

CONTENTS

1.	National News 3
2.	International News7
3.	Important Dates and Events
4.	Sports News
5.	Awards & Recognitions
6.	Defence News 18
	Science & Technology 22
8.	Economy & Finance
9.	तमसो मा ज्योतर्गिमय Reports & Indices 31
10.	Environment
11.	Government Initiatives
12.	Appointments/Person in News
13.	Important Maps & Articles
14.	Important MCQ for Competitive Exams 59







CURRENT AFFAIRS

NATIONAL NEWS

PM MODI TO INAUGURATE 3-DAY RAISINA DIALOGUE IN NEW DELHI -

- The eighth edition of the annual Raisina Dialogue, the flagship conference on geopolitics and geostrategy, begins in New Delhi.
- The annual Raisina Dialogue will be inaugurated by Prime Minister Narendra Modi. The Foreign Ministry is organizing the event in collaboration with the Observer Research Foundation from 2nd March to 4th March 2023. Italian Prime Minister Giorgia Meloni will be the chief guest and keynote speaker at its inaugural session.
- The theme of the conference is "Provocation, Uncertainty, Turbulence: Lighthouse in the Tempest?".



- The Raisina Dialogue 2023 will witness the participation of representatives from over 100 countries including Ministers, Military Commanders, Captains of the Industry, Technology Leaders, Scholars on Strategic Affairs, and Experts from leading Think Tanks and Youth.
- This year's edition of Raisina Dialogue assumes special significance coming against the backdrop of India's G20 Presidency.
- The conference will begin with an inaugural session, followed by an inaugural dinner including welcome remarks by Foreign Secretary Vinay Mohan Kwatra.
- There will be keynote addresses by Health Minister Mansukh Mandaviya, Sachiko Imoto, the senior vice president of Japan International Cooperation Agency, and Ricardo Baptista Leite, Portugal MP.

SUPREME COURT VERDICT ON ECI APPOINTMENTS -

- A five-judge bench of the Supreme Court (SC) unanimously ruled that the appointment of the Chief Election Commissioner and the Election Commissioners shall be made by the President on the advice of a Committee consisting of the Prime Minister, the Leader of the Opposition of the Lok Sabha and Chief Justice of India (CJI).
- In case no leader of Opposition is available, the leader of the largest opposition Party in the Lok Sabha in terms of numerical strength will be a part of such committee.
- SC stated that a reading of the debates of the Constituent Assembly (CA) on the appointment of ECI makes clear that all the members were of the clear view that elections must be conducted by an independent Commission.
- The government had argued that in the absence of such a law by parliament, the President has the constitutional power and asked the SC to exhibit Judicial restraint.
- As the constitution places the power to make any law on appointment of ECI in the hands of Parliament, SC ruling on this issue poses a question of Separation of Power.
- However, SC has stated that this ruling will be subject to any law made by parliament, which means parliament can bring a law to undo it.
- Another view is that since there is no law made by parliament on this issue, the Court must step in to fill the "constitutional vacuum."



• Originally the commission had only one EC but after the Election Commissioner Amendment Act 1989, it was made a multi-member body (1 CEC & 2 other ECs.).

CONFERENCE OF GLOBAL INTELLIGENCE CHIEFS -

- On March 1, India held the second conference of intelligence and security chiefs from 26 countries around the world.
- The conference was held for the first time in April 2022, a day before the start of the Raisina Dialogue. It was addressed by the PM of India and National Security Advisor (NSA).
- As part of Raisina Dialogue, the security conference is organised by the country's external intelligence agency, the Research and Analysis Wing (R&AW) and the National Security Council Secretariat (NSCS) that reports to NSA.
- The objective is to discuss the ongoing geopolitical tensions, provided an opportunity for participants to exchange views on how to address this crisis and other geopolitical tensions.
- on how to address this crisis and other geopolitical tensions.
 The meeting is modelled on the lines of the Munich Security Conference and Singapore's Shangri-La Dialogue. It was coincided with the G20 Foreign Ministers meeting and the Raisina Dialogue. India chairs both G20 and the Shanghai Cooperation Organisation (SCO) in 2023.
- While the U.S. was absent, intelligence chiefs from the U.K., France, Japan and Bahrain were among those present.
- The Raisina Dialogue is India's premier conference on geopolitics and geoeconomics committed to addressing the most challenging issues facing the global community.
- Observer Research Foundation is an independent think tank based in New Delhi with three centres in Mumbai, Chennai and Kolkata. PM Modi inaugurates world's longest railway platform in Hubballi, Karnataka -

PRIME MINISTER NARENDRA MODI DEDICATED WORLD'S LONGEST RAILWAY PLATFORM OF 1.5 KILOMETRES AT SRI SIDDHAAROODA RAILWAY STATION IN HUBBALLI IN THE STATE OF KARNATAKA-

- The inauguration of the platform was done during the PM's Karnataka visit in the presence of Union Minister Pralhad Joshi. It is to be noted that Indian Railways, South Western Railway Zones Hubbali is now registered in the Guinness Book of World
- Records for having the longest platform.
- The world's longest railway platform will cater to the transportation needs of the Hubballi-Dharwad region and will help in enhancing the operational capacity of the yard. Furthermore, it will enable the operations of trains in both directions.
- Gorakhpur platform in Uttar Pradesh is the second longest at 1,366.33 meters, and Kollam Junction in Kerala has the third longest platform at 1,180.5 meters.
- Meanwhile, Prime Minister Narendra Modi also inaugurated the 118-km long Bengaluru-Mysuru expressway. This new project is expected to aid the social and economic growth in the region.







• The new e-way built at a cost of Rs 8,480 crore will reduce the travel time between the cities from 3 hours to around 75 minutes.

SEVEN PM MITRA (PRADHAN MANTRI MEGA INTEGRATED TEXTILE REGION AND APPAREL) PARK SITES ANNOUNCED -

Ministry of Textiles, has issued a notification to set up 7 Mega Integrated Textile Region and Apparel (PM MITRA) Parks with a total outlay of Rs. 4,445 crore.



- Seven sites were chosen out of 18 proposals for PM MITRA parks which were received from 13 States.
- The Parks will come up in Tamil Nadu, Telangana, Gujarat, Karnataka, Madhya Pradesh, Uttar Pradesh and Maharashtra.

KEY FEATURES of PM MITRA Parks-

- These Parks will offer an opportunity to create an integrated textiles value chain right from spinning, weaving, processing/dyeing and printing to garment manufacturing at 1 location.
- Intended to generate 1 lakh direct and 2 lakh indirect employment per park.
- Proposals of State Governments having ready availability of contiguous and encumbrance-free land parcel of 1,000+ acres along with other textiles related facilities & ecosystem are welcome.

About PM MITRA Scheme-

- It will offer the opportunity to create an Integrated Textiles Value Chain right from spinning, weaving, processing/dyeing and printing to garment manufacturing etc. at one location and will reduce the logistics cost of the Industry.
- A Special Purpose Vehicle owned by the Centre and State Government will be set up for each park which will oversee the implementation of the project.

UTTARAKHAND'S ANTI CHEATING LAW -

- On February 11 2023, a protest in Dehradun over paper leaks and scams in government recruitment tests turned violent.
- On the following day, the Uttarakhand Governor gave his assent to the Uttarakhand Competitive Examination (Measures for Control and Prevention of Unfair Means in Recruitment) Ordinance, 2023 to prevent the use of unfair means in exams.
- The ordinance has provisions for fines up to Rs 10 crore and life imprisonment for the guilty.
- The ordinance is aimed at preventing offences related to obstructing the sanctity of examinations, use of unfair means, leakage of question papers, and other irregularities.



• It covers public examinations for recruitment to posts under the state government, autonomous bodies run by the government, and authorities, corporations, and institutions operated with grants of the state government.



'OPERATION DOST': INDIA WENT ALL OUT TO HELP QUAKE-HIT TURKEY, SYRIA-

- As part of "Operation Dost," India is deploying a field hospital, supplies, and rescue personnel to the earthquake-stricken countries of Turkey and Syria, the foreign minister S Jaishankar tweeted.
- A 7.8-magnitude earthquake that occurred on Monday while people were asleep destroyed thousands of buildings, trapped an undetermined number of people, and may have affected millions of people.
- Time is running out for the thousands of injured people and others who are still believed to be trapped, World Health Organization director Tedros Adhanom Ghebreyesus cautioned.
- Adana witnessed the landing of a fourth Indian Air Force C17 bearing aid for Turkey's earthquake victims.



• Turkey hadn't experienced an earthquake of this size since 33,000 people died in the eastern region of Erzincan in 1939.

INDIA'S FIRST HYDROGEN TRAIN WILL COME BY DEC 2023 ON HERITAGE ROUTES-

- Union Railway minister, Ashwini Vaishnaw has informed that India will receive its first hydrogen train by December 2023.
- It will run on heritage circuits like Kalka-Shimla and later it will be expanded to other places.
- The Vande Metro (mini version of Vande Bharat Express)
 is also being developed
- Vande Metro Aim: To help people living around big cities to travel to and fro in comfort between their place of work and hometowns.
- Railway Budget (2023-24:) Rs 2.4 lakh crore





INTERNATIONAL NEWS

PAKISTAN RECEIVES \$700 MLN FUNDS FROM CHINA -

- Pakistan's Finance Minister Ishaq Dar said his country has received \$700 million funds from the China Development Bank. The deposit comes as Pakistan has been struggling with its external debt and has barely enough dollars to cover less than three weeks' worth of imports. Finance Minister Ishaq Dar referred to the deposit as a "lifeline" for Pakistan.
- The loan will bolster the country's diminishing foreign exchange reserves, and the money is expected to arrive at the State Bank of Pakistan this week.



- The coalition government has been trying to increase the country's foreign exchange reserves, which currently stand at \$3.25 billion as of February 17.
- However, the delay in the revival of the \$6.5 billion International Monetary Fund (IMF) programme has made it difficult for the government to achieve this goal.
- Pakistan is also looking to refinance two more commercial loans worth \$500 million and \$800 million. In total, Pakistan is aiming to refinance Chinese loans up to \$2 billion by the end of February or the first week of March 2023.
- This deposit from China is expected to ease some of the pressure on Pakistan's economy, which has been struggling due to the pandemic and external debt.
- Pakistan's external debt servicing obligation for the ongoing fiscal year 2022-23 is \$23 billion, of which \$6 billion has been repaid and \$4 billion rolled over, leaving \$13 billion yet to be funded. The country also has further repayment obligations of \$75 billion during FY24-26.

ONE YEAR OF RUSSIA-UKRAINE CONFLICT -

- A year after start of Russia-Ukraine conflict, there are still signs of escalation everywhere. Calculations on both sides that this would be a short, swift war have proved wrong.
- The anniversary of war comes in the backdrop of Russia's withdrawal from New START treaty.
- The West has recently announced the supply of more advanced weapons to Ukraine, deepening its involvement in the conflict.
- In response, Russian President Vladimir Putin has already reinforced Russian positions along the 1,000km long frontline in Ukraine.



- Risks of a direct confrontation between Russia and the North Atlantic Treaty Organisation (NATO), both nuclear powers, are also on the rise as the war is extended.
- Russia wanted to install a Moscow friendly regime and to take the whole of Ukraine's east and south, stretching from Kharkiv in the northeast through the Donbas in the east (which comprises Luhansk and Donetsk) to Odesa, the Black Sea port city in the southwest, turning the country into a land-locked rump. Russia has failed to meet any of these objectives.
- Nevertheless, Russia has taken substantial portions of Ukrainian territories, including Mariupol. Russia's territorial gains in Ukraine peaked in March 2022, when it controlled some 22% of pre-2014 Ukraine.



- Ukraine recaptured some land in Kharkiv and Kherson. But still, Russia controls some 17% of Ukraine.Focused fighting has been going on in some flashpoints along the frontline including Bakhmut, Donetsk and Zaporizhzhia.
- The U.S. is Ukraine's biggest aid provider it has pledged military and financial assistance worth over USD 70 billion. The EU has pledged \$37 billion and among the EU countries, the U.K. and Germany top the list.

