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Weekly Periodicals of
Current Affairs
By
SUCCESS MANTRA (GTB Nagar)

PREFACE

It gives us great pleasure to release the monthly edition of the PRAVAHINI - Monthly e-

Compendium & Weekly e-Periodicals of Current Affairs. The magazine's members have shown

considerable cooperation as well as devotion. We at successmantra.in work tirelessly to create

thismagazine and bring it to you with a great sense of gratitude.

The February -2023 eBook covers the current events that happened in the month of October.

Current Affairs is a crucial component of any competitive exams including CLAT, AILET, DU-

LLB, HM, CAT, IAS, PCS, SSC, CUET, Banking, MBA and various other competitive

examinations.

Current Affairs play the bigger role in many competitive and government exams. It holds the

power of making or breaking your chance of success. Therefore, the candidates should cover the

Current Affairs thoroughly and smartly.

The PRAVAHINI February -2023 eBook is divided into different sections keeping in mind the

need of various exams. The sections covered namely International, National, Economy, Ecology

and Environment, Science & Technology, Legal Affairs, Sports, States News Makers and few

others.

We would also be pleased to receive any suggestion that could assist us with the upcoming

editions.

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Our Goal

Our goal at Success Mantra is to provide Quality education at rational price and thereby to create an environment that guides students towards the path of the success. Along with designing the curriculum and delivering the lectures, we work upon the ways the students think and approach problems asked.

B.S. Shanti



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NATIONAL AFFAIRS

ASI DISCOVERED 1,300 YEAR OLD BUDDHIST STUPA

- ➤ Recently, the Archaeological Survey of India (ASI) discovered a 1,300-year-old stupa right in the middle of a mining site in Odisha's Jajpur district at a Khondalite mining site.
- ➤ It is the place from where Khondalite stones were supplied for the beautification **project around the 12th Century Shree Jagannath**Temple in Puri.



- ➤ What are the Findings of the ASI?
- > The **stupa could be 4.5-metre tall and initial assessment** showed it may belong to the 7th or 8th century.
- ➤ It was found at Parabhadi which is situated near Lalitagiri, a major Buddhist complex, has a large number of stupas and monasteries.
- Lalitgiri Buddhist site is believed to be the most sacred among the **three sites** (Lalitagiri, Ratnagiri and Udayagiri) as it unearthed a massive stupa where a relic of Buddha was discovered inside a stone casket.
- What are the Khondalite Stones?
- ➤ **Khondalite is a type of metamorphic rock** that is found in the Eastern Ghats region of India, particularly in the state of Odisha. It is named after the Khondalite Group of rocks, which is believed to have formed **around 1.6 billion years ago during the Proterozoic era**.

BVR SUBRAHMANYAM APPOINTED AS NEW CEO OF NITI AAYOG

➤ The National Institution for Transforming India is a public policy think tank. It succeeded the Planning Commission in 2015. The council has all the chief ministers of the state and Lieutenant Governors of UTs.

- ➤ Apart from them, there are temporary members such as four ex-officio members, a CEO, and three part-time members. All the temporary members including the CEO are appointed by the Prime Minister. Recently, **PM Modi appointed BVR Subrahmanyam as the new CEO of NITI Ayog.**
- ➤ The previous CEO of NITI Aayog, Parameshwaran Iyer has been appointed as the Executive Director of the World Bank. **And so, Mr Subrahmanyam is moving to his place.**
- > About BVR Subrahmanyam
- ➤ He **served as the Chief Secretary of Jammu and Kashmir.** He was a 1987 IAS officer from the Chhattisgarh cadre. He served as the private secretary of Mr Manmohan Singh during his reign from 2004 to 2008.

SYL CANAL PROJECT IN HARYANA BUDGET 2023

- ➤ The Haryana Governor recently addressed the Budget session of the state. During the address, he said that the State Government is very stubborn in implementing the SYL Canal project.
- ➤ It is a canal between Sutlej and Yamuna rivers. The canal is a riversharing mechanism between Punjab and Haryana. After completion, the states of Punjab and Haryana will share the waters of Ravi and Beas.



- Powers of Parliament
- > The central government has the power to make laws on water sharing between the states. **The** rivers and the inter-state rivers fall under the union list.

