
1. Civil Services Day

Why in News?

- Recently, the Civil Services Day is celebrated on April 21 by the Government of India.

About:

- It is celebrated as an occasion for the civil servants to rededicate themselves to the causes of citizens and renew their commitments to public service and excellence in work.
- It is chosen to commemorate the day when the first Home Minister of Independent India, Sardar Vallabhbhai Patel addressed the probationers of Administrative Services Officers in 1947 at Metcalf House, Delhi. He referred to civil servants as the 'Steel Frame of India'.
- On this day, the **Prime Minister's Awards for Excellence in Public Administration** are presented to Districts/Implementing Units for implementation of Priority programme and innovation categories.

About Sardar Vallabhbhai Patel:

- He was born on 31st October, 1875 in Nadiad, Gujarat.
- He was the first Home Minister and Deputy Prime Minister of independent India.
- He played an important role in the integration of many Indian princely states to make an Indian federation.
- Women of Bardoli bestowed the title 'Sardar' on Vallabhbhai Patel, which means 'a Chief or a Leader'.
- He is also remembered as the 'Patron saint of India's civil servants' as he established the modern all-India services system.
- The Statue of Unity at Kevadiya in Narmada district of Gujarat was built in his honour.

2. Daporijo Bridge

Why in News?

- Recently, the Border Roads Organisation (BRO) constructed the Daporijo bridge over Subansiri river in Arunachal Pradesh in a record span of just 27 days.

Highlights:

- It is of utmost importance in strategic connectivity as it links roads leading upto the Line of Actual Control (LAC) between India and China.

- The Subansiri River (gold river) originates in the Tibet Plateau and enters India through Miri hills in Arunachal Pradesh. It is the largest tributary of Brahmaputra River.

About Border Roads Organisation:

- It was conceived and raised in 1960 by Pandit Jawaharlal Nehru for coordinating the speedy development of a network of roads in the North and the North Eastern border regions of the country.
- It works under the administrative control of the Ministry of Defence.
- It is regarded as a symbol of nation-building, national integration and an inseparable component in maintaining the security and integrity of the country.
- It has diversified into a large spectrum of construction and development works comprising airfields, building projects, defence works and tunneling and has endeared itself to the People.

3. Unified Commanders Conference

Why in News?

- Recently, the Unified Commanders Conference (UCC) which was scheduled to be held on 22nd-23rd April, 2020 has been postponed in the wake of the Covid-19 pandemic.

About the Unified Commanders Conference (UCC)

- It is the annual meeting of three armed force services (Army, Navy and Air Force) and the Ministry of Defence to plan India's long term security.
- It is chaired by the Defence Minister, Minister of State (Defence).
- It is also attended by the ministry top officials, National Security Advisor (NSA), Chief of Defence Staff (CDS), service chiefs and senior officers of the three services.
- It provides a platform for discussions at the apex Level on all the Joint Issues and enables stock taking of the previous year and planning the way ahead for the Next Year.

About National Security Council:

- It is a three-tiered organization that oversees political, economic, energy and security issues of strategic concern.
- It is formed in 1999, where all aspects of national security are deliberated upon by it.
- It acts as the apex body, headed by the Prime Minister. It operates within the executive office of the Prime Minister of India, liaising between the government's executive branch and the intelligence services, advising leadership on intelligence and security issues.

- Its members are the Ministers of Home Affairs, Defence, External Affairs and Finance.
- It comprises of the three tier structure- Strategic Policy Group (SPG), the National Security Advisory Board (NSAB) and the National Security Council Secretariat.
- **SPG:** It is chaired by the Cabinet Secretary is the principal forum for inter-ministerial coordination and integration of the relevant inputs.
- **NSAB:** It undertakes long-term analysis and provides perspectives on issues of national security.

4. Advisory Council of the 15th Finance Commission

Why in News?

- The Economic Advisory Council of the Fifteenth Finance Commission will meet on 23-24 April, 2020.