PAKISTAN GOVT RAISES POLICY INTEREST RATE BY 200 BPS FOR IMF BAILOUT -

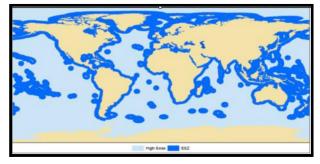
- Amid the severe economic crisis, Pakistan's government has decided to raise the policy rate to 19 per cent or 200 basis points, which will be an increase of 2 per cent. Currently, it stands at 17 per cent.
- The increase is based on rates the government set in the auction to raise domestic debt. This will push the interest rate to 19%, just below the previous record of 19.5% set in October 1996.
- With the new decision, the Pakistan government has accepted another pre-condition of the IMF for the release of USD 1.1 billion in critical funding, a part of the USD 6.5 billion bailout package.



- Earlier this month, the relevant Pakistani officials and the IMF staff concluded the ninth review of the \$6.5 billion bailout package without a staff-level agreement. However, both sides agreed to a set of measures that could still help clinch the deal.
- The Pakistani authorities had hoped that they would convince the IMF about implementing the conditions in a gradual manner but the hopes were dashed during the 10-day visit by the IMF mission.
- Pakistan agreed to implement the Memorandum of Economic and Financial Policies (MEFP), which contained policy suggestions by IMF. Officials still hoped that the staff-level agreement could be reached soon.
- Sources said that discussion on some issues of the power sector was in the final stage after which the staff-level agreement with the IMF would be reached.
- Also the power tariff was to be increased and new taxes imposed to pave the way for the deal. However, because of a severity of the economic crisis, every agreed measure would be tough on an overwhelming majority of the Pakistani people.

RECENTLY, FOR THE FIRST TIME, UNITED NATIONS MEMBERS HAVE AGREED ON A UNIFIED TREATY TO PROTECT BIODIVERSITY IN THE HIGH SEAS -

- The treaty is negotiated under the United Nations Convention on Laws of the Sea (UNCLOS) of 1982 which governs the rights of countries regarding marine resources.
- 2/3rd of the world's oceans are currently considered international waters/high seas. But until now only about 1% of these waters have been protected.
- It aims to create an updated framework to protect marine life in high seas, which are regions outside national boundary waters.





- It will create a new body to manage the conservation of ocean life and establish marine protected areas on the high seas.
- The treaty also establishes ground rules for conducting environmental impact assessments for commercial activities in the oceans.
- Ninety per cent of global warming occurs in the ocean, deeply affecting Marine life.
- Comprehensive protection of endangered species and habitats is not possible without High Seas which cover more than 40% of the Earth's surface and two-thirds of the ocean.
- High seas are the crucial component in global efforts to bring 30% of the world's land and sea under protection by the end of the decade, a target known as "30 by 30".
- The treaty can have benefits for society (pharmaceuticals and food) and will help reverse biodiversity losses and ensure sustainable development.
- The newly established treaty will permit the establishment of marine protected areas within international waters. This will build resilience from climate change, protect marine life, and will also oblige countries to conduct environmental impact assessments of proposed activities on the high seas.

SAUDI, IRAN AGREE TO RESTORE DIPLOMATIC TIES -

- Recently, Saudi and Iranian officials held bilateral talks that concluded with an agreement to restore diplomatic ties which have been severed since 2016.
- The major diplomatic breakthrough negotiated by China in Beijing.
- It comes as diplomats have been trying to end a long war in Yemen, a conflict in which both Iran and Saudi Arabia are deeply entrenched.
- The two countries plan to reopen their respective embassies in Tehran and Riyadh.
- They also vowed to respect countries' sovereignty and not interfere in internal affairs. They also agreed to activate a 2001 security cooperation agreement, as well as a general economy, trade and investment agreement signed in 1998.

Conflict between Iran and Saudi Arabia-

- Saudi Arabia broke off ties with Iran in 2016 after protesters invaded Saudi diplomatic posts after Saudi Arabia had executed a prominent Shilte cleric days earlier.
- Saudi Arabia has long portrayed itself as the world's leading Sunni nation while Iran views itself as the protector of the Islam's Shiite minority.
- Since US's withdrawal from Iran's Nuclear deal, Iran was blamed for a series of attacks including one targeting the heart of Saudi Arabia's oil industry in 2019.
- Western nations and experts have blamed the attack on Iran though the latter has denied launching the attack.
- Iran and Saudi Arabia exploited these upheavals to expand their influence, notably in Syria, Bahrain and Yemen, further heightening mutual suspicions.

ICC ISSUES ARREST WARRANT FOR VLADIMIR PUTIN -

- The International Criminal Court (ICC) issued an arrest warrant for war crimes for President Vladimir Putin and a second Russian official.
- This is the first time that the ICC has issued an arrest warrant against one of the five permanent members of the United Nation Security Council.
- ICC issued an arrest warrant against Russian President Vladimir Putin for the alleged war crime of unlawfully deporting and transferring children from occupied areas of Ukraine to the Russian Federation.

What is ICC-

• On 17 July, 1998 Rome Statute was adopted by 120 States in direction of creating a more just world.



• On 1 July, 2002 Rome Statute took effect upon ratification by 60 states, officially establishing the ICC. Since it has no retroactive jurisdiction, the ICC deals with crimes committed on or after this date.

The Rome Statute, grants the ICC jurisdiction over four main crimes

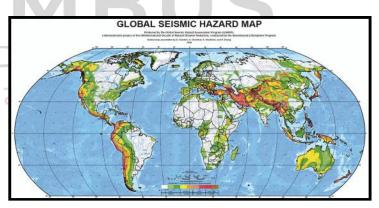
- A. The crime of Genocide
- B. Crimes against Humanity
- C. War crimes
- D. Crime of Aggression
- Currently, 123 countries are party to the Rome Statute, India is not a party to Rome Statute along with US and China.
- The ICC was established to prosecute the most heinous offenses only when a country's own legal machinery fails to act. Unlike the International Court of Justice (ICJ), which deals with countries and inter-state disputes, the ICC prosecutes individuals.



- Unlike the International Court of Justice, the ICC is not part of the United Nations system, with the UN-ICC relationship being governed by a separate agreement.
- The ICJ, which is among the UN's 6 principal organs, mainly hears disputes between nations. It was established in 1945 and is seated at The Hague (Netherlands).

RECENTLY, POWERFUL TREMORS WERE FELT IN TURKEY AFTER AN EARTHQUAKE OF MAGNITUDE 7.8 STRUCK ALONG A WELL-KNOWN FAULT LINE CALLED THE ANATOLIA TECTONIC BLOCK-

- The earthquakes emerged from relatively shallow depths and were a "strike-slip quake".
- It is being described as the strongest Earthquake that Turkey has experienced in over a century and the worst disaster since 1939. The 1939 earthquake was the Erzincan Earthquake that had caused "extreme damage in the Erzincan Plain and the Kelkit River Valley.
- In the Eastern Mediterranean region comprising Turkey, Syria and Jordan, tectonics are dominated by complex interactions between the African, Arabian, and Eurasian tectonic plates, and the Anatolian tectonic block.
- In addition to this, the Aegean Sea Plate, located in the eastern Mediterranean Sea under



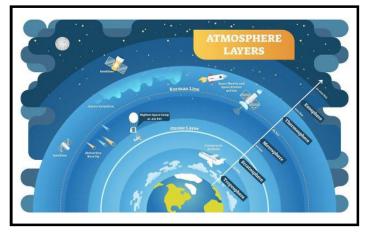
- southern Greece and western Turkey, is also a source of seismic activity in the region.
- According to one estimate, almost 95% of Turkey's land mass is prone to earthquakes, while about a third of the country is at high risk, including the areas around the major cities of Istanbul and Izmir and the region of East Anatolia.

THE UNITED STATES (US) SHOT DOWN A CHINESE SURVEILLANCE BALLOON THAT HAS BEEN SPOTTED OVER US AIRSPACE FOR A COUPLE OF DAYS -

- These cheap, quiet and hard-to-reach balloons have been used for reconnaissance purposes, including in conflicts like the American Civil War.
- The practice became widespread during World War I and was used extensively during the Cold War when the US launched hundreds of balloons to gather intelligence on the Soviet Union and China.



- While their use has declined with the rise of unmanned drones and satellites, many countries still employ spy balloons.
- China has for decades complained about US surveillance by ships and spy planes near its own territory, leading to occasional confrontations over the years. According to China, the balloon was for research but got off track.
- Air space, in international law, is the space above a particular national territory, treated as belonging to the government controlling the territory.
- It does not include outer space, which, under the Outer Space Treaty of 1967 is declared to be free and not subject to national appropriation.



• The treaty, however, did not define the altitude at which outer space begins and air space ends.



IMPORTANT DATES AND EVENTS

IN 1986, THE GOVERNMENT OF INDIA, DESIGNATED FEBRUARY 28 AS NATIONAL SCIENCE DAY TO COMMEMORATE THE ANNOUNCEMENT OF THE DISCOVERY OF THE "RAMAN EFFECT" -

- This year's edition is being celebrated under the theme of "Global Science for Global Wellbeing", in light of India's G20 presidency.
- Physicist CV Raman won the Nobel Prize in 1930 for his discovery of the Raman Effect.It refers to the inelastic scattering of light by matter, resulting in a shift in the frequency of the scattered light.
- In simpler words, it is a change in the wavelength of light that occurs when a light beam is deflected by molecules.
- The Raman effect forms the basis for Raman spectroscopy which is used by chemists and physicists to gain information about materials. Spectroscopy is the study of the interaction between matter and electromagnetic radiation.

NO SMOKING DAY 2023 OBSERVED ON MARCH 8 -

- Every year on the second Wednesday of March, No Smoking Day is observed. It falls on March 8 this year. Even though we all know that smoking is bad for our health, quitting the habit appears to be a difficult task.
- This year's theme is: "Stopping smoking improves your brain health". The day is celebrated to help those who wish to quit smoking as well as to raise awareness about the implications of smoking on an individual's health.
- The day was significantly started to aware people of the ill effects of smoking and help them quit it on time. Giving up smoking takes a lot of dedication and motivation as ones who smoke on a regular basis, their bodies get addicted to it. If they stop having smoke, their body reacts in a way that they crave tobacco.
- The United Kingdom witnessed that the people in the country are getting addicted to smoking.
- In 1984, the day was observed for the first time. Earlier, it was celebrated on the first Wednesday of March as it began on Ash Wednesday.
- However, with time, it shifted to the second Wednesday. Now, it is celebrated as an annual event all over the United Kingdom and in other countries too.

GLOBAL RECYCLING DAY 2023 OBSERVED ON 18TH MARCH -

- Every year on March 18th, Global Recycling Day is celebrated to increase people's comprehension about the harmful effects of plastic on the environment.
- This day also promotes recycling as a crucial concept and encourages people to organize events throughout the year to spread awareness about this cause.
- The theme of Global Recycling Day 2023 is "Creative Innovation". When it comes to recycling, we all have to be creative.
- In order to do it effectively, we need to think outside the box. Putting our recyclables in the bin is not sufficient we need to be proactive and find new ways to reduce, reuse, and recycle.
- Global Recycling Day is a relatively new event that was established on March 18th, 2018, by the Global Recycling Foundation.











• The purpose of this day is to raise awareness about the importance of recycling and encourage people to adopt sustainable practices in their daily lives.

PULWAMA ATTACK ANNIVERSARY: 14TH FEBRUARY 2023 TRIBUTE AND SALUTE MARTYRED CRPF JAWANS-

- On February 14, 2023, the world is celebrating Valentine's Day and India will mark the fourth anniversary of the horrifying Pulwama terrorist assault that claimed the lives of 40 CRPF soldiers.
- A suicide bomber targeted a convoy of vehicles transporting security personnel on the Jammu Srinagar National Highway near Lethpora in the Pulwama area of Jammu and Kashmir.
- 40 Central Reserve Police Force (CRPF) jawans were killed in the attack. Adil Ahmad Dar, a young local of Pulwama

who was associated with the terrorist organisation Jaish-e-Mohammed located in Pakistan, was the perpetrator of the incident (JeM).

