

Current Affairs search results for tag: science-and-technology

1. Scientists revive nearly 48,500-year-old 'Zombie Virus' from bottom of frozen lake in Russia (Dec. 3, 2022)

Scientists revive nearly 48,500-year-old 'Zombie Virus'

French scientists have warned of the onset of another outbreak after they **revived a 48,500-year-old zombie virus** buried under a **frozen lake in Russia**.

Important facts

- It has broken the previous record of a **30,000-year-old virus** discovered by the same team in Siberia in 2013.
- This report is published in the **New York Post**.
- The new research was prepared by **Jean-Marie Alempic**, a microbiologist at the **French National Center for Scientific Research**.
- It has been said in the report that due to the survival of this zombie virus, a more devastating situation can arise in plants, animals and humans.
- Scientists have expressed the possibility of another epidemic like corona due to the survival of this virus.

Threat of melting glacier

- According to the report, due to **global warming**, permanently frozen ice is melting, which covers a quarter of the **northern hemisphere**.
- This has a destabilising effect on organic matter that has been frozen for millions of years, including **deadly microbes**.
- Research has shown that part of this organic matter includes revived cellular microbes (prokaryotes, unicellular eukaryotes) as well as viruses that have been dormant since prehistoric times.

What is a Zombie Virus?

- **Zombie virus** is the term given to a virus that is frozen in ice and therefore dormant.
- Research mentions **13 viruses**, each of which has its own genome.
- It is called **Pandoravirus Yedoma** which is 48,500 years old and has the ability to infect other organisms.
- It was discovered at the bottom of a lake in **Yukechi Alas in Yakutia, Russia**.
- All of the zombie viruses have the potential to be infectious and hence pose a health danger.
- Scientists believe that epidemics like **Covid 19** will become more common in the future.

2. Scientists discover new drought-resistant wheat gene (Dec. 1, 2022)

Scientists discover new drought-resistant wheat gene

Scientists at the **John Innes Centre, Norwich, England** in collaboration with an international team of researchers, discovered the new '**reduced height' or semi-dwarf gene called Rht13 of wheat.**

Important facts

- **Rht13** is a new drought-resistant semi-dwarf wheat gene that can be grown in dry soils.
- This has raised a new hope for sowing wheat crops in water **limited or drought prone environments.**
- These genes allow seeds to be planted deeper into the soil, providing access to moisture, without adverse effects on germination of wheat varieties.
- Wheat varieties containing the Rht13 gene can rapidly increase yields and enable farmers to grow reduced height wheat under dry soil conditions.
- Since the 1960s and the Green Revolution, **short height genes have increased global wheat yields** and improved their sustainable potential.

3. Agnikul inaugurates India's first private space vehicle launchpad in Sriharikota (Nov. 30, 2022)

India's first private space vehicle launchpad

Chennai-based space tech startup **Agnikul Cosmos** launched **India's first private launchpad and mission control centre** at the **Satish Dhawan Space Centre (SDSC) in Sriharikota** on 28 November.

Important facts

- The facility was inaugurated by ISRO chairman **S Somanath.**
- Indian Space Research Organisation (ISRO) has supported the private Company **Agnikul Cosmos** for setting up the launchpad.
- The Company has planned a tech demonstration mission.
- This facility has two parts—the **Agnikul launchpad** and the **Agnikul mission control centre**—which are four kilometres apart.
- The launchpad is designed to accommodate and support liquid stage-controlled launches.
- The Chennai-based startup Agnikul Cosmos plans to launch its **Agnibaan rocket** from this launchpad.

About Agnibaan Rocket

- Agnibaan is a highly customizable two-stage rocket from **Agnikul**, capable of carrying a payload of up to **100 kg in orbit (low-Earth orbit)** at an altitude of about **700 km with a plug-and-play configuration**.
- The Agnibaan rocket will be powered by the company's **3D-printed Agnilet engines**.
- The Agnibaan rocket is a "**semi-cryogenic**" engine that uses a mixture of liquid kerosene and supercold liquid oxygen to propel itself.

4. WHO has changed the name of Monkeypox disease to mpox (Nov. 29, 2022)

WHO has changed the name of Monkeypox disease to mpox

The World Health Organisation (WHO) on 28 November 2022 has announced that it will term "**mpox**" as a synonym for [monkeypox](#). Both names will be used simultaneously for one year while "monkeypox" is phased out.