FIRST SEMICONDUCTOR MANUFACTURING UNIT

- ➤ The **Vedanta group and the Foxconn of Taiwan** have come together to build the first semiconductor manufacturing **unit in Dholera of Gujarat.**
- ➤ The companies signed a Memorandum of Understanding with the Gujarat Government. According to the agreement, **they will invest Rs**1,54,000 crores in this project.



- > The semiconductor plant will be built in the Dholera Special Investment Region in Ahmedabad. It is a greenfield industrial city.
- > The Dholera Special Investment Region Development Authority handles the land and the projects. The **project was started by PM Modi when he was the CM of Gujarat.**
- Projects within Dholera Special Investment Region
 - Ultra Mega Solar Park: generating 4400 MW of electricity
 - An international airport
 - Freight transport railway line
 - Expressway to connect Ahmedabad. Dholera is 100 km from Ahmedabad

INTERNATIONAL AFFAIRS

RUSSIA SUSPENDS 'START TREATY'

- ➤ The **START** is a bilateral treaty signed between the **US** and the **Soviet Union in 1991**. It came into force in 1994. Under the treaty, the countries agreed to bar 6,000 nuclear warheads and 1m600 ICBMs.
- ➤ More than 80% of the nuclear warheads were removed in 2001 with this treaty. The treaty expired in 2009. THE NEW START Treaty was signed in 2010. This new treaty applies till 2026. Russia has now withdrawn from the treaty.



> Background

- The US and Russia have been at constant war due to the differences in their ideologies. Russia follows socialism and the US follows capitalism. The differences affect their trade interests.
- > They fight the cold war, the trade war, the space war, the proxy war, and every other war sadly.

 Now, they are fighting against each other, placing Ukraine at the center.

VIVEK RAMASWAMY LAUNCHES US PRESIDENTIAL BID

- Vivek Ramaswamy is an Indian American. He is a republican (Joe Biden and Barack Obama are all from the Democratic Political party) and an anti-environment activist.
- Anti-environmentalists are those people who believe that environmental regulation is unnecessary. **He established a company to ban environmental governance initiatives**. He is a biotech investor.



➤ Former President Donald Trump announced his candidacy already. Also, **Nikki Hayley, the Governor of South Carolina** has announced her candidacy for the US elections in 2024.

➤ The Republican Party will hold primary elections to choose its nominee. The US constitution does not provide any rule for these elections. Joe Biden, the current President of the US will also run for the 2024 US President Election. He was the Vice President of the country during Obama's time. In the US, you can contest the presidential elections twice, that is, for two terms.

BIODIVERSITY BEYOND NATIONAL JURISDICTION (BBNJ)

- ➤ India has urged the member nations to stay dedicated to the conservation and preservation of the oceans and its biodiversity during the ongoing session (Feb-March 2023) Of Intergovernmental Conference (IGC) i.e., IGC-5 of Biodiversity Beyond National Jurisdiction (BBNJ).
- ➤ India supported the high ambition coalition for the early conclusion of the International Legally Binding Instrument of BBNJ under United Nations Convention on the Law of the Sea (UNCLOS).



- What is the BBNJ Treaty?
- ➤ The "BBNJ Treaty", also known as the "Treaty of the High Seas", is an international agreement on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction within the framework of the UNCLOS.
- ➤ BBNJ encompasses the high seas, **beyond the exclusive economic zones or national waters of countries.**
- According to the **International Union for Conservation of Nature (IUCN)**, these areas account for "almost half of the Earth's surface".
- These areas are hardly regulated and also least understood or explored for its **biodiversity only 1% of these areas are under protection.** Launched at the One Ocean Summit in February 2022, the **High Ambition Coalition on Biodiversity Beyond National Jurisdiction** brings together many delegations engaged in the BBNJ negotiations on a common and ambitious outcome at the highest political level.

INDIA & CHINA HOLD WMCC MEETING

- ➤ India and China recently held the **Working Mechanism for Consultation and Coordination meeting.** This is the 26th meeting and the first since the Galwan standoff, and the 14th physical WMCC meeting.
- ➤ A virtual WMCC meeting was held during the Ladakh standoff in 2020. **The countries discussed the issues along the LAC on the western border.** Also, they discussed the disengagement of troops in the remaining areas. It was a secretary-level meeting.
- Why was the meeting held?
 - To bring back normalcy in the bilateral relations between India and China
 - To restore peace along the Line of Actual Control Future Plans
 - The countries have decided to conduct the Senior Commanders meeting soon. This is in accordance with the **bilateral agreements signed between India and China.**

CHINA & JAPAN SECURITY DIALOGUE

China and Japan held a security dialogue for the first time in four years. It was held in Tokyo. During the meeting, the countries agreed to strengthen their security relations and communication. They will work to gain mutual trust. Also, they agreed to bring upon a framework of maritime and air liaison.