- The attack, which provoked considerable indignation and condemnation throughout India, was claimed by JeM.
- In response to the incident, which raised tensions between India and Pakistan, the Indian government took a range of diplomatic, economic, and military measures against Pakistan.
- The launch of airstrikes by India against Pakistan-controlled terrorist facilities in Kashmir was seen as a significant escalation of hostilities between the two countries.
- Additionally, the incident was condemned by the international community, with several countries expressing their support for India and calling for action against terrorism.
- The United States and the United Nations both condemned the incident and asked that those responsible be held accountable.

HISTORY OF REPUBLIC DAY AND 26 JANUARY-

- The Constitution of India was adopted officially by the Constituent Assembly on Nov 26, 1949, however, Republic Day is celebrated on 26 January. It is so because on 26/Jan/1930, the historic "Poorna Swaraj" declaration was officially promulgated, beginning the final phase of India's freedom struggle where the goal would be complete independence from British rule.
- Opposing the Motilal Nehru report 1927 which demanded for a dominion status, young leaders such as SC Bose and JL Nehru wanted complete independence for India. On 19



Dec 1929, "Poorna Swaraj" resolution was passed at the Lahore session of INC and officially promulgated on 26 Jan 1930. From 1930 till India finally won its independence in 1947, January 26 was celebrated as "Independence Day".

• Thus, when leaders had to decide on a day to promulgate India's new Constitution, January 26 was thought to be ideal..

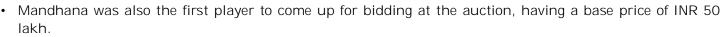




SPORTS NEWS

SMRITI MANDHANA BECOMES MOST EXPENSIVE PLAYER IN WPL WITH ₹.4 CRORE BID BY RCB-

- Indian batter Smriti Mandhana was the most expensive buy at the inaugural Women's Premier League auction in Mumbai.
- Royal Challengers Bangalore (RCB) snapped her up for INR 3.4 crore deal. After bagging a whopping amount paid by the RCB in the WPL auction, Mandhana is set to earn double the Pakistan Super League (PSL) highest-paid players.
- Babar, who played for the Peshawar Zalmi side, under the Platinum category, was traded at the season salary of \$1,50,000 or PKR 3,60,00000 (3 Crore 60 lakh).



- RCB and Mumbai Indians were locked in an intense battle for her services, before the former managed to acquire her services, offering an opening as well as a captaincy option.
- Smriti Shriniwas Mandhana is an Indian cricketer who plays for the Indian women's national team and the Royal Challengers Bangalore in the WPL.
- In June 2018, the Board of Control for Cricket in India (BCCI) named her as the Best Women's International Cricketer. In December 2018, the International Cricket Council (ICC) awarded her with the Rachael Heyhoe-Flint Award for the best female cricketer of the year.
- On 30 December 2021, she became a nominee of the ICC Women's T20 Player of the Year. In December 2021, she, Tammy Beaumont, Lizelle Lee and Gaby Lewis were nominated for the ICC Women's Cricketer of the Year.
- In January 2022, the ICC awarded her with the Rachael Heyhoe-Flint Award for the ICC Women's Cricketer of the Year.

तमसो मा ज्यतिर्गमय

FIH MEN'S HOCKEY WORLD CUP 2023 BEGINS IN CUTTACK-

- Men's Hockey World Cup, 2023 has began with a spectacular opening ceremony in Cuttack that was witnessed by thousands of hockey lovers in attendance from across the country and abroad.
- Union Sports Minister Anurag Thakur, Odisha Chief Minister Naveen Patnaik, International Hockey Federation president Tayyab Ikram and Hockey India chairman Dilip Tirkey were present at the glittering ceremony. 16 teams are participating in the global tournament.



- The matches will be held at two venues, Birsa Mundra Hockey Stadium in Rourkela and Kalinga Stadium in Bhubaneswar, from January 13 to January 29.
- While 20 matches will be played at Rourkela, 24 matches, including the final, will be held in Bhubaneswar.
- The state government has built a new hockey stadium in Rourkela ahead of the event.Odisha is hosting the international event for the second consecutive time, the previous one having been held in Bhubaneswar in 2018.

PT USHA BECOME FIRST WOMEN PRESIDENT OF INDIAN OLYMPIC ASSOCIATION-

• PT Usha was elected to become the president of the Indian Olympics Association (IOA).





- The Minister of Law and Justice of India announced on Twitter to congratulate the legendary Indian athletes. PT Usha becomes the first woman president of the IOA.
- She also expressed her intentions to run for IOA on 26th November 2022. She was the only contender for the election of the top position in the sports organization.
- PT Usha is one of the most accomplished athletes in India.She has won 11 medals including four gold at the Asian Games between 1982 and 1994.
- She also won four gold medals at the Seoul Asan Games in 1986.She has participated in 200m, 400m hurdles, and 4×400 relays.



• PT Usha submitted her candidacy papers for the position of president on 27th November 2022.





AWARDS & RECOGNITIONS

FIFA AWARDS 2022: LIONEL MESSI WINS 'BEST FIFA PLAYER OF 2022' -

- Argentina's Lionel Messi has bagged the Best FIFA men's player prize for 2022. Messi outclassed his Paris Saint Germain (PSG) teammate Kylian Mbappe and Real Madrid captain Karim Benzema to lift the famous trophy at Salle Pleyel in Paris.
- In the FIFA Awards vote, Messi had 52 points, Mbappé 44, and Benzema 34. It is the second time that Messi has won the honour inaugurated by FIFA in 2016.
- Messi was named the winner of the Best FIFA Men's Player award for his outstanding performances in men's football from the period of 8 August 2021 to 18 December 2022. Equalling Cristiano Ronaldo and Robert Lewandowski's massive feat at the FIFA awards.



VETERAN ACTOR-DIRECTOR SATISH KAUSHIK PASSES AWAY AT 67 -

- Veteran actor-writer-director Satish Kaushik has passed away at the age of 67. He was born on April 13, 1965, in Haryana, Kaushik was an alumnus of the NSD and the FTII, and started his film career in the early 1980s. He was an Indian actor, comedian, screenwriter, director and producer. He acted in theatres before finding his break in Bollywood.
- He directed Sridevi's film, "Roop Ki Rani, Choron Ka Raja" and later "Prem", both disasters, but he got his big hit with "Hum Aapke Dil Me Rehte Hain" and also "Tere Sang", among many others.



- As a film actor, Satish Kaushik was known for his roles as Calendar in the 1987 superhero film, Mr India, as Pappu Pager in Deewana Mastana (1997), and as Chanu Ahmed in the British film Brick Lane (2007), directed by Sarah Gavron.
- Satish Kaushik also won the Filmfare Best Comedian Award in 1990 for Ram Lakhan and in 1997 for Saajan Chale Sasural. He penned the dialogues for the 1983 classic "Jaane Bhi Do Yaaron", which acquired a cult following over the years. He is known for his comic roles as `Calendar` in "Mr. India", "Pappu Pager" in "Deewana Mastana" among many others.

INTERNATIONAL WOMEN'S DAY: WOMEN IN ARMED FORCES -

- Recently, on the occasion of International Women's Day, Group Captain Shaliza Dhami has been selected to take over the command of a frontline combat unit in the Western sector (facing Pakistan).
- She will be the first woman officer in the IAF to command a missile squadron in the Western sector.
- The Indian Air Force started inducting women fighter pilots in 2016. The first batch had three women fighter pilots who currently fly the MiG-21, Su-30MKI and Rafale.
- Women officers have started taking command of various Army units in arms and services including Engineers, Signals Army Air Defence Intelligence Corps Army Service (



Signals, Army Air Defence, Intelligence Corps, Army Service Corps, Army Ordnance Corps and Electronics and Mechanical Engineers.

- There are 10,493 women officers serving in the armed forces, the majority in the medical services.
- The Indian Army, being the largest of the three services, has the largest number of women officers at 1,705, followed by 1,640 women officers in the Indian Air Force, and 559 in the Indian Navy.
- In January 2023, the army deployed a woman officer, Captain Shiva Chouhan, on the Siachen glacier for the first time.
- In February 2023, the army began assigning women officers to command roles outside of the medical stream for the first time.



- Around 50 of them are set to head units in operational areas under the Northern and Eastern Commands responsible for guarding India's borders with China.
- International Women's Day is celebrated annually on 8th March. It includes.
- Women's Day was first celebrated back in 1911 by Clara Zetkin, who was a German. The roots of the celebration had been in the labour movement across Europe and North America.
- However, it was only in 1913 that the celebrations were shifted to 8th March, and it has remained that way ever since.
- International Women's Day was celebrated for the first time by the United Nations in 1975.

OSCARS 2023: RRR'S "NAATU NAATU" WINS BEST ORIGINAL SONG / THE ELEPHANT WHISPERERS WINS IN BEST DOCUMENTARY SHORT CATEGORY -

- The 95th Academy Awards (Oscars 2023) have announced that RRR's "Naatu Naatu" won Best Original Song.
- The song had to beat out songs like "Applause" from Tell It Like a Woman, "Hold My Hand" from Top Gun: Maverick, "Lift Me Up" from Black Panther: Wakanda Forever, and "This is Life" from Everything Everywhere All At Once.
- The Oscars 2023 was accepted by lyricist Chandrabose and composer Keeravani.
- The Elephant Whisperers, a Netflix documentary short from Kartiki Gonsalves and Guneet Monga, has won the 95th Academy Awards' Best Documentary Short award.
- The movie was up against 'Stranger At The Gate', 'Haulout', and 'How Do You Measure a Year?' The award is an honour of "my motherland, India," said director Gonzalves.
- The 41-minute short documentary, which was produced by Achin Jain and Guneet Monga and was directed by Kartiki Gonsalves, centres on a Tamil Nadu family who adopts two orphaned baby elephants from the Mudumalai Tiger Reserve.

'RRR' WINS BEST FOREIGN LANGUAGE FILM AT CRITICS CHOICE AWARDS 2023

 India's 'RRR' directed by SS Rajamouli has won the Critics Choice Awards 2023 in the Best Foreign Language Film category and Best Song category for 'Naatu Naatu'

Television:

- Best Actor: Bob Odenkirk (Best Drama Series: Better Call Saul)
- Best Actress: Zendaya (Euphoria)

Film:

- Best Actor: Brendan Fraser (The Whale as Charlie)
- Best Actress: Cate Blanchett (Tár)
- Best Director: Daniel Kwan and Daniel Scheinert (Best Movie: Everything Everywhere All at Once)

RV PRASSAD HONOURED THE MOST DISTINGUISHED SCIENTIST OF THE YEAR AWARD 2022-

- Renowned scientist, R Vishnu Prassad was honoured with "the most distinguished scientist of the year 2022" award at Indian Achievers Award ceremony held in Vigyan Bhawan, Delhi.
- The award recognized individuals for their outstanding contributions in various fields, including culture, science, sports, and innovation.
- He contributed to smart cities, solid waste management, largescale water treatment, and Swachh Bharat Abhiyan.



RRR





DEFENCE NEWS

INDIAN ARMY TO BUY 310 INDIGENOUS ADVANCED TOWED ARTILLERY GUN SYSTEM -

- The Ministry of Defence received a proposal from the Indian Army to buy 310 Advanced Towed Artillery Gun Systems (ATAGS) for deployment along the borders with China and Pakistan, marking a significant step towards 'Make-in-India' in the defense sector. The Indian Army has submitted a proposal worth more than USD 1 billion, which is currently being discussed.
- This would be the first order for the indigenous howitzer, which can strike targets at distances of up to 50 kilometers and is thought to be the best gun in its class.
 - to 50 kilometers and is thought to be the best gun in its class. The forces have been testing the gun at various altitudes and terrain. They have been upgraded based on
- user suggestions.
 Defence Research and Development Organisation (DRDO) has shared raw howitzer technology and knowhow with two private firms, Tata Advanced Systems, and Bharat Forge Group, and they will supply the system to the forces, which will include over 320 high mobility vehicles.
- The 155mm/52 caliber Advanced Towed Artillery Gun System (ATAGS) trials were completed at the Pokhran Field Firing Range (PFFR) between April 26 and May 2.
- The ATAGS is an indigenous towed artillery gun system project undertaken in mission mode by the DRDO as part of the Indian Army's artillery modernization program.
- The Armament Research and Development Establishment (ARDE) in Pune is the DRDO's nodal laboratory for the design and development of ATAGS.
- The development was carried out in collaboration with two industry partners, Tata Advanced Systems Ltd, and Bharat Forge Ltd, as well as active participation from other industries.

