



THE HINDU ANALYSIS

25th Feb 2024

by saurabh
pandey



THE HINDU



PRELIMS TEST 20

Advanced current affairs

SCHEDULED

Today - 9PM



Link IN description



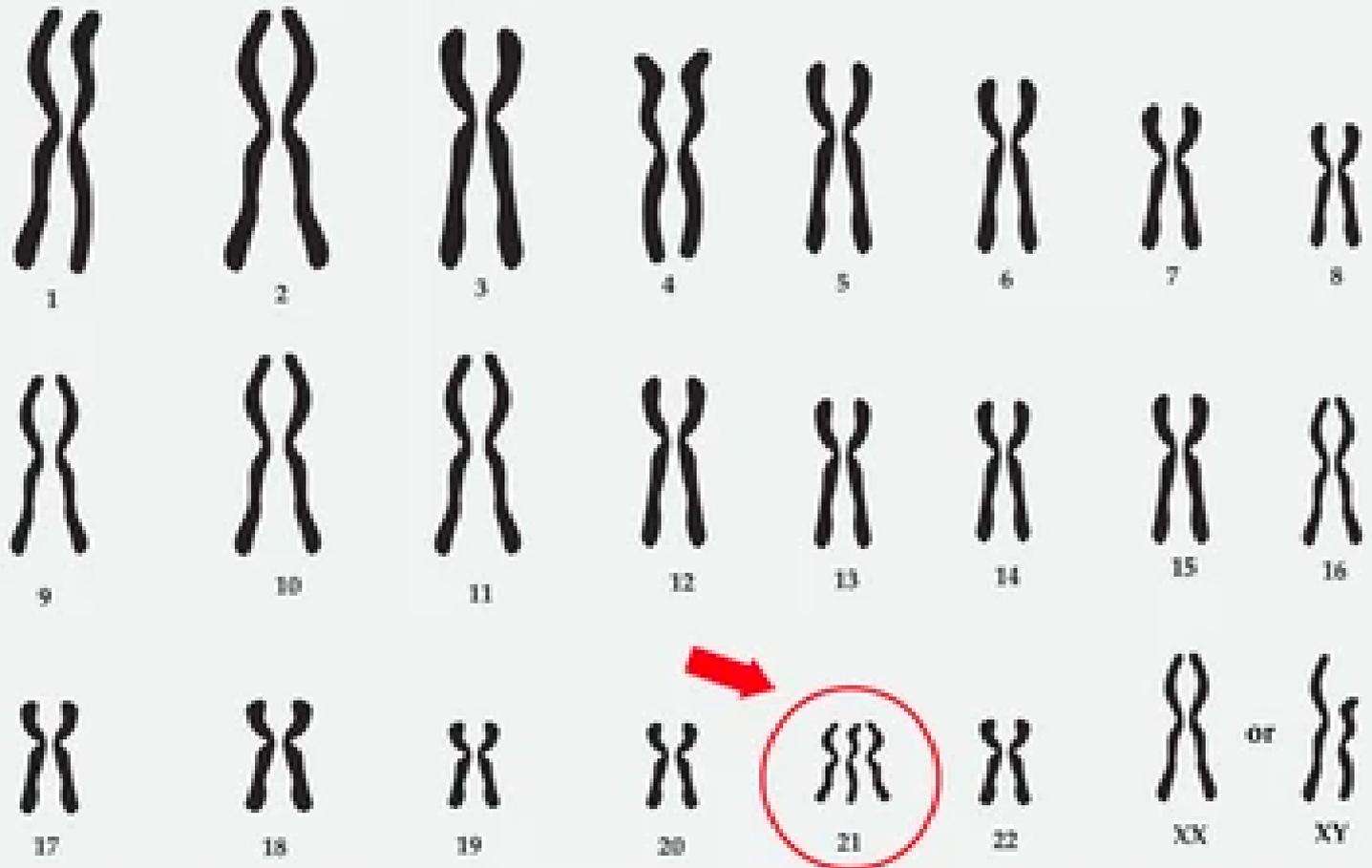
Topic-Edward syndrome

- Add Researchers have reported chromosomal disorders discovered from prehistoric skeletal remains, dating up to approximately 5,500 years old – including six cases of Down syndrome and one case of Edwards syndrome subheading
- Individuals with chromosomal trisomy carry three copies of a chromosome in their cells, instead of two. Trisomy of chromosomes number 21 or 18 results in Down syndrome and Edwards syndrome, respectively