- ➤ If you notice, China recently held the WMCC meeting with India on withdrawing troops on the border. China is planning on holding talks with Australia.
- ➤ China has been changing its tone of business in recent days, that is, 30-40 days. **This is because** the economy of the country is becoming more and more fragile.
- And with the dependent population increasing and the working population decreasing in the country because of its birth control policies, **China will face a big setback in its economic growth in the coming days.**

- > China's policy change
- China was a pro-business market for quite some time in the past. Meaning, the capitalists were given preference.
- > But lately, the Chinese Communist Party's (the ruling government) goals are prioritized over business interests. The case of Jack Ma is the best example of the Chinese policy shift.

DESERT FLAG EXERCISE VIII HELD IN UAE

- ➤ The exercise Desert Flag VIII was held in the UAE air base Al Dhafra. The Indian Air Force participated in the exercise. The other countries that participated were the USA, Korea, Spain, Morocco, Bahrain, the UK, Australia, Kuwait, France, and UAE.
- ➤ For the first time, **LCA Tejas of India is participating in a military exercise** that was held outside the country. India sent two C-17

 transport aircraft and five Tejas to the exercise.



- *▶* Why is exercise important for India?
- ➤ The UAE Air Force is one of the largest air forces in the world. There are more than 4,000 personnel in the UAE Air Force. In the 1970s-80s, the UAE Air Force was not this strong.
- ➤ It received training from the Pakistan Air Force during those times. **Even today, you can find** many retired Pakistan Air Force officers in the UAE.
- ➤ **UAE started building its Air Force in 2007.** Some of the largest procurements began during these days. 3.4 billion USD worth of Mirage 2000, 6.4 billion Lockheed Martin, etc. was purchased. Missiles like AIM-120, AGM Mavericks, etc were also purchased.

PAKISTAN RECEIVES \$700 MILLION FROM CHINA

- ➤ The **foreign exchange reserves of Pakistan fell to 2.9 billion USD.** It is now slowly rising to 4 billion USD. The cash injection was the need of the moment for Pakistan.
- ➤ And China stepped in offering 700 million USD to help its "allweather" friend. China Development Bank transferred the funds to Pakistan State Bank.



- Pakistan was also asking for help from the IMF. Unfortunately, the talks ended in failure. The IMF is planning on sending 1.1 billion USD but no decision has been made yet.
- ➤ Taxes are increasing in the country; oil prices are shooting up rapidly, the rupee value of the country is falling, etc. Pakistan is facing an economic crisis because of ill-planned tax reforms.

 Another reason is the weak regulatory system.
- **▶** What should Pakistan do?
- The country should introduce structural reforms and economic reforms. Also, Pakistan should try and bring in investments. When it comes to trade, the country should remove the bias.
- ➤ Public finances should be strengthened; the energy sector reformation, removing biasing the non-agricultural sector and strengthening competition law.

MULTINATIONAL COBRA WARRIOR EXERCISE

- ➤ The **Cobra Warrior Exercise** is **to be held at Waddington Air Force Base in the UK** in March 2023. It is a multinational exercise. Countries like Singapore, Finland, the USA, South Africa, and Sweden will participate in the exercise.
- ➤ India is also participating in the exercise. **The IAF will send five Mirage 2000 fighters along** with IL-78 mid-air refueling aircraft, and two C-17 Globemaster.
- > The Cobalt Warrior is one of the largest Royal Air Force exercises. During the exercise, the Royal Air Force provides special training to pilots from different countries.

- ➤ The exercise has been conducted for more than a decade. The exercises are considered one of the most challenging exercises in the world. Therefore, the participating air forces gain good exposure.
- > During the exercise, the Royal British Air Force offers Qualified Space Instructors Courses, surveillance, Multi-Engine Tactics, Qualified Weapons Instructors, etc.
- > To qualify for these war strategies the Air Force crew has to seek **intense training provided by** the British Royal Air Force.