INDIA APPROVES PURCHASE OF 70 HTT-40 BASIC TRAINER AIRCRAFT -

- The Union Cabinet approved the procurement of 70 HTT-40 basic trainer aircraft from Hindustan Aeronautics Limited (HAL).
- The approval was given to the Indian Air Force (IAF). The procurement would cost around Rs 6,828 crore. The aircraft will be supplied over a period of six years.
- The aircraft is expected to meet the shortage of basic trainer aircraft of the IAF required for training newly inducted pilots. The aircraft, being an indigenous solution, is configurable for upgrades to incorporate the futuristic requirements of the IAF. The procurement will include associated equipment training



procurement will include associated equipment, training aids and simulators.

• Procurement is seen as the means of employment, which is expected to generate direct employment for nearly 1,500 personnel and indirect employment for up to 3,000 people spread over more than 100 MSMEs.





RECENTLY, JOINT ANTI-SUBMARINE WARFARE DRILLS ARE BEING HELD BY THE UNITED STATES, CANADA, INDIA, JAPAN, AND SOUTH KOREA -

• As a part of it, the exercise named Sea Dragon 23 was started on March 15, 2023 and it aims to strengthen the alliance between the countries to tackle threats from China and North Korea.

How China is Expanding its Maritime Domain-

- China's navy is taking part in joint search and rescue exercises in the Gulf of Oman with Iran and Russia.
- China's dispute with Japan over tiny islands in the East China Sea has also heated up, with both sides accusing the other of violating their maritime territory.
- China is holding Security Bond-2023 exercises with other nations as well.

What is Sea Dragon 23-

- Sea Dragon 23 is a coordinated antisubmarine warfare exercise being held between the US, Japan, Canada, South Korea, and India.
- The Indian Navy is represented by a P8I aircraft, along with P8A of the US Navy, P1 from the Japanese Maritime Self Defence Force, CP 140 from the Royal Canadian Air Force.

DEFENCE ACQUISITION COUNCIL RECENT UPDATES -

• The Defence Acquisition Council (DAC) accorded Acceptance of Necessity (AoN) for capital acquisition proposals worth Rs 70,500 crore for the Armed Forces & Indian Coast Guard under 'Buy Indian-IDDM' (Indigenously Designed, Developed and Manufactured).

Indian Navy-

• Out of the total proposals, Indian Navy proposals constitute more than Rs 56,000 crore, which largely includes indigenous BrahMos cruise missiles, Shakti Electronic Warfare (EW) systems, Utility Helicopters-Maritime among others.

Air force-

• Long Range Stand-Off Weapon for the Indian Air Force gets a nod, which is to be integrated on SU-30 MKI aircraft.

Army-

- Also, 155mm/52 Caliber Advanced Towed Artillery Gun System (ATAGS), along with High Mobility & Gun Towing Vehicles will be procured for the Indian Army.
- Hindustan Aeronautics is a big beneficiary of this announcement by DAC, as it shall supply Advance Light Helicopters MK-III to the Indian Coast Guard.
- The Helicopter will be able to carry a suite of surveillance sensors which will enhance the surveillance capabilities, along with giving full night capability and Instrument Flight Rules capability for operations of the Indian Coast Guard.

Defense Acquisition Council-

- The DAC is the highest decision-making body in the Defence Ministry for deciding on new policies and capital acquisitions for the three services (Army, Navy and Air Force) and the Indian Coast Guard.
- The Minister of Defence is the Chairman of the Council.
- It was formed, after the Group of Ministers recommendations on 'Reforming the National Security System', in 2001, post Kargil War (1999).



INDIAN NAVY CONDUCTS "AMPHEX 2023" MEGA EXERCISE IN ANDHRA-

- Indian Navy has carried out a six-day-long mega military exercise along with the Indian Army and the Indian Air Force near Kakinada in Andhra Pradesh. The "largest" biennial tri-services amphibious exercise AMPHEX 2023 was conducted from January 17 to 22.
- The exercise is to review the preparedness of the Indian Navy and the Army during the war, national calamities and coastal security enforcement. The exercise is being conducted near the Naval Enclave at Survaraopeta village in Kakinada rural Mandal off Kakinada coast.



- The exercise took place amid growing concerns over China's increasing military forays into the Indian Ocean, a region considered as the backyard of the Indian Navy.
- The joint operations conducted during the exercise saw participation by a large number of troops from Indian Army, amphibious warships from Indian Navy and aircraft from the Indian Air Force..

GLOBAL FIRE POWER INDEX, NO CHANGE IN TOP 4 MILITARY RANKINGS-

- The Global Firepower Index ranks the countries based on their potential military strength. India is ranked fourth in the index. The Global Firepower Index ranked 145 countries. The countries were evaluated based on prolonged offensive and defensive military campaigns.
- The Global Firepower Index is calculated using fifty individual factors from geography to logistical capability.
- It also includes manpower, land forces, airpower, natural resources, naval forces, logistics and financials.
 - Under manpower, the factors considered are total



- population, paramilitary, reaching military age annually, active reserves and active services. Under equipment, the factors considered are trainer fleet, aircraft fleet strength, helicopter fleet, attack
- fleets, rocket projectors, tank strength, towed artillery, aircraft carriers, naval fleet strength, destroyers, submarines, coastal patrol craft, frigates, mine warfare craft, coastal patrol craft and tanker fleets.
- The finance factors include external debt, defence budget, reserves of foreign exchange and gold and purchasing power parity.
- The Global Firepower Index, 2022, puts the US at the top, Russia at the second spot, China at No. 3, and India at No. 4.

AGNI-5 BALLISTIC MISSILE-

- Agni-5 is an ingeniously built advanced surface-to-surface ballistic missile developed under the Integrated Guided Missile Development Programme (IGMDP). It is a fire-and-forget missile, which cannot be stopped without an interceptor missile.
- The missile has the capability of hitting targets beyond the range of 5000 km and is crucial for India's selfdefense systems.



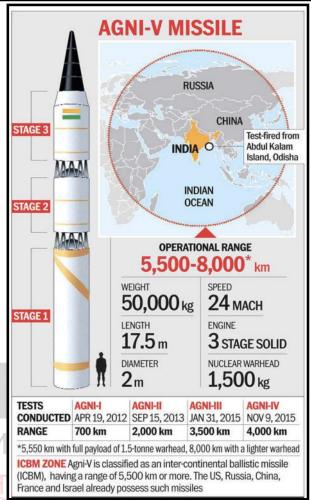
 The Agni missile class is the backbone of India's nuclear launch capability, as are Prithvi short-range ballistic missiles, submarine-launched ballistic missiles, and fighter aircraft.

Other Ranges of Agni Missiles-

- A. Agni I: Range of 700-800 km.
- B. Agni II: Range more than 2000 km.
- C. Agni III: Range of more than 2,500 Km
- **D. Agni IV:** Range is more than 3,500 km and can fire from a road mobile launcher.
- **E. Agni-V:** The longest of the Agni series, an Inter-Continental Ballistic Missile (ICBM) with a range of over 5,000 km.
- Integrated Guided Missile Development Programme IGMDP was the brainchild of renowned scientist Dr. APJ Abdul Kalam.
- It was intended to attain self-sufficiency in the field of missile technology.
- The IGMDP formally got the approval of the Indian government in 1983.
- It brought together the country's scientific community, academic institutions, R&D laboratories, industries and the three defence services in giving shape to the strategic, indigenous missile systems.

The missiles developed under IGMDP are-

- Short-range surface-to-surface ballistic missile Prithvi
- Intermediate-range surface-to-surface ballistic missile Agni
- Short-range low-level surface-to-air missile Trishul
- Medium-range surface-to-air missile Akash
- Third generation anti-tank missile Nag





SCIENCE & TECHNOLOGY

'WORLD'S FIRST' BAMBOO CRASH BARRIER INSTALLED ON MAHARASHTRA HIGHWAY -

- The world's first 200-metre-long bamboo crash barrier has been installed on a highway connecting Chandrapur and Yavatmal districts in Maharashtra.
- Named 'Bahu Balli', the bamboo crash barrier underwent "rigorous testing" at various governmentrun institutions like the National Automotive Test Tracks (NATRAX) in Pithampur, Indore. This was rated as Class 1 during the Fire Rating Test conducted at the Central Building Research Institute (CBRI) in Roorkee and it has also been accredited by the Indian Road Congress, According to Nitin Gadkari-led Ministry of Road Transport and Highways.



 Aatmanirbhar Bharat has been made with the development of the world's first bamboo-made crash barrier, which has been installed on the Vani-Warora Highway in Vidarbh, Maharashtra. Additionally, it has also been accredited by the Indian Road Congress. The recycling value of the bamboo barrier is 50-70 per cent whereas that of steel barriers is 30-50 per cent.

US HANDS OVER NISAR SATELLITE TO ISRO -

- The Indian Space Research Organisation (ISRO) has received the NASA-ISRO SAR (NISAR) satellite from the U.S. space agency. A US Air Force C-17 aircraft carrying the NASA-ISRO synthetic aperture radar (NISAR) has landed in Bengaluru.
- NISAR was envisioned by NASA and ISRO eight years ago in 2014 as a powerful demonstration of the capability of radar as a science tool and help us study Earth's dynamic land and ice surfaces in greater detail than ever before.
- NISAR is a Low Earth Orbit observatory jointly developed by NASA and ISRO.



- NISAR carries L and S dual-band Synthetic Aperture Radar (SAR), which operates with the Sweep SAR technique to achieve large swaths with high-resolution data. The SAR payloads mounted on Integrated Radar Instrument Structure (IRIS) and the spacecraft bus are together called an observatory.
- NISAR will be used by ISRO for a variety of purposes including agricultural mapping, and landslide-prone areas.
- NISAR will provide a wealth of data and information about the Earth's surface changes, natural hazards, and ecosystem disturbances, helping to advance our understanding of Earth system processes and climate change.
- The satellite is expected to be launched in 2024 from Satish Dhawan Space Centre in Andhra Pradesh, into a near-polar orbit. The satellite will operate for a minimum of three years. It is a Low Earth Orbit (LEO) observatory. NISAR will map the entire globe in 12 days.



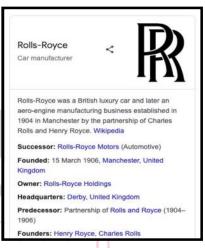
OPENAL HAS RECENTLY LAUNCHED ITS CHATGPT PLUS SUBSCRIPTION FOR INDIAN USERS, PROVIDING THEM WITH EARLY ACCESS TO THE LATEST LANGUAGE MODEL GPT-4 -

How is GPT 4 Different from Other Previous Models-

- According to OpenAI, GPT-4 is more advanced than its predecessors when it comes to creativity, visual comprehension and context.
- It also possesses the ability to collaborate with users on various creative projects, including music, screenplays, technical writing, etc.
- On the contrary, GPT-3 and GPT-3.5 only operated in one modality, text, allowing users only to ask questions by typing them out. It can process up to 25,000 words of text and facilitate extended conversations.
- It handles English best with an 85.5% accuracy, but Indian languages like Telugu aren't too far behind either, at 71.4%.