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Down syndrome - Trisomy 21



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Edwards Syndrome (Trisomy 18)

- **Kidney, Heart, CNS malformations**
- **Many die in utero**
- **Half of those born don't survive past 1st week.**
- **Can be diagnosed in utero via ultrasound and maternal serum markers like α -fetoprotein.**

small mouth, small jaw, short neck

shield chest, or short and prominent sternum; and wide-set nipples

occiput, or back part of the skull, is prominent

dysplastic, or malformed ears



clenched hands with overlapping fingers

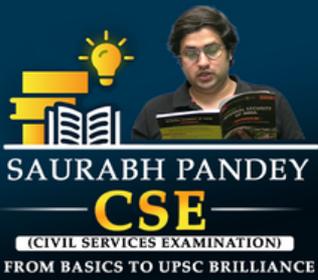
alpha fetoprotein AND occiput extension

flexed big toe; prominent heels



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Topic- kerala implements H1 Rule on Antimicrobial resistance

- In 2011, the Indian government introduced the H1 rule to prohibit the over-the-counter (OTC) sales of antibiotics without a prescription, responding to the growing concern over antimicrobial resistance (AMR).

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World Health
Organization

REGIONAL OFFICE FOR Europe

Antimicrobial resistance (AMR)

is the ability of a microorganism to survive and resist exposure to antimicrobial drugs, threatening the effectiveness of successful treatment of infection.

There are **different types of antimicrobials** which work against **different types of microorganisms**, e.g. antibacterials or antibiotics against bacteria, antivirals against viruses, antifungals against fungi, etc.