FRANCE UNVEILS NEW STRATEGY FOR AFRICA

- ➤ French President Emmanuel Macron recently unveiled a new economic and military strategy for Africa. According to the new strategy, the French Government is to reduce its troops in the African region.
- Dropping the military approach, France is to boost its economic influence in the region. France refers to the change as the beginning of a "New Era". France is to bring in a new security partnership. However,
 France will not close its military bases. Rather, the bases are to be utilized based on the needs of the African partners.
- ➤ Africa is the **new "field of competition".** The eyes of developed and developing economies are on the African region.
- The **region is of interest to investors for its rich oil resources, mineral deposits**, and also agricultural potential. But France is still in its age-old style of military dominance while China and the USA have already in the race to capture African markets.

ECONOMIC AFFAIRS

INTEGRATION OF UPI & PAYNOW

- ➤ Recently, **India's Unified Payments Interface (UPI) and Singapore's PayNow** have been integrated to enable faster Remittances between the two countries.
- > Singapore has become the first country with which cross-border **Person to Person (P2P)** payment facilities have been launched.
- > The UPI-PayNow partnership marks the world's first to feature cloud-based infrastructure and participation by non-bank financial institutions.
- **▶** What is UPI and PayNow?
- ➤ UPI: UPI is India's mobile-based fast payment system, which facilitates customers to make round-the-clock payments instantly, using a Virtual Payment Address (VPA) created by the customer.
- ➤ PayNow: PayNow is a fast payment system in Singapore. It enables peer-to-peer funds transfer service, available to **retail customers through participating banks and Non-Bank Financial Institutions (NFIs) in Singapore.**

INDIAN ECONOMY TO CONTRIBUTE 15% TO GLOBAL GROWTH

- According to the International Monetary Fund (IMF), India will alone contribute 15% of the global growth in 2023 and continues to remain a relative "bright spot" in the world economy.
- ➤ Which Factors are Most Responsible for India's Economic Rise?
- For Growth Prospects: India remains a bright spot at a time when the IMF is projecting 2023 to be difficult with global growth slowing down from 3.4% in 2022 to 2.9% in 2023.

- ➤ **Digitalisation**: According to the IMF, India has turned digitalisation into a **driver of overcoming the pandemic and creating job opportunities,** while the country's fiscal policy has been responsive to economic conditions.
- ➤ **Investment in Green Economy:** The country's fiscal responsibility has been translated into a medium-term framework, with a strong anchor to public finances.
- ➤ Capital Spending: The capital spending has increased, which would amount to 3.3% of gross domestic product, and will be the biggest such jump after an increase of more than 37% between 2020-21 and 2021-22.

NEW WORLD BANK PRESIDENT: AJAY BANGA

- David Malpass, the former World Bank President resigned before his term was completed due to climate-related controversies.
- After his resignation, US President Joe Biden recently nominated the former MasterCard CEO Ajay Banga as the new World Bank President. Ajay has expertise in handling climate change-related economic issues.



- ➤ He is now serving as the Vice Chairman of General Atlantic, a private firm. **His business** experience with the master card is more than 30 years.
- ➤ He is the first Indian-born nominee to serve at the World Bank. With the recent FBI reports talking about the hate crimes against Sikhs in the country, the US's political decision on choosing Ajay Banga as the head of the key organization is commendable.
- ➤ **Background:** David Malpass was nominated by former US President Donald Trump. **The duo** was criticized for their anti-environmental policies.

AWARDS & HONOURS

DADASAHEB PHALKE INTERNATIONAL FILM FESTIVAL AWARDS

- > The **DPIFF (Dadasaheb Phalke International Film Festival Awards)** was started in 2012. It
 - is an independent corporate film festival. It is not the same "DADASAHEB PHALKE AWARD" presented at the National Film Awards.
- ➤ The **DADASAHEB PHALKE AWARD** is presented in a ceremony organized by the Government of India (Directorate of Film Festivals). But the DPIFF is completely a private ceremony organized by the family members of Dadasaheb Phalke.



➤ 2023 was organized by his grandson. Dadasaheb is the Father of Indian Cinema. The award presented in his name at the National Film Award ceremony is one of the most prestigious awards in the country. It is not to be confused with DPIFF.