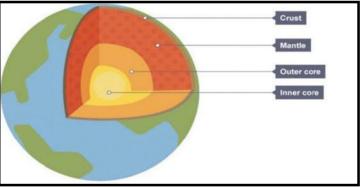
ROLLS-ROYCE ANNOUNCED ORDER OF TRENT XWB-97 ENGINES FROM AIR INDIA -

- Rolls-Royce, a British engineering company, announced that it has received an order from Air India for 68 Trent XWB-97 engines, in addition to an option for 20 more. The large A350 aircraft of Airbus are powered by Rolls-Royce XWB engines.
- Air India sealed an order for procuring 250 Airbus passenger jets. The order comprises 40 Airbus A350s and 210 Airbus A320/321 aircraft. Separately, Air India ordered 220 planes from Boeing.
- This is the biggest-ever order for the Trent XWB-97, which exclusively powers the Airbus A350-1000. Air India has also ordered 12 Trent XWB-84, engines, the sole engine option for the Airbus A350-900.
- It also informed that this is the first time that an Indian airline has ordered the Trent XWB and the deal will make Air India the largest operator of the Trent XWB-97 in the world.



RECENTLY, NEW RESEARCH SUGGESTED THAT EARTH'S INNER CORE HAS STOPPED SPINNING FASTER THAN ITS SURFACE AND MIGHT NOW BE ROTATING SLOWER THAN IT-

- The research analyzed seismic waves from repeating earthquakes over the last six decades.
- By analysing changes in the time and propagation of these signals, they could estimate the rotation of the inner core, which is believed to move independently from the mantle and rest of the planet.
- The inner core started rotating slightly faster than the rest of the planet in the early 1970s. But it had been slowing down before coming in sync with Earth's rotation around 2009.



- There has been a "negative trend", meaning the inner core is now rotating slower than the surface. Next change may occur in the mid-2040s.
- The results seem to indicate that the Earth's inner core changes its speed of rotation every 60-70 years on average.
- The slowdown could change how rapidly the entire planet spins, as well as influence how the core evolves with time.



How is the Earth's Inner Core-

- It is the innermost layer of the Earth. It is a hot iron ball of the size of Pluto. The inner core is solid due to the pressure caused by the weight put on it by the Earth's other top layers.
- It is distinct from the outer core, which is a liquid.Roughly 5,000 kilometers (3,100 miles) below the surface we live on, the inner core can spin independently because it floats in the liquid metal outer core.
- Radius- The inner core has an average radius of 1220 km. The boundary between the inner and outer cores is located at approximately 5150 km below the surface of the Earth. This boundary is called the Lehman Seismic Discontinuity.
- Temperature- Between 7,200-8,500°F (4,000-4,700°C).

ACCORDING TO THE MINISTRY OF EARTH SCIENCE, THE SAMUDRAYAAN MISSION IS EXPECTED TO BE REALISED BY YEAR 2026-

- The mission is aimed at sending three personnel to 6000-metre depth in a vehicle called 'MATSYA 6000' for the exploration of deep-sea resources like minerals.
- 'MATSYA 6000' vehicle is being designed and developed by National Institute of Ocean Technology (NIOT), Chennai under Ministry of Earth Sciences.
- It has an endurance of 12 hours under normal operation and 96 hours in case of emergency for human safety.
- It is India's first unique manned ocean mission and is a part of the Rs 6000-crores Deep Ocean Mission.
- The manned submersible will allow scientific personnel to observe and understand unexplored deep-sea areas by direct intervention.
- It will also boost the Central government's vision of 'New India' that highlights the Blue Economy as one of the ten core dimensions of growth.India has a unique maritime position, a 7517 km long coastline, which is home to nine coastal states and 1,382 islands.



<

Ministry of

Earth

- For India, with its three sides surrounded by the oceans and around 30% of the nation's population living in coastal areas and coastal regions play a major economic factor.
- Deep Ocean Mission- It was approved in June 2021 by the Ministry of Earth Sciences. It aims to explore the deep ocean for resources, develop deep-sea technologies for sustainable use of ocean resources, and support the Blue Economy Initiatives of the Indian Government.
- The cost of the Mission has been estimated at Rs. 4,077 crores over a five-year period and will be implemented in phases.

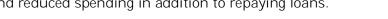


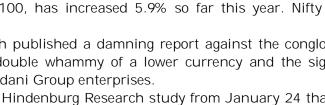
\$3.11 trillion on Tuesday, according to Bloomberg.

- The UK's FTSE 350 Index, which consists of firms in
 - the domestically oriented FTSE 250 and FTSE 100, has increased 5.9% so far this year. Nifty 50 has decreased 3.5% thus far in 2023.

Indian

- Since US-based short-seller Hindenburg Research published a damning report against the conglomerate, India's equity market has been dealing with a double whammy of a lower currency and the significant fallout of the stock tumble being experienced by Adani Group enterprises.
- The company refuted the allegations made in the Hindenburg Research study from January 24 that it had inappropriately used offshore tax havens and had manipulated stock prices.
- Concerns about its excessive debt levels were also raised in the report. Due to Hindenburg's devastating assessment, the listed Adani equities saw a combined market capitalization loss of an astounding \$140 billion.
- In an effort to assuage traders concerned about the group's access to funding, Adani has consistently refuted the allegations and reduced spending in addition to repaying loans.

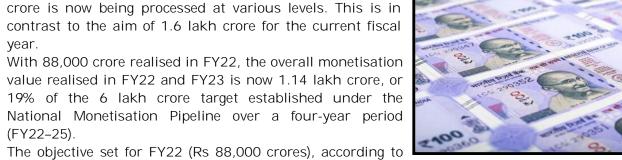




UK Stocks Beat India to Become World's Sixth-Biggest

3.6M

2023



the NITI Aayog, was met, and the pipeline of proposals totaling Rs 1.4 lakh crore are currently being

A total target of Rs 1,62,422 crores was planned for FY23, of which transactions with accrual and/or investment values of Rs 26,000 crores have been accomplished and proposals totaling Rs 1.23 lakh crore

ECONOMY AND FINANCE

ASSETS TOTALING RS 26,000 CRORE MONETIZED IN FY23: NITI AAYOG -

UK SURPASSES INDIA AS THE WORLD'S SIXTH-BIGGEST EQUITY MARKET -

The government has generated assets worth 26,000 crore during FY23, and a pipeline of proposals totaling 1.23 lakh



year.

(FY22-25).

This is \$5.1

counterparts.

processed by the relevant ministries.

are now being processed at various stages.

are being felt throughout Indian markets.

The UK has surpassed India as the sixth-largest equity market in the world for the first time since May 2022

as a weaker pound increases the attraction of exporters

and concerns over the Adani-Hindenburg controversy

This hasn't happened since May 29, 2022, when the combined market capitalization of primary listings in the UK, excluding ETFs and ADRs, reached about

billion more than their



• After losing more than 4% due to the Adani stock decline since late January, the BSE's market capitalization was Rs 261 lakh crore.

RECENTLY, INDIA'S UNIFIED PAYMENTS INTERFACE (UPI) AND SINGAPORE'S PAYNOW HAVE BEEN INTEGRATED TO ENABLE FASTER REMITTANCES BETWEEN THE TWO COUNTRIES -

- 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 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.
- PayNow allows users to send and receive instant funds from one bank or e-wallet account to another in Singapore by using just their mobile number,

Singapore National Registration Identity Card (NRIC)/Foreign Identification Number (FIN), or VPA.

• Linkage- With this facility, funds held in bank accounts or e-wallets can be transferred to /from India using just the UPI ID, mobile number, or VPA. This facility will eliminate the need for entering the details of beneficiaries, such as bank account numbers, bank codes etc.

INDIA TO CONTRIBUTE 15% OF GLOBAL GROWTH IN 2023: IMF -

- 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.
- 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.
- For FY 2023/24 (April 2023 to March 2024) India's growth rate is projected at 6.1% a bit slow like the rest of the world economy, but way above the global average. And in that way, India is providing about 15% of global growth in 2023.
- 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.
- 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.
- India does have a young population. 15 million people are added to the labour force every year. Strong investment climate that generates jobs is a great advantage for India. Women can be a fabulous driver for India's growth.

SERVICES EXPORTS TO CROSS USD 300 BILLION THIS FISCAL: PIYUSH GOYAL -

- The country's services exports are doing "extremely well" and going by the current trend these outbound shipments would register about 20 per cent growth in this fiscal and cross the USD 300 billion target despite global economic uncertainties, Commerce and Industry Minister Piyush Goyal has said.
- Minister Piyush Goyal further said that on the merchandise front also, exports are so far registering healthy growth despite the world being under recession, huge inflationary pressure, and overstocking of









various commodities. With all these stress, where every global leader is talking of "very" tough times, India's exports rose 9 per cent year-on-year during April-December 2022-23.

- During April-December 2022-23, overall exports rose 9 per cent to USD 332.76 billion while imports increased 24.96 per cent to USD 551.7 billion.
- Trade deficit during the nine-month period widened to USD 218.94 billion as against USD 136.45 billion in April-December 2021-22. In last fiscal year, the country's merchandise shipments touched an all-time high of USD 422 billion.
- India's exports contracted 12.2 per cent to USD 34.48 billion in December 2022, mainly due to global headwinds, and the trade deficit widened to USD 23.76 billion during the same period. The minister said individual months have seen some ups and downs, but overall the exports sector is doing well so far despite global economic uncertainties.



 According to the data of the commerce ministry, the estimated value of services export in April-December 2022 is USD 235.81 billion as compared to USD 184.65 billion in the year-ago period. In 2021-22, these exports touched an all-time high of USD 254 billion.

INDIA'S UNEMPLOYMENT RATE ROSE TO 7.45% IN FEB: CMIE -

- Joblessness as measured by the CMIE All India unemployment rate remained elevated in February 2023 and rose to 7.45% from 7.14% in the previous month.
- The urban unemployment rate decreased for the second straight month and was at 7.93% in February as against 8.55% in January. It touched a record high of 10.09% in December 2022. But more worrying the rural unemployment rate spiked to 7.23% last month from 6.48% in January.
- India's GDP growth rate declined for the second consecutive quarter in October-December (Q3FY23), coming in at 4.4 per cent, according to the data released by the Ministry of Statistics and Programme Implementation. The latest quarterly growth number at 4.4 per cent is lower than the 6.3 per cent growth that was seen in the second quarter of 2022-23.
- The government also released the data for the production of eight core sector growth in January. It showed that production of eight core sector growth expanded at a four-month high of 7.8 per cent in January, which is up from a 7 per cent growth recorded in December.
- The manufacturing sector in India expanded at the slowest pace in four months in February but remained relatively strong amid buoyant domestic demand, despite higher inflationary pressures.
- Rising borrowing costs and weakness in manufacturing have slowed the Indian economy. The manufacturing sector shrank 1.1 per cent in the quarter year-on-year, the second straight contraction reflecting weakness in exports.

INDIA'S DIGITAL PAYMENTS MARKET WILL MORE THAN TRIPLE TO \$10 TRILLION BY 2026 -

- In a country witnessing rapid growth, it comes as no surprise that India also has one of the fastest-growing fintech landscapes in the world, driven primarily by the advancement in the digital payments segment.
- Boston Consulting Group (BCG), in collaboration with PhonePe, India's leading digital payments company, today unveiled a report titled, "Digital payments in India: A US\$10 trillion opportunity".
- India's digital payments landscape has witnessed





phenomenal growth over the past five years. As per the report, India's digital payments market is at an inflection point and is expected to increase more than threefold from the current US\$3 trillion to US\$10 trillion by 2026.

• As a result of this unprecedented growth, digital payments (non-cash) will constitute 2 out of 3 payment transactions by 2026.

INDIA HAS GONE FROM BEING A MARGINAL SUGAR EXPORTER FIVE YEARS AGO TO NO. 2 IN THE WORLD, BEHIND ONLY BRAZIL -

- India has gone from being a marginal sugar exporter five years ago to No. 2 in the world, behind only Brazil. Between 2017-18 and 2021-22, exports have soared from USD 810.9 million to USD 4.6 billion.
- Sugar exports may cross USD5.5 billion in the current fiscal year.
- Sugar industry is an important agro-based industry that impacts the rural livelihood of about 50 million sugarcane farmers and around 5 lakh workers directly employed in sugar mills.
- In (Oct-Sep) 2021-22 India emerges as the world's largest producer and consumer of sugar and world's 2nd largest exporter of sugar.
- Sugar industry is broadly distributed over two major areas of production- Uttar Pradesh, Bihar, Haryana and Punjab in the north and Maharashtra, Karnataka, Tamil Nadu and Andhra Pradesh in the south.
- South India has a tropical climate which is suitable for higher sucrose content giving a higher yield per unit area as compared to north India.
- Geographical Conditions for the Growth of Sugar-DEMY FOR Temperature: Between 21-27°C with hot and humid climate. Rainfall: Around 75-100 cm. Soil Type: Deep rich loamy soil.
- Out of India's total 110 lakh tonnes (It) sugar exports in 2021-22, raws alone accounted for 56.29 lt.
- The biggest importers of Indian raw sugar were Indonesia (16.73 It), Bangladesh (12.10 It), Saudi Arabia (6.83 It), Iraq (4.78 It) and Malaysia (4.15 It).