#AMR #antimicrobialresistance

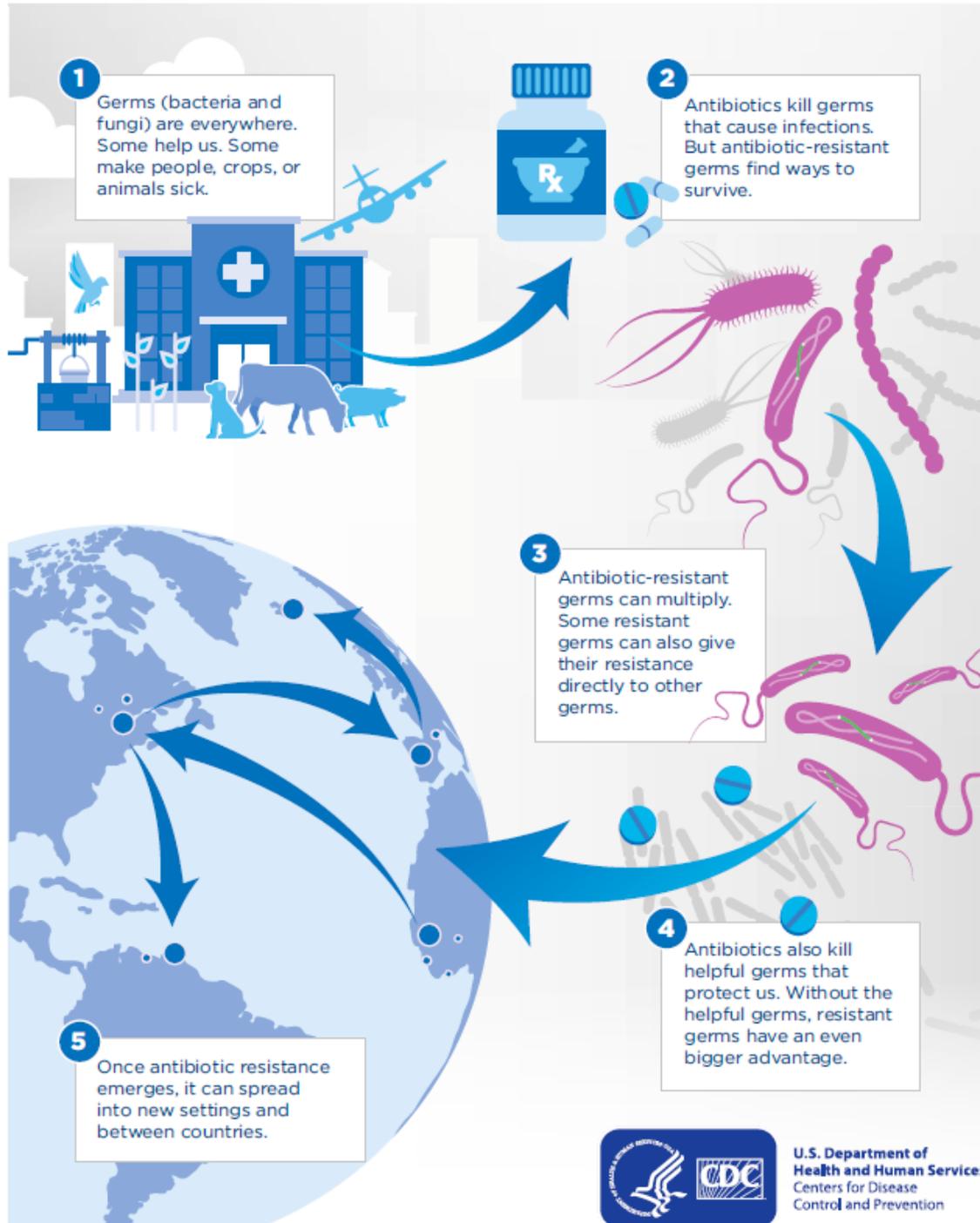


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How Antibiotic Resistance Spreads



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No prescription, no antibiotics

Kerala's Operation AMRITH prohibits over-the-counter (OTC) sales of antibiotics without a prescription

- Kerala has implemented the 2011 H1 rule that prohibits OTC sales of all classes of antibiotics
- Kerala's high doctor-patient ratio even in villages may help in enforcing the H1 rule
- Over 50-70% of antibiotic prescriptions by doctors are deemed unnecessary and irrational
- Reducing the incidence of hospital-acquired infections will sharply and quickly reduce the demand for antibiotics
- All hospitals should be made to report rates of hospital-acquired infections to the State government
- Rationalising antibiotic use in hospitals, and banning growth-promotional use of antibiotics in poultry and fish farms, and agriculture will have a big impact
- Curbing antimicrobial resistance requires a multipronged approach. Enforcing the OTC regulation alone will not be sufficient

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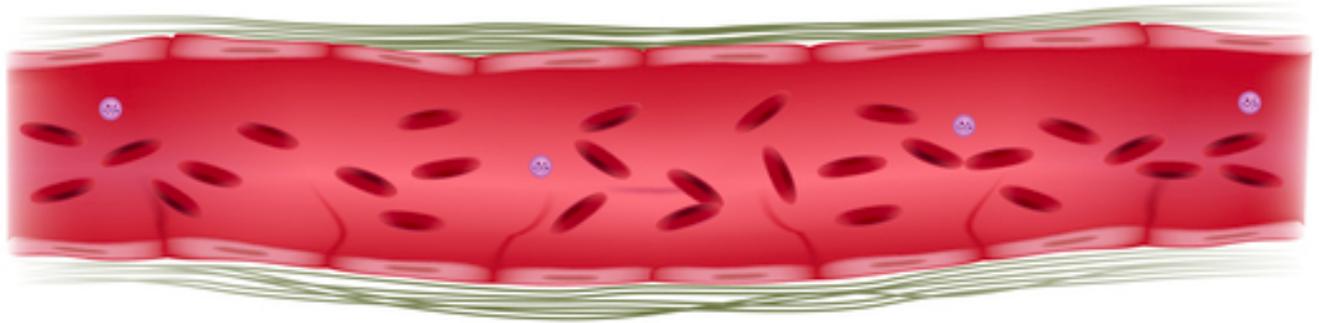
Topic

Nanotechnology to treat Haemophilia

- A team of scientists has engineered nanoparticles that can treat haemophilia – a disorder in which patients lack a coagulation factor and cannot properly form blood clots leading to spontaneous bleeding – in animals by counteracting an enzyme that breaks down blood clots and whose effects last longer compared with current drugs.

