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Security Ink

- CSIR-National Physical Laboratory has developed a bi-luminescent security ink.
- The ink glows in red and green colors when illuminated by two different excitation sources at 254 Nano meters (nm) and 365 nm, respectively.
- The ink was prepared in a batch of 1kg and given to Bank Note Press (BNP), a unit of Security Printing Minting Corporation of India Ltd. (SPMCIL), New Delhi.
- The ink is found comparable to the standards that are in use.
- The formulation can be used to check the authenticity of passports, Government documents, tamper evident labels, identity cards, etc.

Lalit Kala Akademi

- Lalit Kala Akademi, National Academy of Art, New Delhi was set up by the Government of India as an autonomous body, on 5th August, 1954.
- The Akademi was given statutory authority in 1957, under the Societies Registration Act 1860.
- Lalit Kala Akademi manifests a commitment to the service of the visual arts by establishing, preserving and documenting visual art of the highest order.
- It has a vision that takes care of the traditional art of India as well as of helping artists to imbibe many of the contemporary happenings in the international art scene.
- Lalit Kala Akademi, National Acedmy of Art Awards will be conferred to eminent artists annually by the President of India at the Rashtrapati Bhavan.

UHRC Resolution

- The United Nations Human Rights Council is a United Nations body whose mission is to promote and protect human rights around the world.
- The UNHRC was established by the UN General Assembly on March 15, 2006 to replace the UN Commission on Human Rights (UNCHR, herein CHR) that had been strongly criticized for allowing countries with poor

human rights records to be members.

- The UNHRC has 47 members elected for staggered three-year terms on a regional group basis.
- The headquarters of UNHRC is in Geneva, Switzerland.
- The UNHRC investigates allegations of breaches of human rights in UN member states, and addresses important thematic human rights issues such as

1. Freedom of association and assembly,
2. Freedom of expression,
3. Freedom of belief and religion,
4. Women's rights,
5. LGBT rights,
6. Rights of racial and ethnic minorities.

- Recently Sri Lankan govt's decided to withdraw from UNRC resolution with regard to 'promoting reconciliation, accountability and human rights in the country.
- UNHRC Resolution was co-sponsored by previous government in 2015 in a bid to address war crimes and human rights issues.

World Wildlife Day

- United Nations General Assembly (UNGA), in 2013 passed a resolution to proclaim 3 March, the international day of the adoption of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).
- The day is being celebrated on the 3rd of March every year to create awareness about the importance of protecting wildlife.
- The theme for year 2020 is "Sustaining all life on earth".
- The year is significant on two counts.

1. It has been announced as bio-diversity super year because of the large number of ecofriendly initiatives being taken the world over.
2. The year 2020 is especially significant to India because it has taken over as the President of CoP13 for Action against Climate Change.

- In India, the Environment and Forests ministry is spearheading the day's celebration with great importance being given to the theme of protecting wildlife to ensure sustainable life styles.

K2-18b

- Recently astronomers have found a potentially habitable exoplanet, which is more than twice the size of Earth.
- The planet, named K2-18b, is located 124 light-years away from Earth and measures 2.6 times the radius and 8.6 times the mass of our planet.
- Because of its size, the K2-18b looks more like a smaller version of Neptune than a larger version of Earth.
- It orbits its star within the habitable zone where temperatures could allow liquid water to exist.
- The K2-18b was earlier reported with the detection of water vapor in the planet's hydrogen-rich atmosphere.
- However, the extent of the atmosphere and the conditions of the interior underneath remained unknown at that time.
- According to recent reports it's possible for the K2-18b to host liquid water at habitable conditions beneath its hydrogen-rich atmosphere.
- This study opens the search for habitable conditions to exoplanets that are significantly larger than Earth, beyond Earth-like exoplanets.

Habitable conditions of a Planet

- Water vapor has been detected in the atmospheres of a number of exoplanets but, even if the planet is in the habitable zone, that doesn't necessarily mean there are habitable conditions on the surface.
- To establish the prospects for habitability, it is important to obtain a unified understanding of the interior and atmospheric conditions on the planet in particular, whether liquid water can exist beneath the atmosphere.
- The K2-18b was expected to have a hydrogen 'envelope' surrounding a layer of "high-pressure water", with an inner core of rock and iron.
- If the hydrogen envelope is too thick, the temperature and pressure at the surface of the water layer beneath would be far too great to support life.
- Despite the size of K2-18b, its hydrogen envelope is not necessarily too thick and the water layer could have the right conditions to support life.

Psyche Mission

- NASA and SpaceX are collaborating for a space mission that involves a journey to a unique metal-rich asteroid called Psyche.
- Psyche is orbiting the Sun between Mars and Jupiter.
- The Psyche mission is targeted to launch in July 2022 on a Falcon Heavy rocket from Cape Canaveral Air Force Station in Florida, NASA said in a statement.

- The Psyche asteroid is considered unique because it appears to largely be made of the exposed nickel-iron core of an early planet.
- Metallic cores are believed to be present deep within rocky, terrestrial planets like our Earth.
- However, since these lie unreachable far below the planet's rocky mantles and crusts, we are unable to reach there.
- As one cannot see or measure Earth's core directly, the mission to Psyche asteroid offers a unique window to scientists.
- It may even reveal the violent history of collisions and accretion that created terrestrial planets in the first place.
- Launch of Psyche will include two secondary payloads– Escape and Plasma Acceleration and Dynamics Explorers (EscaPADE) and Janus.
- While EscaPADE will study the Martian atmosphere, the Janus will study binary asteroids.

Source: PIB, AIR News, Indian Express

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