Highlights:

- It will be an online meeting presided by the Chairman of the 15th Finance Commission and attended by all the Members and Senior Officials of the Finance Commission.
- The meeting will be attended by the 5 Members of the Council.
- The likely agenda for the Advisory Council Meeting is:
 - ✓ Implications of the pandemic for GDP growth in 2020-21 and 2021-22. Uncertainty about macro variables over time.
 - ✓ Possible assumptions for tax buoyancy and revenue in the current year and next year.
 - ✓ What should be the public expenditure fillip to shore up the Economy.

Finance Commission:

- The Finance Commission is a Constitutionally mandated body that is at the centre of Fiscal Federalism.
- Set up under Article 280 of the Constitution, its core responsibility is to evaluate the state of finances of the Union and State Governments, recommend the sharing of taxes between them, lay down the principles determining the distribution of these taxes among States. Its working is characterised by extensive and intensive consultations with all levels of governments, thus strengthening the principle of cooperative federalism.
- Its recommendations are also geared towards improving the quality of public spending and promoting fiscal stability.

- The first Finance Commission was set up in 1951 and there have been fifteen so far. Each of them has faced its own unique set of challenges.

5. TriboE Mask

Why in News?

- A team of researchers at the Centre for Nano and Soft Matter Sciences (CeNS), Bangalore, have come up with a recipe for making face masks, termed as TriboE Mask, that can hold electric charges to restrict the entry of infections.

Highlights:

- The recent innovation is based on electrostatics.
- It uses principles of Triboelectricity.
- When two non-conducting layers are rubbed against each other, the layers develop positive and negative charges instantly and continue to hold the charges for some time.
- This Electric Field which is quite strong at proximity can be used to deactivate or possibly even kill the germs.

TriboE Mask:

- The mask is three-layered –a layer of nylon cloth sandwiched between polypropylene layers.
- Polypropylene layers are sourced from commonly used non woven grocery bags.
- In place of nylon, silk fabric from an old saree or shawl may also be cut and used. When layers are rubbed against each other, the outer layers develop negative charges, while nylon will hold the positive charges.
- This will act as double electric wall protection against the infectious entities crossing.
- As the mask is made out of commonly available fabrics, it can be washed just like any other cloth and can be reused.
- At this stage, the mask is, however, not recommended to healthcare professionals and patients.

6. Six-Planet System Discovered

Why in News?

- Researchers have discovered a star system with six planets whose orbits are in almost perfect rhythm.

Highlights:

- The star, dubbed HD 158259, is orbited by a "super-Earth" and "five mini-Neptunes". Astronomers only know of around dozen star systems containing six or more planets. However, what makes the HD 158259 system so remarkable is the exceptionally regular spacing of its planets.
- Using measurements taken using the SOPHIE spectrograph and the TESS exoplanet-hunting Space Telescope, an international team of researchers were able to precisely calculate the orbits of each planet.
- All pairs of subsequent planets in the system are said to be close to the "3:2 resonance."
- This essentially means that as the first planet, or the one closest to the star, completes three orbits; the second one completes roughly two orbits. And as the second planet completes three orbits, the third completes roughly two.
- This pattern continues for all the subsequent planets. These intriguing orbital periods could provide scientists with clues as to how the system formed, suggesting that they did not form close to their current positions.
- The evidence indicates that the star system is compact, highlighted by the fact that the distance between the outermost planet and HD 158259 is 2.6 times smaller than the distance between the sun and Mercury in our own solar system.
- The planets of the system, which is located around 88 light-years away, appear to have masses between two and six times that of the Earth's.
- Five of them are defined as super-Earths, meaning that they have a mass higher than that of our planet but significantly lower than Uranus or Neptune.
- The remaining planet is described as a "mini-Neptune", planets that are less massive than Neptune while still resembling the gas giant in our own solar system in terms of atmosphere and composition.