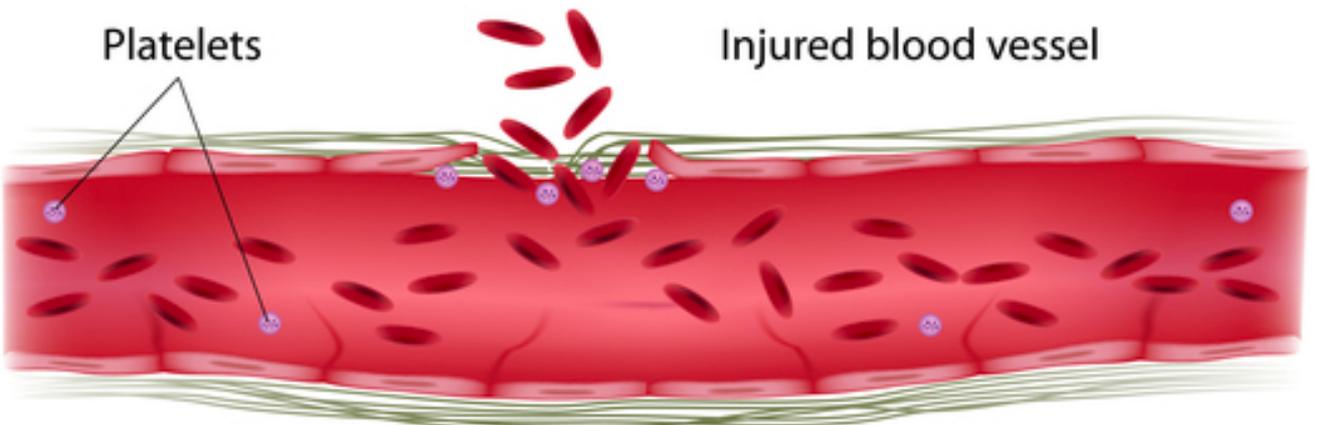
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Normal blood vessel



