

1. National Anti-Doping Bill

Topic: Polity and Governance



In News: The Lok Sabha has passed the National Anti-Doping Bill in an effort to put a halt to doping in sports.

More on the Topic:

Details of the Bill:

- The Bill prohibits athletes, athlete support personnel, and other persons from engaging in doping in sport.
- **Violation of anti-doping rules may result in disqualification of results** including forfeiture of medals, points and prizes, ineligibility to participate in a competition or event for a prescribed period, and financial sanctions.
- **Converting NADA as Statutory Body:** Currently, anti-doping rules are implemented by the National Anti-Doping Agency (NADA), which was established as a society.
- **The Bill provides for constituting NADA as a statutory body headed by a Director General** appointed by the central government. Functions of the Agency include planning, implementing and monitoring anti-doping activities, and investigating anti-doping rule violations.
- **The National Board for Anti-Doping:** The National Board for Anti-Doping in Sports will be established to make recommendations to the government on anti-doping regulations and compliance with international commitments on anti-doping.
- The Board will oversee the activities of NADA and issue directions to it.
- **National Anti-Doping Disciplinary Panel:** The Board will constitute a National Anti-Doping Disciplinary Panel for determining consequences of anti-doping rule violations. Further, the Board will constitute a National Anti-Doping Appeal Panel to hear appeals against decisions of the Disciplinary Panel.

Issues in the Bill:

- **The qualifications of the Director General are not specified in the Bill** and are left to be notified through Rules.

- **Discretion to the central government to remove the Director General.** It may affect the independence of the Director General.

Context of the Bill:

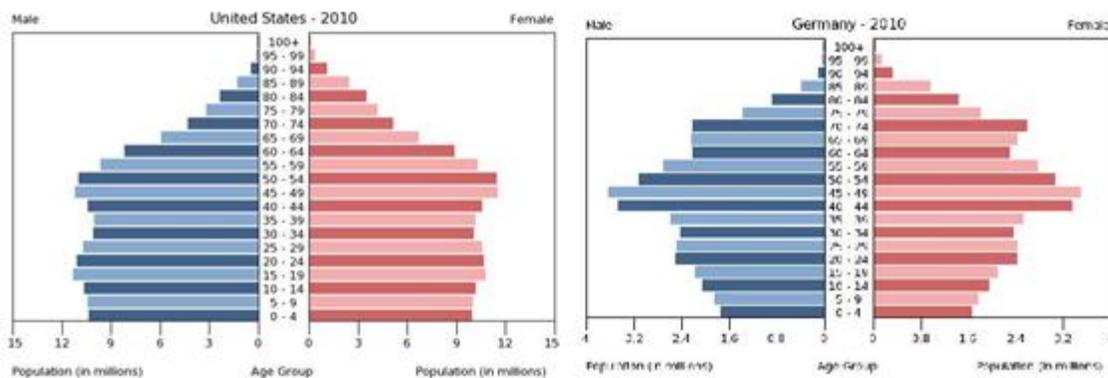
- Doping is the consumption of certain prohibited substances by athletes to enhance performance.
- In 1999 the World Anti-Doping Agency (WADA) was set up under the International Olympic Committee.
- WADA is recognised by the UNESCO International Convention against Doping in Sport (2005).
- WADA’s primary role is to develop, harmonise, and coordinate anti-doping regulations across all sports and countries.
- **WADA requires countries to have a National Anti-Doping Organisation for enforcing anti-doping rules.**
- The anti-doping process in India is managed by the National Anti-Doping Agency (NADA).
- NADA was established as an autonomous body under the Societies Registration Act, 1860 in November, 2009

Source: Indian Express

2. Replacement Level Fertility

Topic: Population and Associated Issues

Exhibit 1: Replacement-Level Fertility Leads to “Pillar” Shaped Age Structure; Below-Replacement Fertility Leads to “Mushroom Cloud” Shaped Age Structure





In News: Union minister of Health has informed that India has achieved replacement level fertility, with as many as 31 States/Union Territories reaching a Total Fertility Rate of 2.1 or less.

More on the Topic:

- Replacement level fertility is the level of fertility at which a population exactly replaces itself from one generation to the next.
- It can be taken as requiring an average of 2.1 children per woman.
- According to World population prospects 2022, India will overtake China as most populous country in 2023.

Reasons for India achieving replacement level Fertility:

- The latest data has shown significant progress on several indicators related to **fertility, family planning, age at marriage and women's empowerment** — all of which have contributed to the decrease in TFR.
- From NFHS-4 to NHFS-5, **decline in teenage childbearing was minimal— 7.9% in 2015-16 to 6.8% in 2019-21.**
- There has been a significant increase in **current use of any modern contraceptive method.**
- Contraceptive Prevalence Rate has increased substantially from 54% to 67% at the all-India level.
- Introduction of **new reversible spacing (gaps between children) methods , wage compensation systems to undergo sterilisation, and the promotion of small family norms** also worked well over the years.
- **Government of India has for long been working on population control.** In fact, India was the first country to launch a national-level family planning programme and the encouraging results that we see now are due to sustained, concerted efforts put together by the Centre, and the state governments.