WHO said that the disease's original name was considered "racist and stigmatizing" in certain countries of the world. After complaints from some member countries WHO decided to rename the disease.

Assigning names to new and, very exceptionally, to existing diseases is the responsibility of WHO under the International Classification of Diseases (ICD).

The World Health Organisation (WHO) declared monkeypox disease as a "public health emergency of international concern (PHEIC)", on 23 July 2022. It is the highest level of health alert which is issued by WHO.

Monkeypox disease

- Monkeypox is a viral zoonotic disease that occurs primarily in tropical rainforest areas of **Central** and **West Africa**.
- It was first identified in monkeys in 1958 hence it is called Monkeypox. It was first identified in humans in 1970.
- Because it was transmitted from animal to human it is called zoonotic disease.
- The first case of Monkeypox in the country was also reported from Kollam district of Kerala on July 14.

World Health Organisation (WHO)

- The World Health Organisation is a specialised agency of the United Nations which was founded on 7 April, 1948.
- Headquarters of WHO : Geneva, Switzerland
- Director General of WHO: Tedros Adhanom Ghebreyesus of Ethiopia.
- Member Countries : **194**

5. World's first Intranasal vaccine iNOVACC gets DCGI approval for Covid booster doses (Nov. 29, 2022)

World's first Intranasal vaccine iNOVACC gets DCGI approval

Bharat Biotech International Limited (BBIL) has announced on 29 November that the **iNOVACC vaccine** has become the **world's first intra-nasal vaccine** to receive primary series and heterologous booster approval.

Important facts

- Bharat Biotech International Limited (BBIL) is a global leader in **vaccine innovation and developer** of vaccines for infectious diseases.
- Now **iNOVACC (BBV154)** can be used in India under restricted use in emergency from the **Central Drugs Standard Control Organization (CDSCO)** for heterologous booster dose for age above 18 years.
- This nasal vaccine is the second approved COVID-19 vaccine in India after **Biological E's Corbevax**, which can be used as a mix-and-match booster shot.
- iNOVACC is a recombinant replication deficient adenovirus vectored vaccine with a pre-fusion stabilized **SARS-CoV-2 spike protein**.
- iNOVACC has been specially formulated to allow intranasal delivery via nasal drops.

6. ISRO launches PSLV-C54 rocket carrying earth observation satellite Oceansat & 8 nanosatellites (Nov. 26, 2022)

ISRO launches PSLV-C54 rocket

The **Polar Satellite Launch Vehicle (PSLV)** of the Indian [Space Research Organization \(ISRO\)](#) successfully launched **PSLV C 54** and **eight nanosatellites**, into space from the first launch pad at the **Satish Dhawan Space Centre** in **Andhra Pradesh's Sriharikota** on 26 November.

Important facts

- This is the 56th flight of the Polar Satellite Launch Vehicle of ISRO and **24th flight** of the extended **PSLV-XL version**.
- The mission payloads including **Oceansat (PSLV C 54)** and eight other nanosatellites have separated in the specified two hours in two different sun-synchronous orbits.
- Specific data from the satellite will be used by the Government departments.
- Mission Director S.R.Biju said PSLV rockets are the workhorses of ISRO.
- the payloads are indigenous and will provide crucial Data including maritime security and detection of cyclones in potential zones.

- The customer payloads are ISRO Nano Satellite-2 for Bhutan (INS-2B), Anand, four satellites of Astrocast, and two satellites of Thybolt.
- The mission objective is to ensure data continuity of ocean color and wind vector data to sustain the operational applications.

7. Union Minister Rajeev Chandrasekhar Inaugurates 63rd STPI at Davanagere, Karnataka (Nov. 25, 2022)

Union Minister Rajeev Chandrasekhar Inaugurates

The Minister of State for Electronics & Information Technology and Skill Development & Entrepreneurship, **Rajeev Chandrasekhar** inaugurated a Digital India Startup hub at the Software Technology Parks of India (STPI) centre at **Davanagere, Karnataka** on 25 November 2022.

This is the **63rd STPI** centre in the country and the fifth in Karnataka.