Platelets

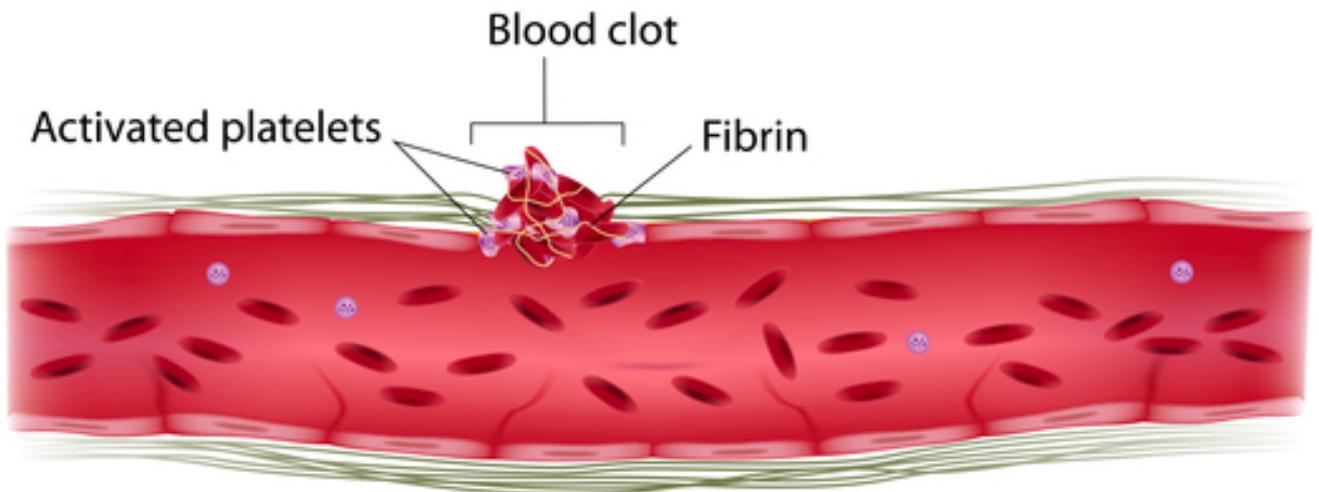
Injured blood vessel

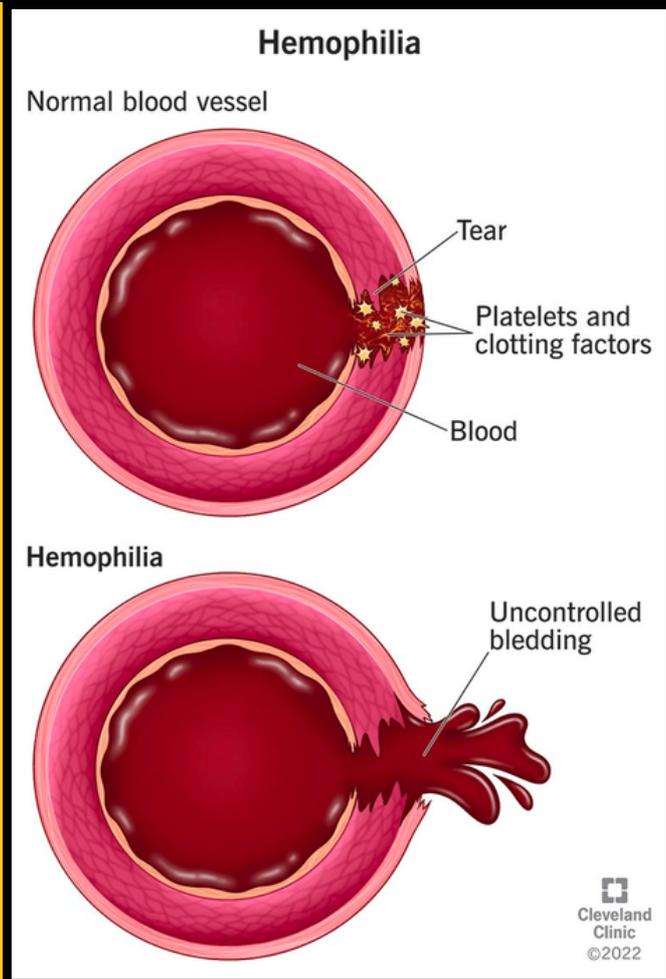
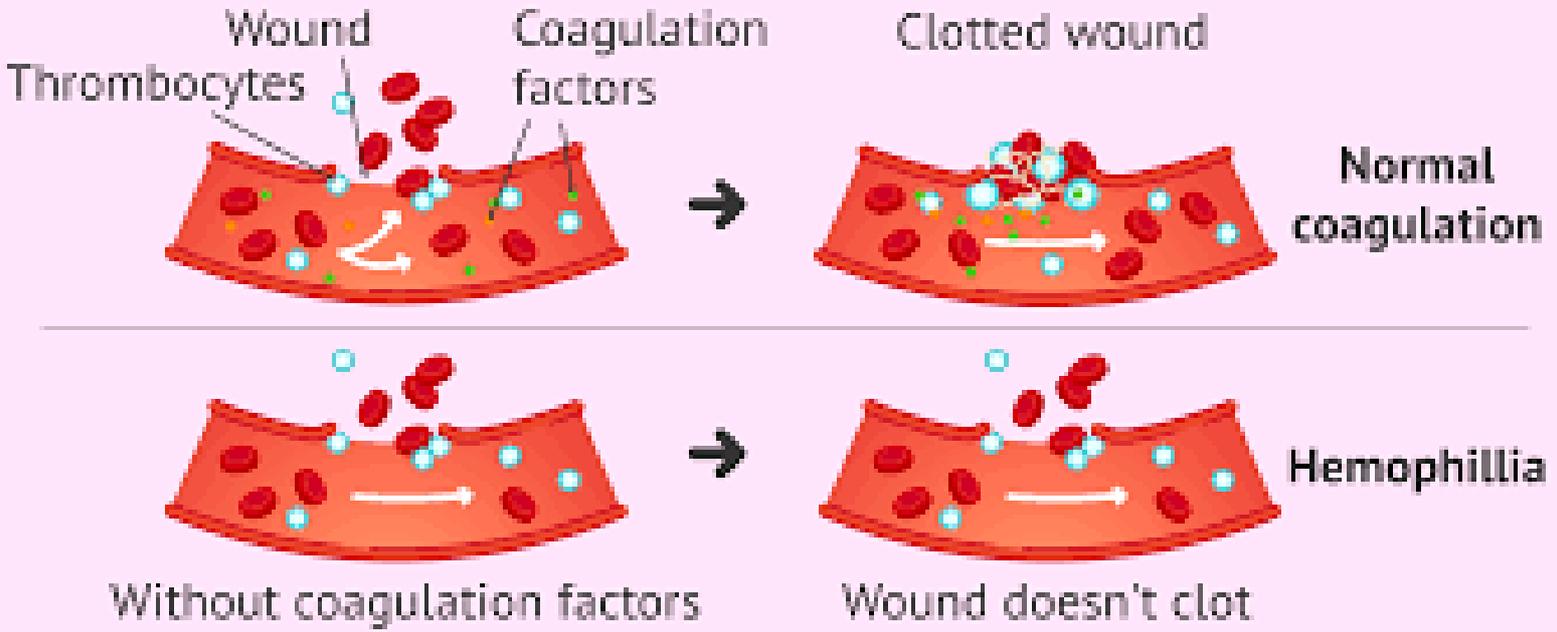


