement 1 is correct.**
- It reaffirmed global commitments towards indigenous knowledge, biodiversity and traditional, complementary and integrative medicine. **Hence, statement 2 is correct.**

- It will serve as a catalyst to harness the potential of traditional medicine through the lens of science.
- It will focus on the integration of traditional medicines in national health systems and help unlock the power of traditional medicine. **Hence, statement 3 is correct.**

**Ans. 7 Option A is correct**

**Explanation**

- Patulin (C<sub>7</sub>H<sub>6</sub>O<sub>4</sub>) is a toxic mycotoxin produced by several types of fungi. Hence, **Option A is correct**
- It is harmful to a wide range of creatures, including humans, mammals, plants, and microbes.
- It can grow on damaged or decaying fruits, especially apples.

**Ans. 8 Option A is correct**

**Explanation**

- The Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) is an independent intergovernmental body established to strengthen the science-policy interface for biodiversity and ecosystem services. **Hence, statement 1 is incorrect.**
- It works in a similar way to the IPCC, which is the UN's climate science body
- **Hence, statement 2 is correct.**

**Ans. 9 Option A is correct**

**Explanation**

- Flex-fuel technology is a system that allows vehicles to run on multiple types of fuel, typically gasoline, ethanol, or a mixture of both. **Hence, statement 1 is correct.**
- It is not primarily used in aviation but is more commonly found in automobiles designed to be flexible in terms of the types of fuel they can use. **Hence, statement 2 is incorrect.**

**Ans. 10 Option C is correct**

**Explanation**

- Across genders, women are considered to be highly vulnerable and disproportionately affected by climate change than men.
- Women in developing and less developed countries (especially in low-income areas) are more vulnerable to climate change. **Hence, statement 2 is correct.**
- This is because of their dependence on natural resources and labour-intensive work for their livelihood.
- Women are more likely to live in poverty than men that makes them more susceptible to the effects of climate change.
- According to a UN study, most (80%) of those displaced by climate-related disasters are women and girls. **Hence, statement 1 is correct.**



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