The minister said that India has the fastest growing innovation system with more than 80,000 Startups and over 107 Unicorns, the Minister said the world today looks at India with awe and respect.

Software Technology Park of India (STPI)

It was set up in 1991 by the under Ministry of Electronics and Information Technology (MeitY).

It was set up to promote Software to promote the development and export of software and software services including Information Technology (I.T.) Enabled Services / Bio-IT.

It aims to be the largest technology Startup ecosystem in the country and to transform the country into a software product nation.

The total export from STPI in 2020-21 was Rs. 4, 96,313 crores, which is around 50% of the national software exports and 2.3% of India's GDP in 2020-21.

Director General of STPI : **Arvind Kumar**

8. Europe announces name of world's first disabled astronauts (Nov. 24, 2022)

Europe announces name of world's

The European Space Agency announced the name of the **first "parastronaut"** on 23 November in a major step towards allowing people with **physical disabilities to work and live in space.**

Important facts

- The 22-nation European Space Agency said it selected former British Paralympic runner **John McFall** as part of a new generation of 17 recruits selected for astronaut training.

- He will participate in a feasibility study designed to allow ESA to assess the conditions needed for people with disabilities to participate in future missions.
- Five new astronauts have been roped in to take part in the training after ESA replenished its astronaut ranks for the first time since 2009.
- The EAS received 257 applications for the role of an astronaut with a disability, designated a "parastronaut".
- McFall, who lost his right leg due to a motorcycle accident at the age of 19, won a **bronze medal** in the 100 metres at the 2008 **Beijing Paralympic Games**.

9. ISRO successfully launches 200th 'RH-200' Rohini sounding rocket (Nov. 24, 2022)

ISRO successfully launches 200th

ISRO's versatile sounding rocket RH200 carried out its **200th consecutive successful launch** from the coast of **Thumba, Thiruvananthapuram** on 23 November.

Important facts

- The Indian Space Research Organization (ISRO) termed it a "**historic moment**". It was witnessed by former President **Ram Nath Kovind** and ISRO Chairman **S Somnath**, among others.
- The successful flight of RH200 took off from the **Thumba Equatorial Rocket Launching Station (TERLS)**.
- Indian sounding rockets are used as privileged instruments for the scientific community to conduct experiments on meteorology, astronomy and similar branches of space physics.
- Indian sounding rockets are used as privileged instruments for the scientific community to conduct experiments on meteorology, astronomy and similar branches of space physics.
- The national space agency headquarters said the Rohini sounding rocket series has been the forerunner to ISRO's heavier and more complex launch vehicles.
- The 200th consecutive successful flight is a testimony to the commitment of Indian rocket scientists towards the unmatched reliability demonstrated over the years.

10. Yogi Adityanath inaugurates the UNESCO-India-Africa Hackathon 2022 at Noida (Nov. 22, 2022)

UNESCO-India-Africa Hackathon 2022 at Noida

Uttar Pradesh chief minister **Yogi Adityanath** inaugurated the **UNESCO-India-Africa Hackathon 2022** at the Gautam Buddha University in **Greater Noida** on 22 November 2022.

The Hackathon has been organized by the Union Ministry of Education and students from 22 African countries are participating in the Hackathon.

What is a Hackathon?

A hackathon, also known as a codefest, is a social coding event that brings computer programmers and other interested people together to improve upon or build a new software. In the present Hackathon students will engage themselves in coding for 36 hours non-stop to find technology-based solutions for issues in education, agriculture, health, energy and drinking water, among others. They will also try to figure out smart solutions for global issues such as climate change, environmental issues, and renewal energy.

The students participating in the Hackathon have come from countries, including Botswana, Cameroon, Eswatini, Ethiopia, Equatorial Guinea, Gambia, Ghana, Guinea Bissau, Kenya, Lesotho, Malawi, Mali, Mauritius, Morocco, Mozambique, Namibia, Niger, Sierra Leone, Tanzania, Togo, Uganda and Zimbabwe.

The U.P. CM also invited participating African students to travel to ancient cities like Varanasi, Prayagraj, Ayodhya, and others in the state.

UNESCO (United Nations Educational Scientific and Cultural Organization)

- It is a specialised agency of the United Nations.
- It was set up on 16 November 1945.
- Its Headquarters : **Paris**, France