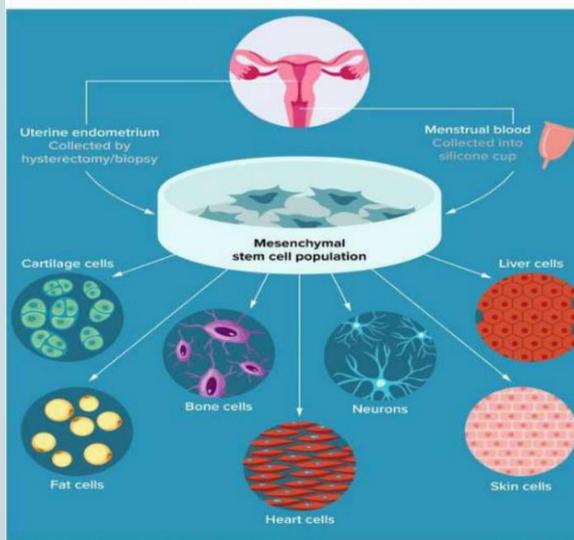


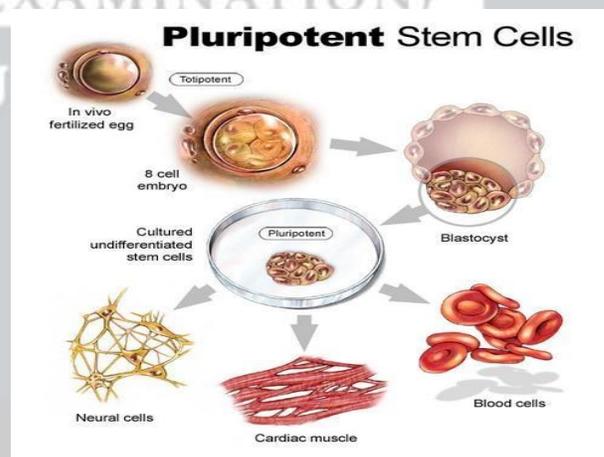
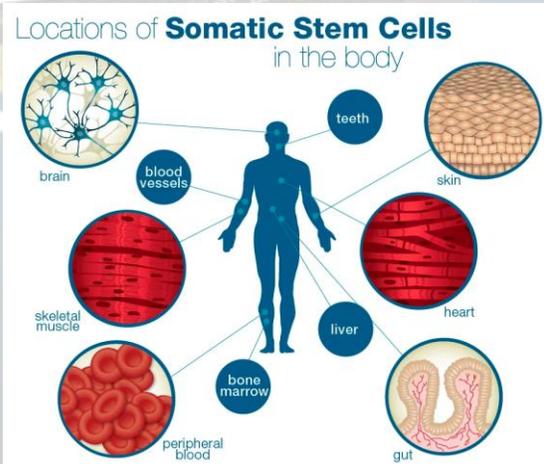
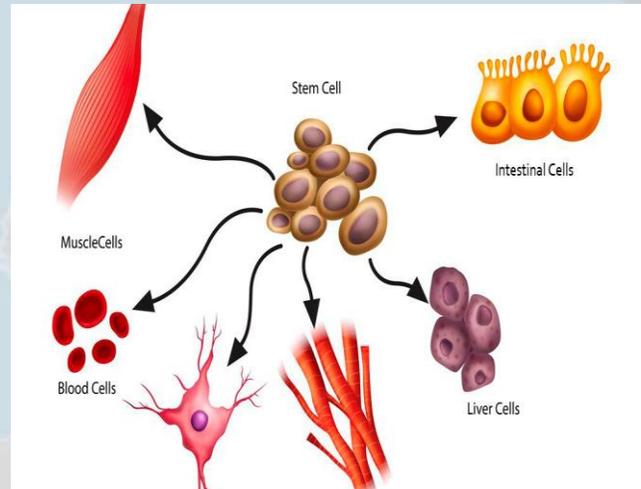
Endometrium

- The endometrium is the inner lining of your uterus. This tissue is what shed during a menstrual period.
- Think of endometrium as layers of tissue that build up along the inside lining of the uterus.
- When you have a period, these layers fall away from the walls of your uterus and leave your body.



- Researchers had long hypothesised that the endometrium contained stem cells, given its remarkable capacity to regrow itself each month.
- The tissue, which provides a site for an embryo to implant during pregnancy and is shed during menstruation, undergoes roughly 400 rounds of shedding and regrowth before a woman reaches menopause.
- Such cells are highly valued for their potential to repair damaged tissue and treat diseases such as cancer and heart failure.

- But they exist in low numbers throughout the body and can be tricky to obtain, requiring surgical biopsy, or extracting bone marrow with a needle.



Why autoimmune disease??

- Several factors can cause autoimmune disease such as environmental factors, genetics, hormonal imbalance and lifestyle habits.
- However, since women are more susceptible to these diseases, scientists previously thought that it could be related to sex hormones or faulty regulation of the X chromosome.
- Now, a group of scientists have found a molecular coating that is found in half of the X chromosomes in women might be the reason behind this phenomenon.
- Human females (and most mammals) contain two X chromosomes while the males of the species contain one X and one Y chromosome.
- The molecular coating of the X chromosome is a combination of RNA and proteins and is crucial to a process called X-chromosome inactivation which ensures that one set of X chromosomes is in.
- females remain active and functional in all the cells of the body while the other is muffled.