470 AIRBUS, BOEING PLANES FOR AIR INDIA -

- Air India has announced two major deals worth around USD 100 billion to buy 470 passenger planes from top aircraft manufacturers Airbus (with France) and Boeing (with United States).
- The deal reflects India's aspirations to be a world leader in the aviation sector, which is projected to require over 2,000 aircraft in the next 15 years.
- This is the first aircraft order Air India has placed in 17 years and the first A350 aircraft will be delivered to Air India by the end of 2023.
- The deal is expected to make India the third-largest player in the aviation sector and create new opportunities in aerospace manufacturing under India's 'Make in India-Make for the World' vision.





- India's Civil Aviation is among the fastest-growing aviation markets globally and will be a major growth engine to make India a USD 5 trillion economy by 2024. The nation's aeroplane fleet is projected to quadruple in size to approximately 2500 aeroplanes by 2038.
- Recent Government Initiatives Related to Aviation Sector-
- National Civil Aviation Policy (NCAP) 2016- Through the NCAP 2016 the government plans to take flying to the masses by enhancing affordability and connectivity. It promotes ease of doing business, deregulation, simplified procedures, and e-governance.
- UDAN 2.0- The Scheme lays out the vision of improving value realisation through better integration and optimization of Agri-harvesting and air transportation and contributing to Agri-value chain sustainability, resilience under different and dynamic conditions.
- Monetising Assets through PPP Mode- The Centre has earmarked a total of 25 airports for asset monetisation over the years 2022 to 2025 under the National Monetization Pipeline.

GST COUNCIL WILL SET UP APPELLATE TRIBUNAL FOR DISPUTE REDRESSAL -

- FM Nirmala Sitharaman announced that the GST Council adopted the Group of Ministers (GoM) report on the GST Appellate Tribunal with certain modifications.
- The GoM on Goods and Services Tax Appellate Tribunals was set up under the chairmanship of Haryana Deputy CM Dushyant Chautala in July 2022.
- The tribunals should consist of two judicial members.One technical member each from the Centre and States, besides a retired Supreme Court Judge as president.

PM MODI INAUGURATES GLOBAL INVESTORS SUMMIT 2023 IN LUCKNOW-

- Prime Minister Narendra Modi inaugurated the Uttar Pradesh Global Investors Summit 2023 in Lucknow. The 10-12 February event is expected to be attended by several ministers of the Union and the state government and a host of leading industrialists.
- Prime Minister Narendra Modi, Defence Minister Rajnath Singh, Uttar Pradesh Chief Minister Yogi Adityanath and State Industrial Development Minister Nand Gopal Gupta Nandi as well as industrialists Mukesh Ambani, K Chandrasekaran, Kumar Mangalam Birla and Anand Mahindra addressed the inaugural session of the summit.



• The event is important for the state which initially set a target to attract investment proposals of Rs 10 lakh crore at the UPGIS-2023, and later revised it to Rs 17.3 lakh crore.

INDIA THE FIRST COUNTRY IN THE WORLD TO RECEIVE \$100 BILLION IN REMITTANCES-

- India will be the first country in the world to receive \$100 billion from remittances during 2022, the World Bank has said.
- Though remittances to the rest of the South Asian countries declined by 10%, it rose by 12% in India's case.
- Remittances to South Asian countries grew by 3.5% to \$163 billion in 2022.
- Worldwide, remittances are estimated at \$794 billion in 2022.



PM MODI ATTENDS



- South Asia receives the most remittances that are estimated at \$163 billion in 2022.India's share will be \$100 billion.
- Latin America and Caribbean comes second with \$142 billion.
- Remittances to India were enhanced by wage hikes and a strong labour market in the US and other member countries of OECD (Organisation for Economic Co-operation and Development).
- The top five recipient countries for remittances in 2022 are expected to be India, establishing a benchmark of \$100 billion in the year, followed by



Mexico, with a tally of \$60 billion (which replaced China in second position during 2021), and China, the Philippines, and the Arab Republic of Egypt.

• India had received \$89.4 billion in remittances in 2021, according to the World Bank, making it the top recipient globally last year also.





REPORTS & INDICES

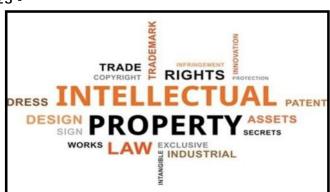
INTERNATIONAL INTELLECTUAL PROPERTY INDEX 2023 -

- Recently, India ranks 42nd among 55 leading global economies on the International Intellectual Property (IP) Index 2023 released by the U.S. Chambers of Commerce, according to which India is ripe to become a leader for emerging markets seeking to transform their economy through IP-driven innovation.
- US topped the International IP Index followed by United Kingdom and France.
- The Index evaluates the IP framework in each economy across 50 unique indicators which industry believes represent economies with the most effective IP systems.
- The indicators create a snapshot of an economy overall IP ecosystem and span nine categories of protection: Patents, Copyrights, Trademarks, Design Rights, Trade Secrets, Commercialization of IP Assets, Enforcement, Systemic Efficiency, Membership and Ratification of International Treaties.
- Intellectual Property (IP) refers to creations of the mind, such as inventions, literary and artistic works, symbols, names, and images used in commerce.
- These rights are outlined in Article 27 of the Universal Declaration of Human Rights. These legal protections allow the creators to control use of their work and prevent others from using or reproducing them without permission.
- The main types of IP include patents for inventions, trademarks for branding, copyrights for artistic and literary works, trade secrets for confidential business information, and industrial designs for product appearance.
- India is a member of the World Trade Organisation and committed to the Agreement on Trade Related Aspects of Intellectual Property (TRIPS Agreement).India is also a member of World Intellectual Property Organization. India on 108th Position in Electoral Democracy Index 2023 -

LIST OF 10 HAPPIEST COUNTRIES IN THE WORLD FOR 2023 -

- The World Happiness Report 2023 has been released. According to the World Happiness Index for 2023, Finland is the happiest country in the world for the sixth year in a row.
- Researchers looked at six important variables to determine where people are happy in the world: social support, money, health, independence, charity, and lack of corruption.
- The survey discovered that, despite a number of converging crises, overall life satisfaction is on par with levels prior to the epidemic.
- India has been ranked 125th out of 146 countries, which is an improvement of nine positions from its 2022 ranking.
- However, India's ranking is lower than even war-torn countries like Russia and Ukraine. Furthermore, India's







neighboring countries such as Nepal, China, Bangladesh, and Sri Lanka have a higher ranking than India.

ACCORDING TO THE MINISTRY OF HOME AFFAIRS (MHA) IN THE LAST FIVE YEARS, THE HIGHEST NUMBER OF CUSTODIAL DEATHS HAVE BEEN REPORTED IN GUJARAT AT 80 -

- Custodial death is a death that occurs while a person is in the custody of law enforcement officials or in a correctional facility. It can occur due to various causes such as use of excessive force, neglect, or abuse by the authorities.
- According to the Law commission of India, the crime by a public servant against the arrested or the detained person who is in custody amounts to custodial violence.

Custodial Death in India-

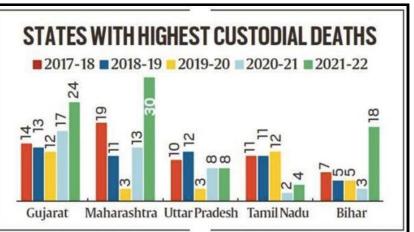
- A. A total of 146 cases of death in police custody were reported during 2017-2018,
- B. 136 in 2018-2019,
- C. 112 in 2019-2020,
- D. 100 in 2020-2021,
- E. 175 in 2021-2022.
- In the last five years, the highest number of custodial deaths (80) has been reported in Gujarat, followed by Maharashtra (76), Uttar Pradesh (41), Tamil Nadu (40) and Bihar (38).

Possible Reasons for Custodial Deaths-

- Absence of Strong Legislation
- Institutional Challenges
- Excessive Force:
- Lengthy Judicial Processes:
- Not Adhering to International Standard:
- Medical neglect or lack of medical attention, and even suicide.
- Poor training or lack of accountability among law enforcement officials.
- Inadequate or substandard conditions in detention centers.
- Underlying health conditions or pre-existing medical conditions that are not adequately addressed or treated while in custody.

Provisions Available Regarding Custody-

- Article 21 states that "No person shall be deprived of his life or personal liberty except according to procedure established by law".
- Article 22 provides "Protection against arrest and detention in certain cases".
- Police and public order are State subjects as per the Seventh Schedule of the Constitution of India.
- The Central Government issues advisories from time to time and also has enacted the Protection of Human Rights Act (PHR), 1993.
- Section 41 of Criminal Procedure Code (CrPC) was amended in 2009 to include safeguards so that arrests and detentions for interrogation have reasonable grounds and documented procedures, arrests are made transparent to family, friends and public, and there is protection through legal representation.





STATE OF INDIAN DAMS-

- According to a new study by the United Nations, around 3,700 dams in India will lose 26% of their total storage by 2050 due to accumulation of sediments which can undermine water security, irrigation and power generation in future.
- The study was conducted by the United Nations University Institute on Water, Environment and Health (UNU-INWEH), also known as the UN's think tank on water.
- Trapped sediment has already robbed roughly 50,000 large dams worldwide of an estimated 13 to 19% of their combined original storage capacity.
- It shows that 6,316 billion cubic metre of initial global storage in 47,403 large dams in 150 countries will decline to 4,665 billion cubic metre, causing 26% storage loss by 2050.
- The loss of 1,650 billion cubic metre storage capacity is roughly equal to the annual water use of India, China, Indonesia, France and Canada combined.
- In 2022, the Asia-Pacific region, the world's most heavily dammed region, is estimated to have lost 13% of its initial dam storage capacity. It will have lost nearly a guarter (23%) of initial storage capacity



lost nearly a <mark>quarter (23%) of initi</mark>al storage capacity by mid-century.— 🔘 🖃 🗛 🖕

- The region is home to 60% of the world's population and water storage is crucial for sustaining water and food security.
- China, meanwhile, the world's most heavily dammed nation, has lost about 10% of its storage and will lose a further 10% by 2050.
- India is ranked third in the world in terms of building large dams. Of the over 5,200 large dams built so far, about 1,100 large dams have already reached 50 years of age and some are older than 120 years.
- The number of such dams will increase to 4,400 by 2050 i.e., 80% of the nation's large dams face the prospect of becoming obsolete as they will be 50 years to over 150 years old.



ENVIRONMENT

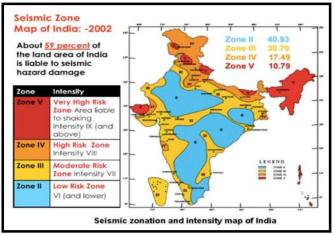
A SEVERE EARTHQUAKE FOLLOWED BY AN ALMOST EQUAL MAGNITUDE AFTERSHOCK HIT SOUTHEASTERN TURKEY AND SYRIA ON FEBRUARY 6, 2023, CAUSING WIDESPREAD DESTRUCTION AND LOSS OF LIFE-



- The Turkey-Syria earthquake should motivate a review of India's earthquake preparedness, as poor enforcement of zoning and construction rules is prevalent in the country.
- India's terrain is prone to great earthquakes, particularly in the Himalayan plate boundary, which has the potential for large quakes (magnitude 7 and above).
- In India, earthquakes are primarily caused by the collision of the Indian Plate with the Eurasian Plate.
- This collision has resulted in the formation of the Himalayas, as well as frequent earthquakes in the region.

