

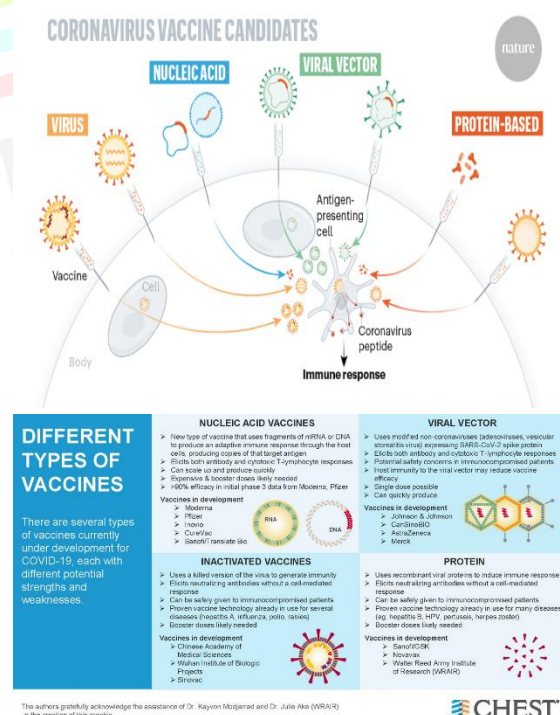
Dhokra

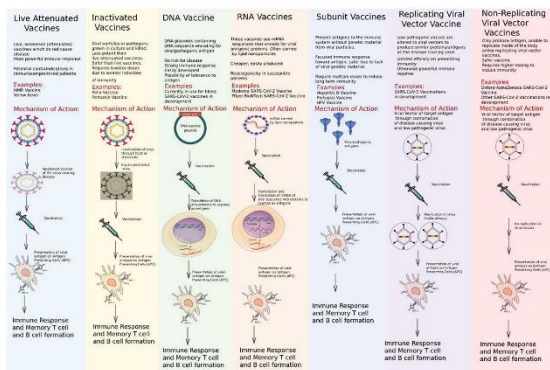
- Dhokra (also spelled Dokra) is non-ferrous metal casting using the lost-wax casting technique.
- This sort of metal casting has been used in India for over 4,000 years and is still used. One of the earliest known lost wax artefacts is the dancing girl of Mohenjo-Daro.
- The product of Dhokra artisans is in great demand in domestic and foreign markets because of their primitive simplicity, enchanting folk motifs, and forceful form.
- Dhokra horses, elephants, peacocks, owls, religious images, measuring bowls, lamp caskets, etc., are highly appreciated.
- The lost wax technique for the casting of copper-based alloys has also been found in China, Egypt, Malaysia, Nigeria, Central America, and other places.
- The process- There are two main processes of lost wax casting: solid casting and hollow casting. While the former is predominant in the south of India the latter is more common in Central and Eastern India.
- Solid casting does not use a clay core but instead a solid piece of wax to create the mould; hollow casting is the more traditional method and uses the clay core.



THE HINDU

Different types of vaccines





- CDK (cyclin-dependent kinase)**

 - In the treatment protocol for breast cancer, CDK (cyclin-dependent kinase) inhibitors constitute a major therapeutic tool, especially for metastatic breast cancer. Three drugs, Ribociclib, Palbociclib, and Abemaciclib, belong to this therapeutic class, which help in slowing the spread of cancer cells in the body.
 - A cyclin-dependent kinase inhibitor protein is a protein which inhibits the enzyme cyclin-dependent function kinase (CDK).
 - Several function as tumor suppressor proteins.
 - Cell cycle progression is delayed or stopped by cyclin-dependent kinase inhibitors, abbreviated CDIs, CKIs or CDKIs.

THE HINDU

ChatGPT & Ramanujan Machine

- The recent buzz around ChatGPT (Chat Generative Pre-trained

Transformer), a software tool that can answer questions on almost any topic, carry on conversations with humans, write poems, and computer programs, and perform many more complex tasks that require intelligence, is testimony that artificial intelligence can “create”.

- One can also mention here Google’s product LaMDA (Language Model for Dialogue Application) that is similar to ChatGPT and other sophisticated products (Dall E) that can create images from verbal descriptions.
- In early 2021, a team of Israeli scientists announced a software tool called The Ramanujan Machine that creates mathematical conjectures which are equations without proof.
- Mathematicians then prove or disprove these conjectures, thereby establishing theorems. Conjectures in mathematics shed light on newer frontiers.

THE HINDU

EC Appointment

- Article 324 of the Constitution is the fountainhead that creates the ECI.
- This brings to mind the larger issue of the working of the Constitution.
- While commending the adoption of the Constitution to the CA on November 25, 1949, Dr. B.R.

Ambedkar said, “However good a Constitution may be, it is sure to turn out bad because those who are called to work it, happen to be a bad lot. However bad a Constitution may be, it may turn out to be good if those who are called to work it, happen to be a good lot. The working of a Constitution does not depend wholly upon the nature of the Constitution.”

- The next day, on November 26, 1949, almost echoing Dr. Ambedkar’s words, Dr. Rajendra Prasad said, “Whatever the Constitution may or may not provide, the welfare of the country will depend upon the way in which the country is administered. That will depend upon the men who administer it... If the people who are elected are capable and men of character and integrity, they would be able to make the best even of a defective Constitution. If they are lacking in these, the Constitution cannot help the country. After all, a Constitution, like a machine, is a lifeless thing. It acquires life because of the men who control it and operate it, and India needs today nothing more than a set of honest men who will have the interest of the country before them.”