Government Schemes:

- The Government has launched **Mission Parivar Vikas in 2017 for substantially increasing access to contraceptives and family planning services** in 146 high fertility districts with TFR of 3 and above in seven high focus states.
- **National Family Planning Indemnity Scheme (NFPIS)** was launched in the year 2005. Under this scheme clients are insured in the eventualities of death, complication and failure following sterilization.
- **Under Compensation scheme for Sterilization Acceptors** the Ministry of Health and Family Welfare provides compensation for loss of wages to the beneficiary and also to the service provider (& team) for conducting sterilizations from the year 2014.

Source: Indian Express

3. RBI-Digital Payments Index

Topic: Reports and Indices

Parameter

Weightage

• Payment Enablers	25%
• Payment Infrastructure - Demand Side Factors	10%
• Payment Infrastructure – Supply-side factors	15%
• Payment Performance	45%
• Consumer Centricity	5%

In News: RBI has released latest RBI Digital Payment Index. Recent Index showed significant growth (between March 2021- March 2022) indicating rapid adoption and deepening of digital payments across the country.

More on the Topic:

- The digital payment index intends to measure measures the adoption of online transactions.
- The index is published **on a semi-annual basis** from March 2021 onwards.
- The RBI-DPI comprises 5 broad parameters that enable the measurement of the deepening and penetration of digital payments in the country over different periods.

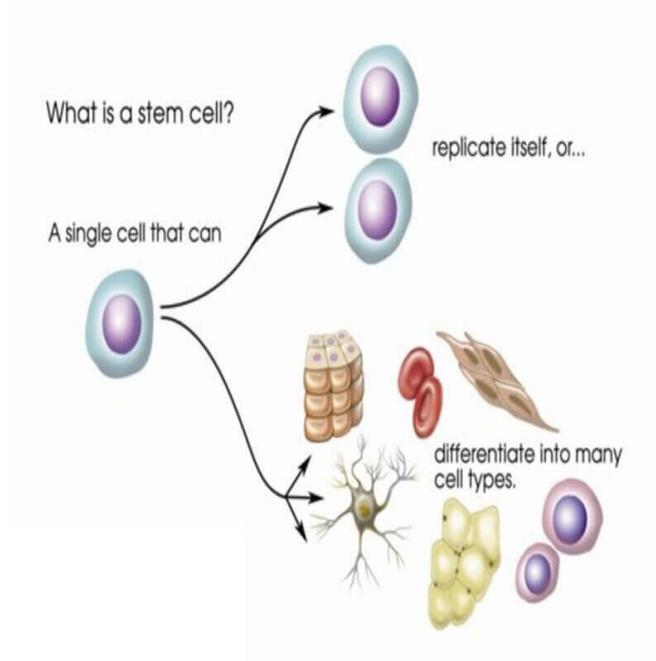
These parameters are:

- Payment Enablers
- Payment Infrastructure – Demand-side factors
- Payment Infrastructure – Supply-side factors
- Payment Performance
- Consumer Centricity

Source: Hind

4. Stem Cell Transplant

Topic: Science and Technology



In News: After receiving a stem cell transplant, a 66-year-old man may be the fifth person to be cured of HIV, the virus that causes AIDS.

More on the Topic:

- A bone marrow transplant is also called a stem cell transplant or, more specifically, a hematopoietic stem cell transplant.
- SCT, also called bone marrow transplant, **is a procedure in which a patient receives healthy stem cells to replace damaged stem cells.**
- The replacement cells can either come from own body (Autologous transplantation) or from a donor (Allogeneic transplantation).

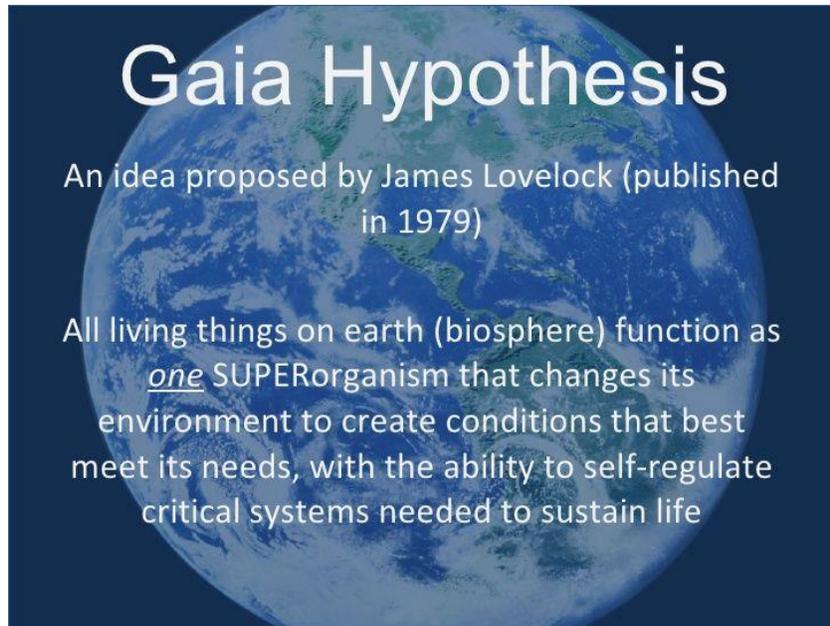
Stem Cells:

- A stem cell is a cell with the unique ability to develop into specialized cell types in the body.
- **All stem cells regardless of their source have three general properties:**
- They are capable of dividing and renewing themselves for long periods
- They are unspecialized
- They can give rise to specialized cell types

Source: Indian Express

5. Gaia hypothesis

Topic: Environment and Ecology



In News: James Lovelock, creator of Gaia hypothesis had passed away recently.

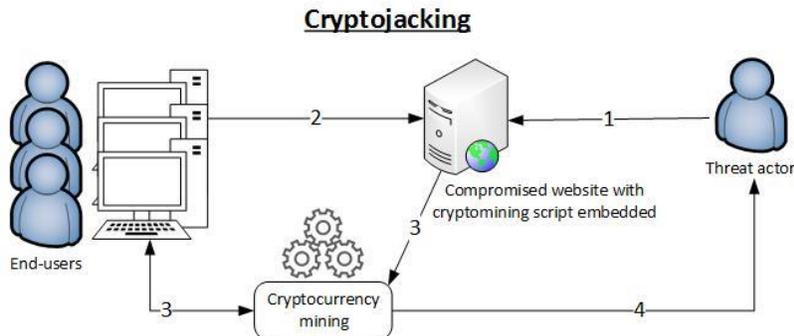
More on the Topic:

- Gaia theory refers to a scientific hypothesis which states that the earth is a complex living entity, with the sustenance of life dependent on the self-regulating interactions among organisms and their inorganic surroundings.
- Topics related to the hypothesis include **how the biosphere and the evolution of organisms affect the stability of global temperature, salinity of seawater, atmospheric oxygen levels, the maintenance of a hydrosphere of liquid water and other environmental variables that affect the habitability of Earth.**

Source: TOI

6. Cryptojacking

Topic: Science and Technology



Steps

1. The threat actor compromises a website
2. Users connect to the compromised website and the cryptomining script executes
3. Users unknowingly start mining cryptocurrency on behalf of the threat actor
4. Upon successfully adding a new block to the blockchain, the threat actor receives a reward in cryptocurrency coins

In News: Cryptojacking' attacks on computer systems have gone up by 30% in the first half of 2022.

More on the Topic:

- Cryptojacking is a **cyber attack wherein a computing device is hijacked and controlled by the attacker, and its resources are used to illicitly mine cryptocurrency.**
- In most cases, **the malicious programme is installed when the user clicks on an unsafe link, or visits an infected website** and unknowingly provides access to their Internet-connected device.
- **Cryptojacking is hard to detect** and the victims of these attacks mostly remain unaware that their systems have been compromised.
- Some telltale signs are the device slowing down, heating up, or the battery getting drained faster than usual.

Source: Hindu

7. India International Bullion Exchange

Topic: Economy



In News: India's first international bullion exchange was inaugurated by prime minister Narendra Modi in his home state of Gujarat.

More on the Topic:

- Physical gold and silver of high purity, often kept in the form of bars or coins, is called a bullion. Of considered legal tender, bullion is often held as reserves by central banks or held by institutional investors.
- **The eligible qualified jewellers in India will be permitted to import gold through the IIBX**, for the first time, since the liberalisation of gold imports through nominated banks and agencies in 1990s.
- **Non-resident Indians and institutions will also be able to participate** on the IIBX after registering with the **International Financial Services Centres Authority (IFSCA)**.
- Institutions such as Funds for Gold ETF are also expected to participate.
- **The IIBX will submit a report to IFSCA on a monthly basis** providing details of transactions in bullion by qualified jewellers, including details of products traded, quantity, value, quantity of gold imported etc.
- **Structure:** The bullion exchange will be operated by an entity known as the India International Bullion Holding IFSC (International Financial Services Centre) Limited (IIBH), a joint collaboration involving the
 - Central Depository Services (India) Limited,
 - India INX International Exchange Limited (India INX),
 - Multi Commodity Exchange of India Ltd (MCX),
 - National Securities Depository Limited (NSDL) and
 - National Stock Exchange of India Ltd (NSE).

Source: Business Standard