Blood clot

Activated platelets

Fibrin





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Topic

Compound that kill Mycobacterium abscessus

- Scientists have isolated an antibacterial compound that can kill Mycobacterium abscessus, a relative of the bacteria that cause tuberculosis, without generating any signs of bacterial drug resistance in infected mice.
- The safety profile and efficacy suggest that it can be used for treating people infected with M. abscessus, which is very hardy and frequently shrugs off standard antibiotic protocols.
- M. abscessus is growing more common worldwide and can cause severe lung infections.

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Topic-Interferon gamma linked to Long COVID patients

- An analysis of blood samples from 55 patients diagnosed with Long COVID has revealed that they experienced prolonged elevated levels of an anti-viral protein interferon gamma, which persisted for 180 days post-infection.
- This effect was induced by CD8 “killer” T cells in response to antigens present in the patients’ CD14 cells.
- The findings highlight an immune response to SARS-CoV-2 infection associated with long COVID’s debilitating symptoms.

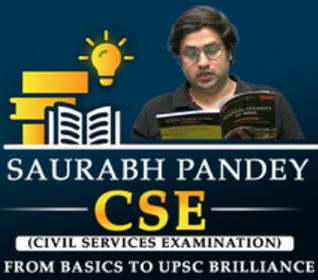
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What are Interferons?

- Naturally occurring proteins and glycoproteins.
- Secreted by eukaryotic cells in response to viral infections, tumors, and other biological inducers.
- Produce clinical benefits for disease states such as hepatitis, various cancers, multiple sclerosis, and many other diseases.

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Topic

Did neanderthals use glue to create stone tools?

- Neanderthals created stone tools held together by a multi-component adhesive, a team of scientists has discovered.
- The well-preserved tools showcase a technical solution broadly similar to examples of tools made by early modern humans in Africa.
- Its findings, which are the earliest evidence of a complex adhesive in Europe, suggest these predecessors to modern humans had a higher level of cognition and cultural development.

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- The researchers discovered traces of a mixture of ochre (over 50%) and bitumen on several stone tools.
- Using liquid bitumen with 55% ochre, researchers were able to produce a mixture that was sticky enough for a stone tool to remain together but without adhering to hands.



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Topic

SC on Forest conservation act

- the Supreme Court ordered the government to continue following the all-encompassing “dictionary meaning” of forest as upheld in a 1996 Supreme Court decision in the T.N. Godavarman Thirumulpad case till a final verdict is handed out on a petition challenging the amended Forest Conservation Act of 2023.

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What is the Forest Conservation Act?

- **The Forest Conservation Act, which came into force in 1980, was conceived to stop the razing of forests.**
- **An estimated four million hectares of forest land had been diverted from 1951-75 and once the Act came into force, the average annual rate of diversion dropped to about 22,000 hectares – or about a tenth – going by □ figures cited by the Centre to a parliamentary panel to demonstrate the effectiveness of the legislation.**



- However, the provisions of this legislation predominantly applied to tracts of forest land recognised as such by the Indian Forest Act, or by States in their records since 1980.
- Illegal timber-felling at Gudalur in Tamil Nadu led the Supreme Court to deliver the landmark Godavarman Thirumulpad judgment in 1996.
- It decreed that forests had to be protected irrespective of how they were classified and who owned them.
- This brought in the concept of ‘deemed forests,’ or forest-like tracts that weren’t officially classified as such in government or revenue records but looked like them.
- In the 28 years that have passed since the judgment, States – based on surveys and reports by expert committees – have interpreted ‘forests’ differently.
- This is natural, given the wide variety of forests and constituent plants in India.



- **The Centre’s recent attempt to amend the Forest Conservation Act was ostensibly to bring “clarity” as there were large tracts of recorded-forest land that had already been legally put to non-forestry uses, but conformed to a State’s criteria of a ‘deemed forest.’**
- **This posed challenges to the use and ownership of such land.**
- **Such ambiguity also bred a reluctance among private citizens to cultivate private plantations and orchards, despite their significant ecological benefits, for fear that they would be classified as ‘forest’ (and thus render their ownership void).**
- **India’s ambitions to create a carbon sink of 2.5-3 billion tonnes, to meet its net-zero goals required forest laws to be “dynamic”, and the rules sought to remove ‘deemed forest,’ not already recorded as such, from the ambit of protection**



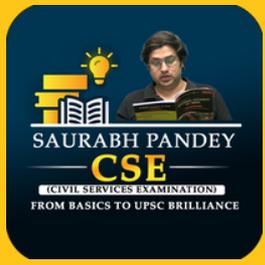
What did the amendments deal with?