Steps can be Taken for Earthquake Preparedness in India-

- Building Codes and Standards- India has established building codes and standards for earthquake-resistant construction.
- Retrofitting and Reinforcement- Older buildings may not meet current earthquake-resistant standards, and many of them can be retrofitted or reinforced to improve their seismic performance.
- Emergency Response Planning- Planning for





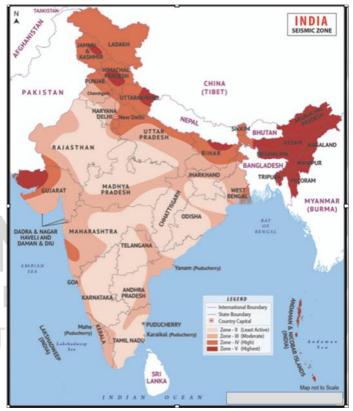


emergency response is critical for minimising the impact of earthquakes. This includes developing evacuation plans, establishing emergency shelters, and training personnel on how to respond to earthquakes.

• Research and Monitoring- Investing in research and monitoring can help improve our understanding of earthquakes and their causes, and can also help to develop better methods for predicting and mitigating their impact.

JOSHIMATH LAND SUBSIDENCE-

- Due to land subsidence, Joshimath a key transit point for tourists travelling to Badrinath and Hemkund Sahib - developed cracks, causing panic and protests among the local population.
- Joshimath has been declared a landslidesubsidence zone and over 60 families living in uninhabitable houses in the sinking town have been evacuated to temporary relief centres.
- Joshimath is a hilly town located on the Rishikesh-Badrinath National Highway (NH-7) in Chamoli district of Uttarakhand.
- The city serves as a tourist town as it acts as an overnight rest stop for people visiting Badrinath, Auli, Valley of Flowers, and Hemkund Sahib, among other important religious and tourist locations in the state.
- Joshimath is also of great strategic importance to the Indian armed forces and is home to one of the Army's most important cantonments.
- The town (fall in high-risk seismic Zone-V) is traversed by running streams with a high gradient from Vishnuprayag, a confluence of the Dhauliganga and the Alaknanda rivers.



- It is home to one of the four cardinal maths or monasteries established by Adi Shankara Sringeri in Karnataka, Dwarka in Gujarat, Puri in Odisha and Joshimath near Badrinath in Uttarakhand.
- Cracks on walls and buildings were first reported in 2021, as Chamoli district of Uttarakhand experienced frequent landslides and flooding.
- As per reports, the Uttarakhand government's expert panel in 2022 found that several pockets of Joshimath are "sinking" owing to man-made and natural factors.
- According to the 1976 Mishra Committee report, Joshimath lies on a deposit of sand and stone, it's not on the main rock. It lies on an ancient landslide. The report added that undercutting by river currents of Alaknanda and Dhauliganga are also playing their part in bringing landslides.



GOVERNMENT INITIATIVES

AMAZON WILL JOIN THE ONDC NETWORK IN INDIA -

- E-commerce giant Amazon announced that it will join the Indian government's ONDC (Open Network for Digital Commerce) platform, and as part of its initial collaboration will integrate its Smart Commerce and logistics services with the ONDC network.
- Amazon logistics services include pickup and delivery, while Smart Commerce is a suite of SaaS (software-as-a-service) products hosted on AWS that can assist MSMEs build and scale their business and integrate it with the ONDC network.



 Amazon said it will continue to explore potential opportunities for a stronger integration with the ONDC network. ONDC is a non-profit organization set up by the commerce ministry's Department for Promotion of Industry and Internal Trade (DPIIT) to democratise e-commerce services and provide small e-commerce stores and online sellers with a level playing field.

ONE NATION, ONE CHALLAN INITIATIVE -

- The Gujarat government is in the process of setting up virtual traffic courts in the state under the One Nation, One Challan initiative.
- It aims to bring all related agencies, such as the traffic police and the Regional Transport Office (RTO), on one platform, to enable the seamless collection of challans as well as data transfer.
- The system involves the detection of traffic violations through the CCTV network and getting the registration number of the erring vehicle from applications like VAHAN (detecting the vehicle's ownership details) and SARATHI (compilation of driving licenses).
- An e-challan is then generated with the relevant penalty amount, and sent to the mobile number linked



with the vehicle. If someone doesn't pay the challan amount within 90 days, the challan will be automatically forwarded to a virtual court and proceedings will be initiated.

• Virtual courts are aimed at eliminating the presence of litigants in the court. An accused can search their case on the virtual court's website and successful pay for the fine to dispose the case.

VIBRANT VILLAGES PROGRAMME -

- Recently, the Union Cabinet has approved raising of seven new ITBP (Indo-Tibetan Border Police) battalions and allocated Rs 4,800 crore under the Vibrant Villages Programme (VVP) to bolster the social and security framework along the China border.
- The Cabinet has also cleared a 4.1-km Shinku-La tunnel on the Manali-Darcha-Padum-Nimmu axis to allow all-weather connectivity to Ladakh.



- The decision to raise additional battalions was taken keeping an eye on the need for effective monitoring in the border areas and the battalion.
- The government's decision to approve a financial package for border villages and upgrade security comes at a time when issues with China are still to be resolved along the LAC in Ladakh.
- PLA troops are still squatting in the Depsang Plains and Demchok. China is also upgrading its infrastructure along the LAC.



Vibrant Villages Programme-

- It is a Centrally sponsored scheme, announced in the Union Budget 2022-23 (to 2025-26) for development of villages on the northern border, thus improving the quality of life of people living in identified border villages.
- It will cover the border areas of Himachal Pradesh, Uttarakhand, Arunachal Pradesh, Sikkim and Ladakh. It will cover 2,963 villages with 663 of them to be covered in the first phase.



- Vibrant Village Action Plans will be created by the district adminstration with the help of Gram Panchayats. There will not be overlap with Border Area Development Programme.
- The scheme aids to identify and develop the economic drivers based on local, natural, human and other resources of the border villages on the northern border.

PM MODI INAUGURATES ASIA'S LARGEST HELICOPTER MANUFACTURING FACILITY IN KARNATAKA'S TUMAKURU-

- Prime Minister Narendra Modi dedicates to the nation the Hindustan Aeronautics Limited (HAL) helicopter factory in Karnataka's Tumakuru. The foundation stone of the facility, which is a dedicated new greenfield helicopter factory, was also laid by PM Modi in 2016. The facility will enhance India's capacity and ecosystem to build helicopters. This will result in providing employment for around 6000 people in the region.
- This helicopter factory is Asia's largest helicopter manufacturing facility and will initially produce the Light Utility Helicopters (LUH), the PMO said in a release. LUH is an indigenously designed and developed 3-tonne class, single engine multipurpose utility helicopter with unique feature of high manoeuvrability.
- The factory will be expanded to manufacture other helicopters such as Light Combat Helicopter (LCH) and Indian Multirole Helicopter (IMRH) as well as for repair and overhaul of LCH, LUH, Civil ALH and IMRH in the future.



- The factory also has the potential for exporting the civilian LUHs in future, the PMO said.
- This facility will enable India to meet its entire requirement of helicopters indigenously and will attain the distinction of enabling self-reliance in helicopter design, development and manufacture in India.
- The factory will have a manufacturing set up of Industry 4.0 standards. According to the PMO, over the next 20 years, HAL is planning to produce more than 1000 helicopters in the class of 3-15 tonnes from Tumakuru.



APPOINTMENTS/PERSON IN NEWS

RECENTLY, INDIAN AMERICAN BUSINESS EXECUTIVE AJAY BANGA WAS NOMINATED BY US PRESIDENT TO HEAD THE WORLD BANK -

- If confirmed by the World Bank Board of directors, he will be the first Indian-American to head either of the two top international financial institutions: the International Monetary Fund (IMF) and the World Bank.
- World Bank was created in 1944, as the International Bank for Reconstruction and Development (IBRD) along with the IMF. The IBRD later became the World Bank.
- The World Bank is one of the United Nations' specialized agencies. It has 189 member countries.
- Major Reports- Ease of Doing Business (Stopped publishing), Human Capital Index, World Development Report.
- Shareholding of WB- The United States is the largest single shareholder, with 16.41% of the votes, followed by Japan (7.87%), Germany (4.49%), the United Kingdom (4.31%), and France (4.31%). The rest of the shares are divided among the other member countries.

MAHARASHTRA CHIEF MINISTER EKNATH SHINDE NAMED SHIV SENA CHIEF -

- Eknath Shinde, the chief minister of Maharashtra, was elected as the Shiv Sena's supreme leader during the party's national executive meeting.
- The Election Commission of India (ECI) recognised his faction as the true Shiv Sena and gave him the "bow and arrow" insignia during the first national executive meeting following that recognition.
- The MLAs, MPs, and other Sena leaders who had joined Shinde after he split from the group headed by former chief minister Uddhav Thackeray were present at the meeting.
- Many important proposals were presented in this meeting, including the proposal to give Bharat Ratna to Veer Savarkar. Apart from this, a proposal was presented to give maximum employment opportunities to the local youth in all the projects in the state and to give the status of elite language to Marathi language.

RAJEEV RAGHUVANSHI APPOINTED AS NEW DRUG CONTROLLER GENERAL OF INDIA -

- Rajeev Singh Raghuvanshi has been appointed as the new Drug Controller General of India (DCGI), Central Drugs Standard Control Organization (CDSCO). Rajeev Singh Raghuvanshi is a former Indian Pharmacopoeia Commission secretary-cum-scientific director.
- The Union Public Service Commission (UPSC) has recommended to the government his name as the successor to Dr. V G Somani, whose extended tenure will end in mid-February.
- The recommendation was later approved by the Health







Ministry, followed by approval of the Appointments Committee of Cabinet led by Prime Minister Narendra Modi.

- The DCGI heads the Central Drugs Standard Control Organisation (CDSCO) which is responsible for ensuring quality drug supply across the country. It also has the authority to give approval to new drugs and regulate clinical trials.
- He has more than 25 publications in peer-reviewed journals and has co-authored six chapters in books.

MANIK SAHA SWORN IN AS 13TH CM OF TRIPURA //CONRAD SANGMA SWORN-IN AS MEGHALAYA CHIEF MINISTER FOR 2ND TERM -

- Manik Saha took oath as 13th chief minister for the second time as Tripura Chief Minister after the BJP clinched a victory in the February 16 Assembly polls.
- Eight other ministers were sworn. Governor Satyadeo Narayan Arya administered the oath of office and secrecy to Mr. Saha and eight more MLAs as Ministers in the presence of Prime Minister Narendra Modi, Union Home Minister Amit Shah held a marathon meeting with TIPRA Motha chief Pradyot Bikram Manikya Debbarma and 13 MLAs of his party.
- Four of the new ministers have been retained from the previous government. The possible strength of the Council of Ministers in the 60-member House is 12.
- Conrad Kongkal Sangma was sworn in as the Meghalaya chief minister for the second successive term in the presence of Prime Minister Narendra Modi.
- Governor Phagu Chauhan administered the oath of office to Sangma, along with his two deputies Prestone Tynsong and Sniawbhaland Dhar, and nine other ministers.
- Sangma won from the South Tura constituency with a margin of 5,016 against Bharatiya Janata Party's Bernard N Marak, as per the data shared by the Election Commission of India on March 2.

NEPAL ELECTS RAM CHANDRA PAUDEL AS ITS NEXT PRESIDENT - O R / A

- Ram Chandra Paudel has been elected to serve as the new president of Nepal. According to the Nepalese Election Commission, he received 33,800 electoral votes, while his opponent, Subash Chandra Nembwang, received 15,500 votes.
- Ram Chandra Paudel received votes from 352 members of provincial assemblies and 214 members of parliament.
- An electoral college made up of representatives from the federal parliament and the provincial assembly chooses the president.
- The overall number of electors in Nepal's presidential election is 882, including 550 representatives from each of the country's seven provincial assembly and 332 members of the parliament. As Nepal's new president, he will take over from Bidya Devi Bhandari.