How is this achieved?

- The chromosome is wrapped in long strands of RNA called XIST that attract proteins and tamp down the expression of the gene inside.
- However, not all genes are muffled in this manner and the ones that escape the X inactivation process are thought to be the cause of autoimmune diseases.
- Not only this, the XIST molecule too has been known to elicit inflammatory immune responses.

FRA vs WLPA ACT

- In 1990, the Union Ministry of Environment and Forests (MoEF) had ordered that all forest villages be converted to revenue villages.
- The FRA, enacted 18 years ago, also required all forest villages to be converted to revenue villages.
- During conversion, “the actual land use of the village in its entirety, including lands required for current or future community uses, like schools, health facilities and public spaces,” were to be recorded as part of the revenue village.

What does the WLP Act 1972 provide?

- Sanctuaries and national parks are notified under the Wildlife (Protection) Act (WLPA) 1972.
- People inside sanctuaries continue to enjoy all their rights unless prohibited, but they don't in National Parks.
- No new rights are permitted once the notice of intent is issued.
- The Collector is to inquire into the rights of all persons, their nature and extent, in the proposed sanctuary or national park.
- Then, the Collector's office has to decide whether to admit the claims in sanctuaries and acquire all rights in national parks.
- The law mandates similar procedures when some land is initially notified as forest. But governments have not followed them.
- In 2006, the Indian government enacted the FRA to explicitly undo this “historical injustice” resulting from the inadequate recognition of “forest rights on ancestral

lands and their habitat in the consolidation of State forests during the colonial period as well as in independent India”.

- The FRA requires and authorises the gram sabhas to determine and recognise forest rights, and protect and preserve the forests, wildlife, and biodiversity within their customary and traditional boundaries, including inside Protected Areas. These responsibilities were earlier vested with the Forest Department.

Armenia vs Azerbaijan



Rights for the dwellers

What the Forest Rights Act, 2006, entails

- Tenurial security over the forestland under occupation prior to December 13, 2005
- Recognition of community right over forest and forest products
- Protection and conservation of community forest resources
- Conversion of all forest villages and habitation located inside the forestland into revenue villages
- In situ rehabilitation of displaced persons evicted without compensation prior to December 13, 2005
- Recognition of ancestral domain (habitat) right to



Residents of Gunduribadi village in Odisha's Nayagarh district get ready for mapping their land boundaries for the Forest Rights Act implementation. • SPECIAL ARRANGEMENT

Particularly Vulnerable Tribal Groups

- Conversion of all leases granted by erstwhile governments, zamindars and king into permanent land records
- Seasonal access to nomadic, pastoral and semi-nomadic communities over forestland



How do FRA and WLPA compare?

- Being a later law, the FRA overrides the WLPA. All provisions in the WLPA that contravene provisions in the FRA are null and void.
- As a result, when notifying a Protected Area under the WLPA, the government needs to determine rights under the FRA and acquire the consent of the gram sabhas.
- The government specifically incorporated these requirements in a 2006 amendment vis-à-vis the notification of tiger reserves.
- The FRA became operational when its Rules were notified in January 2008.



Beauty in the 'beast'



The Jufuho (snow monsters) on Mount Zao in Japan on Tuesday. A mix of snow, strong winds, and low temperatures traps trees in layers of snow and ice, forming the shape of snow-covered trees. The distribution of 'snow monsters' is shrinking due to global warming. GETTY IMAGES

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The *Juhyo* (snow monsters) on Mount Zao in Japan on Tuesday. A mix of snow, strong winds, and low temperatures traps trees in layers of snow and ice, forming the shape of snow-covered trees. The distribution of 'snow monsters' is shrinking due to global warming. GETTY IMAGES

- Winter conditions at the summit of Mount Zao, a volcano standing between Japan's Yamagata and Miyagi prefectures, can conjure up "creatures" of snow and ice, built up over tree trunks and branches.
- Windblown ice is covered by snow in repeated cycles, building hulking shapes on the mountain slopes.
- These famous *Juhyo*, or "snow monsters," attract visitors to Mount Zao from the end of January through mid-March.
- The Sri Lankan Cabinet has decided to amend the Online Safety Act after it came under attack for stifling dissent and harming the potential growth of the country's digital economy.
- However, when it was decided yesterday to go for an amendment, it was not stated which clauses of the Act would be amended,
- The legislation, accepted in January, would have led to the establishment of the Online Safety Commission, which would have been empowered to make punitive rulings on offenses.
- A false statement online would be liable, if convicted, to imprisonment for a term not exceeding five years or to a fine not exceeding five hundred thousand Sri Lankan rupees.

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Constraint for industrialization in India

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The constraint for industrialization India??

- First, employment elasticity of services-led growth is poor.
- Second, early investments in higher education contributed to the near abandonment (act of abandoning something) of mass school education
- Third, the returns to education differ across classes and social groups.
- A culture of growth also requires the revaluation of labour, production, and technology.
- Certain skills are not valued even if they command higher wages. Artisanal knowledge doesn't enjoy as much social respect as scholasticism or metaphysical abstraction.
- Increasing returns and efficiency come from innovation and its diffusion, which

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are based on mass education and collective absorptive capacity.

- **India needs deep industrialization, not just the service sector, that has the power of changing the foundations of society.**

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(CIVIL SERVICES EXAMINATION)

FROM BASICS TO UPSC BRILLIANCE