> DPIFF 2023

- Film of the year: RRR
- Best Film: The Kashmir Files
- Best Actress: Alia Bhatt
- Best Actor: Ranbir Kapoor
- Critics-Best Actor: Varun Dhawan
- Critics-Best Actress: Vidya Balan
- Best Director: R Balki
- Best Cinematographer: PS Vinod
- Most Promising Actor: Rishab Shetty (for KANTARA)
- Best Playback singer-Male: Sachet Tandon
- Best Playback Singer-Female: Neeti Mohan
- Best Web Series: RUDRA
- Most versatile Actor: Anupam Kher
- Television Series of the Year: Anupama
- Best Actor in Television series: Zain Imam for Fanaa
- Best Actress in Television Series: Tejasswi Prakash

HARI BALAKRISHNAN AWARDED WITH MARCONI PRIZE

- > Recently, Computer scientist Hari Balakrishnan was awarded the 2023 Marconi Prize. Dr.
 - Balakrishnan has been cited for fundamental contributions to wired and wireless networking, mobile sensing, and distributed systems.
- ➤ The Marconi Prize is a top honor for computer scientists and is **awarded by the U.S.-based Marconi Foundation.**



- ➤ It is given to those who have made a significant contribution to increasing digital inclusivity through advanced information and communications technology.
- > The Prize recipients are recommended by an independent selection committee and approved by the Marconi Society Board.



SPORTS

SERGIO RAMOS RETIRES FROM INTERNATIONAL FOOTBALL

- ➤ **Sergio Ramos Garcia is a Spanish Football player.** He is popular for his aggressive play. He played for Real Madrid for more than sixteen seasons.
- ➤ He has won four UEFA championship leagues, two UEFA European championships, and also the 2010 FIFA World Cup. **He was one of the youngest players to reach 100 caps**.



- ➤ Cap is awarded to players appearing in the national team. In simple terms, it is the number of times a player plays for the national team. **Till today, Ramos is the most capped player.**
- ▶ Real Madrid: It is a football club in Madrid, Spain that was started in 1902. The team is one of the most internationally recognized teams in the world. It is the most valuable team in the world and its worth is around 5.1 billion USD.
- The annual revenue of the team is 640.7 million Euros and is the second-highest revenueearning team in the world. Also, Real Madrid is one of the founders of La Liga.

AUSTRALIA WON T20 WOMEN'S WORLD CUP

- ➤ The **2023 T20 Women's world cup was held in South Africa**. The final battle was between South Africa and Australia. The Australian team won the battle.
- ➤ The Australian women's team is winning the T20 world cup for the sixth time. India quit losing to the Australian team during the semi-finals. India was the runner-up in the previous women's T20 world cup.



- ➤ Beth Mooney scored 74 runs and topped the match. The name of the **women's T20 cricket team** is **Southern stars.** The team captain is Meg Lanning.
- ➤ The name of the Indian Women's Cricket Team is Women in Blue or sometimes also called Team India; the captain is Harman Preet Kaur. It was founded in 1976. The team is governed by the BCCI, that is, the Board of Control for Cricket in India.

BEST FIFA MEN'S PLAYER AWARD

- The captain of the Argentina football team Lionel Messi recently won the Best FIFA Men's player award. It is one of the prestigious awards for sports personalities, especially for those in the football game. The award is presented by FIFA.
- > History of the award
- Earlier he was called the FIFA World Player of the Year. Later in 2010, it was combined with the Ballon d'Or and together it was called the FIFA Ballon d'Or. FIFA received 13 million pounds to add the tag of Ballon d'Or.
- The **award was presented in this name for six years, that is, till 2016**. All six years, it was Lionel Messi who won the award. Later in 2016, the Ballon d'Or tag was given up.
- And only the FIFA tag was attached. FIFA dropped the Ballon d'Or because its **relations with** the England Football Association were deteriorating.
- ➤ Lionel Messi is an Argentine football player. Currently, he belongs to the "Paris Saint Germain" club.

IMPORTANT DAYS AND DATES

NATIONAL SCIENCE DAY OBSERVED ON FEBRUARY 28TH

➤ India celebrates National Science Day on February 28.

National Science Day is celebrated in the country to mark the discovery of the Raman Effect. Raman discovered the Raman Effect on February 28, 1928, and received the Nobel Prize for his discovery in 1930.