- The amendments also put beyond the pale of protection forest land situated alongside a rail line or a road, necessary to provide access to a habitation, up to a maximum size of 0.10 hectare. Forest land situated within a distance of 100 kilometres along international borders or the Line of Control or Line of Actual Control, and which needed to be cleared to construct strategic linear projects of national importance would also be exempt from the Act.
- Any ten hectares in a forest, regarded necessary for use in constructing security related infrastructure or five hectares in forest land affected by 'left wing extremism' too would be bereft of protection.
- The government rationale is that these exemptions are necessary to facilitate basic infrastructure in tribal areas.
- Moreover, the proper protection and conservation of forests by local communities, the Centre argued, requires creating livelihood opportunities through the promotion of ecotourism, zoos and safaris.



Topic- NB8 ROLE

- **□ In this year's Raisina Dialogue in New Delhi, we, the eight Nordic-Baltic countries, are participating in it together as representatives of the Nordic-Baltic cooperation, the NB8.**
- **Our message is clear: in times of turmoil and conflict, the world needs more trust, dialogue and cooperation.**
- **join forces to protect and defend peace and stability, to oppose aggression, to maintain a rules-based world order, and to strengthen a world economy based on free trade, sustainability and long-term partnerships**



Target Mains 2024

Essay topic- “The spirit is beyond destruction. No one can bring an end to spirit which is everlasting
“आत्मा विनाश से परे है। कोई भी उस आत्मा का अंत नहीं कर सकता जो शाश्वत है

SEND ANSWER- SAURABH PANDEY UPSC
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Advanced current affairs

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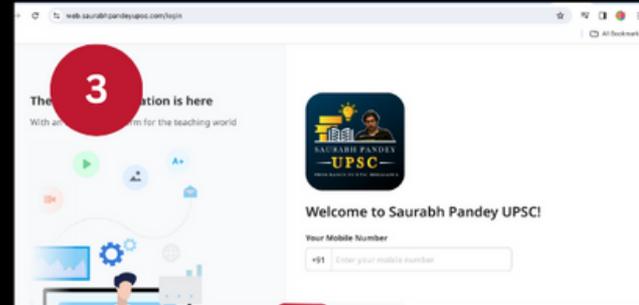
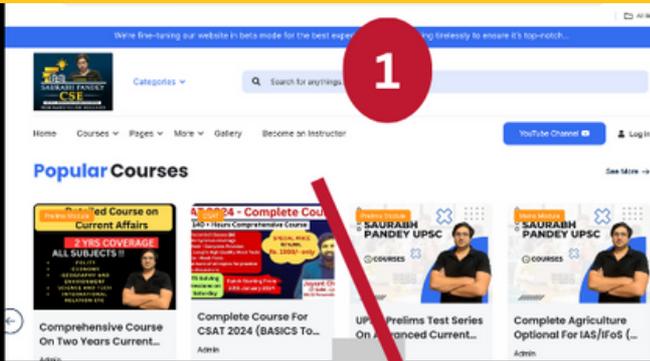
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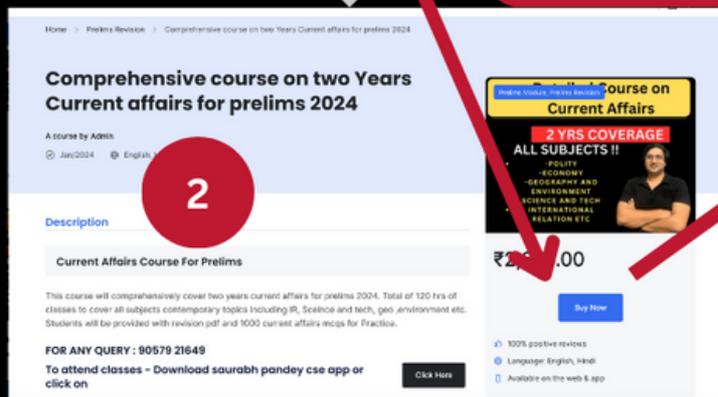
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