- d elevation of ECs to Chief Election Commissioner (CEC), and the tenures of ECs and CEC
- For this, the following process is proposed. An existing committee of Parliament or a new committee formed for this purpose should propose the qualifications and requirements for persons to be appointed as ECs/CEC.
- The proposals of the committee should be put to Parliament and should be considered approved only if they are approved by two-thirds the majority of the members of Parliament present and voting.
- Once the qualifications and requirements have been approved by Parliament, the same committee should be entrusted with the task of searching for and selecting individuals proposed to be appointed as ECs/CEC.
- The committee should invite nominations and applications of individuals appropriate for or interested in being appointed as +
ECs/CEC.
- The committee should send its recommendations to Parliament for consideration.
- Recommendations of the committee should be considered approved by Parliament only if approved by two-

thirds majority of the members of Parliament present and voting.

THE HINDU

INS MRMUGAO

The story so far:

- In a boost to the country's maritime capabilities, INS Mormugao has officially joined the Indian Navy's fleet, marking a significant milestone for an indigenous military expedition.
- The warship 'Yard 12705', named after the Goan port city of Mormugao, is the second of the four V+
- Visakhapatnam destroyers being built under the Indian Navy Project 15B, or P15B.

What is Project 15B?

- Project 15 was launched in the 1990s to add guided missile destroyers to the inventory of the Indian Navy. The project was named 'Delhi class'.
- It was followed by Project 15A or Kolkata class which primarily focused on advanced technology and equipment in surface ships.
- Project 15B or the Visakhapatnam class is a follow-on class of weapon-intensive Project 15A destroyers.
- The project was launched in January 2011 to incorporate advanced

design concepts such as state-of-the-art weapons and sensors, advanced stealth features, and a high degree of automation for "improved survivability, seakeeping, stealth, and manoeuvrability"

What are the capabilities of INS Mormugao?

The destroyer is 163 meters long, and 17 meters wide and displaces 7,400 tonnes when fully loaded.

- The ship is propelled by four gas turbines in a combined gas and gas (COGAG) configuration.
- The propulsion system allows the ship to achieve a speed of more than 30 knots (50km/h) and a maximum range of 4,000 nautical miles.
- It can accommodate a crew of about 300 personnel.
- INS Mormugao's firepower comprises BrahMos surface-to-surface missiles (SSM), Barak-8 surface-to-air (SAM) missiles for a long range of shore and sea-based targets, and a 76mm super rapid gun mount.
- The ship is armed with RBU-6000 anti-submarine rocket launchers and 533mm torpedo launchers.
- It is also equipped to carry and operate multi-role helicopters.

- Its enhanced stealth features ensure a reduced Radar Cross Section or radar signature.
- It is automated with sophisticated digital networks such as the Gigabyte Ethernet based Ship Data Network (GESDN), the Combat Management System (CMS), Automatic Power Management System (APMS), Integrated Platform Management System (IPMS), and Ship Data Network (SDN).
- While the CMS performs threat evaluation and resource allocation based on the tactical picture compiled and ammunition available onboard, APMS controls power management.
- IPMS is used to control and monitor machinery and auxiliaries and the SDN is the 'information highway for data' from sensors and weapons.
- Built with over 75% indigenous content, the commissioning of INS Mormugao
- Rule- based freedom of navigation, security of sea lanes, etc. have become more important than ever for stability and economic progress of the world,"

THE HINDU

AAP VS LG

- The Delhi Lieutenant Governor Vinai Kumar Saxena has directed the implementation of a 2016 order of the Committee on Content Regulation in Government Advertising.
 - The order calls for recovering ₹97.14 crores plus interest from the ruling Aam Aadmi Party (AAP) for "political advertisements".
 - The AAP party, however, has been defending its spending on advertisements stating that it is for the public knowledge of different government schemes and various awareness campaigns.
 - A three -member body, the CCRGA was formed by the Union Ministry of Information and Broadcasting in April 2016, to regulate the content of Central and State government advertisements on all media platforms.
- What is the strategic importance?**
- While India's interests are closely tied to the Indian Ocean, China has been rapidly expanding its naval footprint in the region.
 - Amid growing Chinese strategic interests, India renewed its focus on bolstering its maritime capabilities in the region to counter the threat

THE HINDU

Maritime anti-piracy bill

- Parliament has passed the Maritime Anti-Piracy Bill 2022 with Rajya Sabha
- The Bill has already been passed by Lok Sabha.
- The Bill enables Indian authorities to take action against piracy on the high seas. It applies to the sea beyond the Exclusive Economic Zone, which is 200 nautical miles from India's coastline.
- The Bill defines piracy as any illegal act of violence, detention, or destruction against a ship, aircraft, or person, for private purposes, by the crew or passengers of a private ship or aircraft.
- The Bill will strengthen India's credentials as a partner with other countries to make the world more piracy free.
- This Bill will provide an effective legal instrument to combat maritime piracy, not only in India's territorial waters in the Exclusive Economic Zone but also on the high seas.
- More than 90 percent of trade taking place by sea routes.
- India has taken a lead on the issue of maritime security at a multilateral forum. This would enhance India's global credentials and strengthen maritime security.

THE HINDU