TM

- History of National Science Day
- ➤ The National Council for Science and Technology 1986 proposed to mark National Science
 Day on February 28. The Government of India agreed to the proposal.
- > The objective of National Science Day
- National Science Day is celebrated to spread the importance of science in day-to-day life. On this occasion, the importance of science and achievements in the field are discussed. New technologies are implemented.
- ➤ The theme of National Science Day 2023: Global Science for Global well being
- > Raman Effect
- > The wavelength of light changes in the air as it is deflected by molecules. This is referred to as scattering. The sky is blue in color because of the Raman effect.
- > Smaller wavelengths scatter easily. The wavelength of blue is small and is **scattered the maximum as compared to all the other colors.** For this reason, the sky is blue in color.

ZERO DISCRIMINATION DAY OBSERVED ON MARCH 1ST

- ➤ Zero Discrimination Day is celebrated on March 1. The day is mainly celebrated by organizations like UNAIDS. The main objective of the day is to promote equality.
- ➤ The first Zero Discrimination Day was celebrated in 2014. It was launched by UNAIDS. The first Zero Discrimination Day celebrations were conducted in Beijing.



- > Zero Discrimination Day in India
- ➤ In India, activists use the day to speak against discrimination **faced by the LGBT community.**
- > Section 377 and Zero Discrimination Day
- The day is used by Indian activists to raise voices to repeal section 377. The section was legislated by the Britishers. It penalizes sexual acts that are against nature, that is, homosexual activities.
- ➤ In 2018, the Supreme Court dismissed the section from the IPC. **However, Parliament has not** yet taken any action on this.
- ➤ So internationally, the code hasn't been repealed in India. In other former British colonies like

 Singapore, the act has been completely repealed.

SCIENCE AND TECHNOLOGY

MOON DUST AS SOLAR SHIELD

- ➤ Recently, a team of Researchers have published a study titled- "Dust as a Solar Shield", proposing that launching Moon Dust into the stratosphere can slow down Global-Warming.
- ➤ What was the Proposal?
- ➤ **Solar Radiation Management:** They proposed the regular transport of moon dust to a gravity point (Lagrange Point) **between Earth and Sun to temper the ravages of global warming.**
- ➤ **Analogy with Volcanic Spew and Moon Dust:** Artificially spraying Moon Dust into the stratosphere has been motivated from the fact that a sufficiently powerful **Volcanic Eruption can spew sulfates and other aerosols** into the stratosphere and thus cool the air there.

MOON, VENUS & JUPITER CONJUNCTION

➤ The Moon, Venus, and Jupiter are to come to the spot in the sky on February 22, 2024. Moon will pass very close to Jupiter and Venus immediately after sunset. You can watch this easily even without a telescope. However, without the telescope, the planets will appear like a star.



- *▶* What is a conjunction in astronomy?
- ➤ The conjunction occurs when two or more planets or two or more moons pass close by. **For instance, the sun and moon are in conjunction during new moon days**. Planetary conjunction occurs when two or more planets come close by.
- Magnitudes of Venus and Jupiter during the conjunction
- ➤ Venus will be at a magnitude of -4.0. Jupiter will be at a magnitude of -2.1. And the moon will be at a magnitude of -9.8. Magnitude is the measure of brightness.

- Venus and Jupiter are the brightest planets in the solar system. Jupiter is the brightest for its size.
 And Venus is the brightest for its gasses and thick clouds in the atmosphere that reflects most of the sunlight back into space.
- > Venus Jupiter conjunction
- > The **planets have at least one conjunction every year.** However, the 2023 conjunction is special and unique.
- ➤ Why so? Usually, the Venus-Jupiter conjunction occurs very close to the sun. The bright light from the sun makes the conjunction invisible. However, this conjunction is a bit far away and is clearly visible.

JAMES WEBB TELESCOPE SPOTS 6 MONSTER GALAXIES

- The **James Webb Space Telescope (JWST)** has discovered six Monster galaxies, formed roughly 500-700 million years after the Big Bang, according to a Study.
- ► How were these Galaxies Found?
- ➤ Researchers spotted the six monster galaxies using the **Cosmic Evolution Early 44 Release Science programme of JWST.**
- ➤ The **programme studies the formation of the earliest galaxies** when the universe was less than 5% of its current age.
- ➤ Researchers **turned the telescope to a patch of the sky close to the Big Dipper,** which appears to harbor a group of stars that form a pattern in the night sky. The Hubble space telescope first observed this region in the 1990s.
- ➤ The Big Dipper is an asterism of stars, in the constellation Ursa Major (also known as the Great Bear). It consists of seven bright stars, four forming a rectangular "bowl" shape and three forming a "handle".

> It is often used as a navigational tool, a reference point for stargazing, and as a symbol in popular culture.

WHAT ARE NEUTRINOS?

Recently, physicists working with the Kamioka Liquid Scintillator Antineutrino Detector (KamLAND) in Japan reported that after analyzing two years' data, they could not find signs that neutrinos could be their own anti-particles.



- > What was the Experiment?
- KamLAND looks for an event called neutrinoless double beta-decay.
 In normal double beta-decay, two neutrons in an atom turn into two protons by emitting two electrons and two electron antineutrinos.
- In neutrinoless double beta-decay, the anti-neutrinos aren't emitted, which can happen only if anti-neutrinos are just different kinds of neutrinos.
- What are Neutrinos?
- > Neutrinos are the second most abundant particles in the Universe after photons (light particles), produced in copious amounts in the cores of stars.
- **Properties**: Because they are so ubiquitous, their properties are windows into the microscopic structure of the universe.
- ➤ For example, one open question about neutrinos is whether they are their own antiparticles. If they were, physicists will have a way to explain why the universe has more matter than antimatter.

MISCELLANEOUS

LADAKH SETS GUINNESS RECORD PANGONG TSO MARATHON

The Ladakh Autonomous Hill Development Council recently launched the Pangong Tso Marathon. The marathon is the first of its kind in India. It was held on

the frozen Pangong Tso lake.

➤ The marathon was conducted at an altitude of 4,350 meters. With this, it makes the Guinness record for World's Highest Frozen Lake Marathon. It is the first frozen lake marathon in India.



> About the Marathon

- ➤ The marathon included a 21 km long run. It began in Luking village. The marathon was organized by the Council of Ladakh along with the Adventure Sports Foundation of Ladakh.
- Pangong Tso Lake
- ➤ The lake has saline water and is completely frozen during winter. **Researchers believe that the lake was a part of the Indus river system in early times**. Today, however, the lake lies separated from the Indus river. It is the highest saltwater lake in the world.

WHAT IS DICKINSONIA FOSSILS?

- ➤ Fossils of an extinct species, **Dickinsonia**, that scientists reported in a discovery from India's **Bhimbetka Rock Shelters in 2021** have been found to be a false alarm.
- Researchers after a closer look at the site revealed the Dickinsonia fossil to really be wax smeared on a rock by a beehive.
- > What is Dickinsonia?
- ➤ Dickinsonia is an **extinct primitive animal that inhabited seabeds around Australia, China, Russia, Ukraine,** in the Ediacaran period, 600-500 million years ago.

> It was classified as an animal after the discovery of cholesterol molecules in the fossils. It is believed to be one of the earliest animals to have existed on earth.

WHAT IS MAD COW DISEASE?

- Recently, Brazil has halted its beef exports to China after a case of Mad Cow Disease was confirmed in the northern state of Para.
- **▶** What is Mad Cow Disease?
- Also known as **Bovine Spongiform Encephalopathy (BSE) is degenerative, transmissible**, slowly progressive, and a fatal infection that affects the central nervous system of adult cattle.



- ➤ Causes: BSE is caused by a protein called a prion normally found on cell surfaces, the normal prion protein changes into an abnormal prion protein that is harmful.
- After getting altered, these proteins destroy the nervous system tissue- the brain and spinal cord.
- The body of a sick cow does not even know the abnormal prion is there. Without knowing it is there, the cow's body cannot fight off the disease.

THE HINDU DAILY ARTICLES' ANALYSIS BY SUCCESS MANTRA SMART COACHING

In this competitive world, the demand for "authentic Current Affairs updates" from a reliable source has been increasing for the past few years, with the growth of awareness and aspirants' educational goals.

Keeping this in mind, Success Mantra Smart Coaching, via its YouTube Channel 'Success Mantra Digital', aims to make 'The Hindu Daily Articles Analysis' accessible to everyone and everywhere across the platform. It offers the latest important news with a minute update, especially for aspirants who are preparing for their dream entrance exams like CLAT, AILET, CUET, DU-LLB, MH-CET, IPU-CET, NCHM and many more.

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Daily Hindu Overview

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