FIFA PRESIDENT GIANNI INFANTINO RE-ELECTED FOR ANOTHER TERM -

- Gianni Infantino was re-elected as FIFA president until 2027 by acclamation, after highlighting his strong financial performance as a reason for keeping a CEO in their position for life.
- The decision was made by the congress of 211 member federations, who have seen their annual funding from FIFA increase from \$250,000 to \$2 million since Infantino's first win in 2016.
- Following the 2022 World Cup in Qatar, FIFA now has \$4 billion in reserves, and it conservatively predicts a record revenue of at





least \$11 billion from the 2026 men's World Cup, which will be hosted in North America.

ERIC GARCETTI APPOINTED AS US AMBASSADOR TO INDIA -

- The US Senate Committee has announced the appointment of Eric Garcetti as the new US Ambassador to India.
- Despite being nominated by President Joe Biden almost two years ago, Garcetti's appointment had been pending until now.
- Eric Garcetti served as the President of the City Council of Los Angeles for four consecutive terms and is known to be a close acquaintance of President Biden. He has also emerged as a leader within the Democratic Party.
- However, Garcetti's tenure as mayor of Los Angeles lasted for **second line (a)** nine years and was not without controversy. In 2020, there was a controversial incident that occurred during his time in office.
- Eric Garcetti's nomination for the prestigious diplomatic posting as the US Ambassador to India had been pending before the US Congress since July 2021, when President Biden nominated him for the position.
- Prior to his confirmation, the position had remained vacant for more than two years. However, during
 President Biden's first two years in office, some lawmakers had expressed concerns about Garcetti's
 handling of sexual assault and harassment allegations against a former senior adviser, which led to his
 confirmation being delayed.

FORMER PAKISTAN PRESIDENT PERVEZ MUSHARRAF PASSES AWAY

- Former President of Pakistan, Pervez Musharraf passed away at the age of 79 in Dubai.
- He ruled Pakistan from 1999 to 2008.
- He has been declared a fugitive in the former Prime Minister Benazir Bhutto murder case and Red Mosque cleric killing case.
- In March 2014, he was indicted for suspending the Constitution on November 3, 2007.
- In December 2019, a special court handed Musharraf a death sentence in the high treason case against him.

CHRIS HIPKINS SWORN IN AS NEW ZEALAND'S 41ST PRIME MINISTER-

- Chris Hipkins was sworn in as the 41st prime minister of New Zealand by the governor-general during a ceremony in Wellington.
- His appointment came after the resignation of former PM Jacinda Ardern.
- He will have less than nine months before contesting a tough general election, with opinion polls indicating his Labour Party is trailing its conservative opposition.
- He served as education and police minister under Ardern.



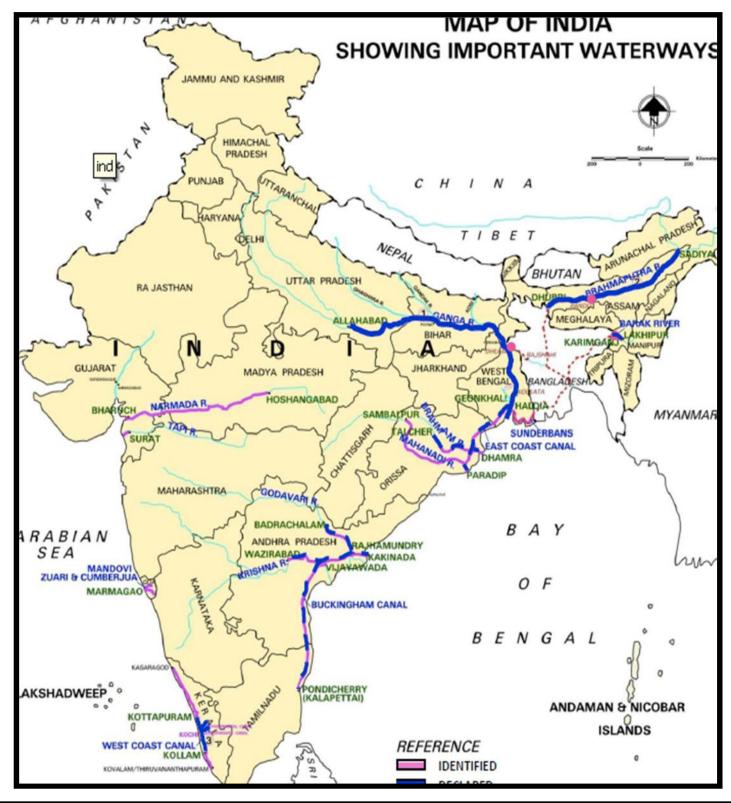




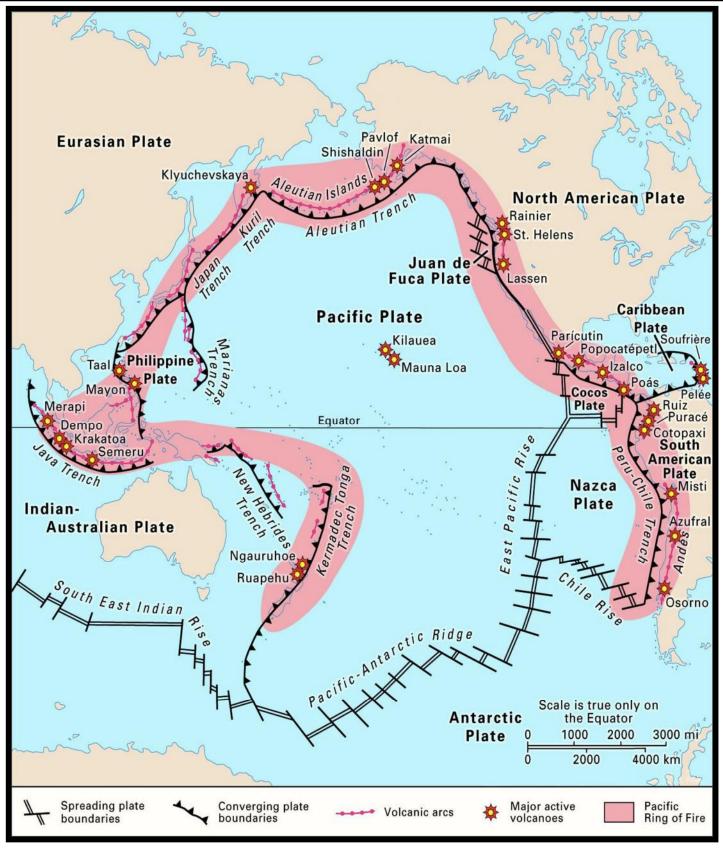




IMPORTANT MAPS & ARTICLES



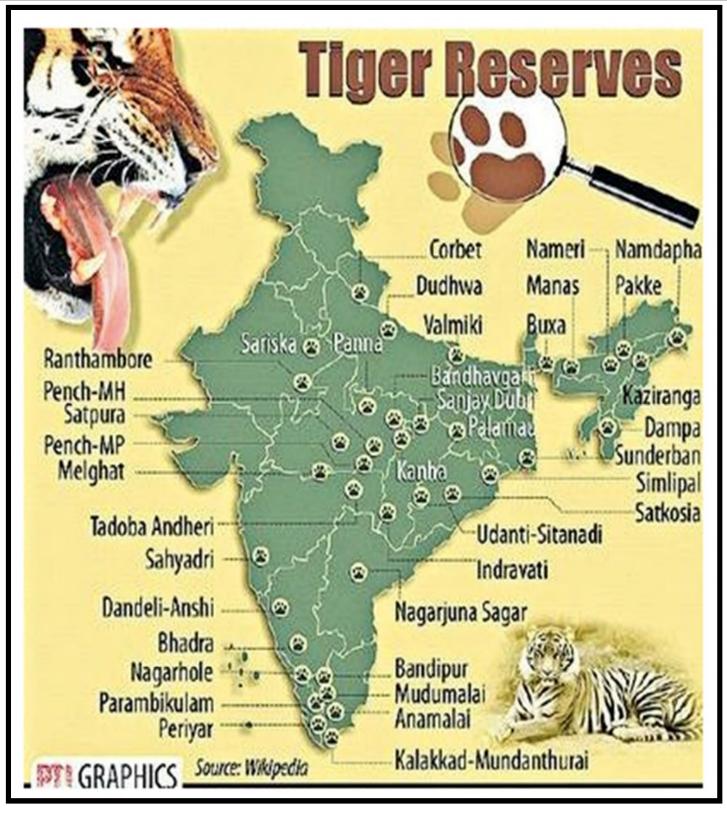




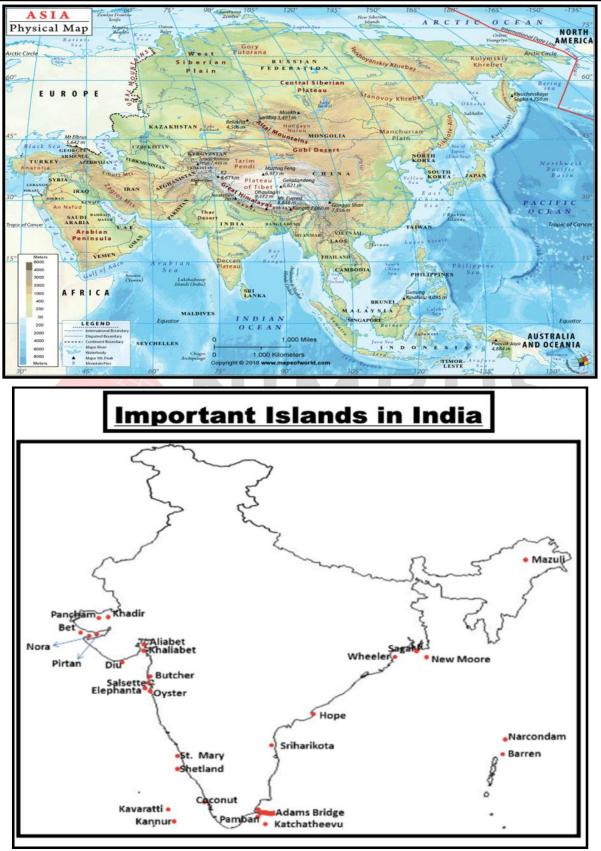




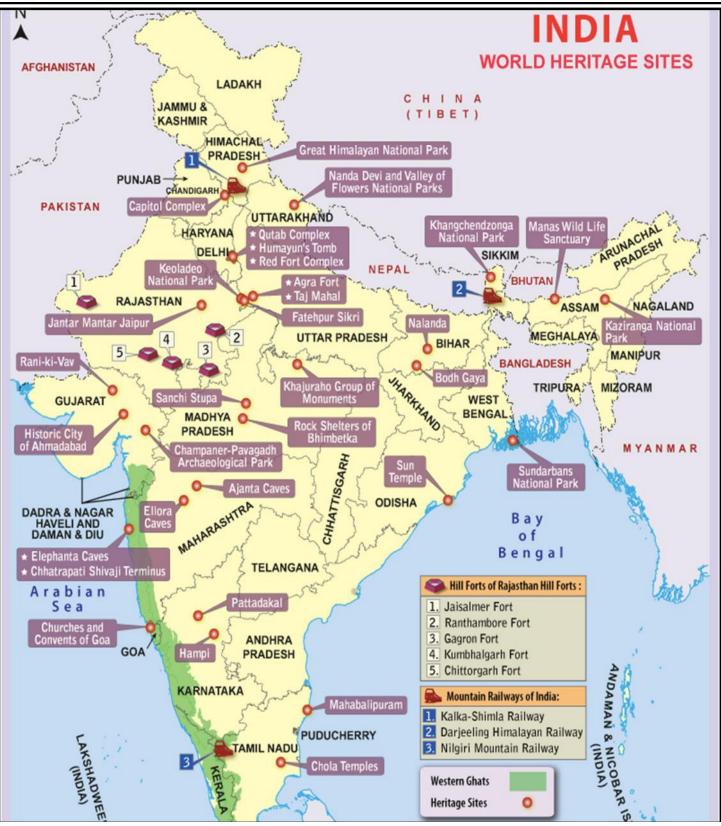






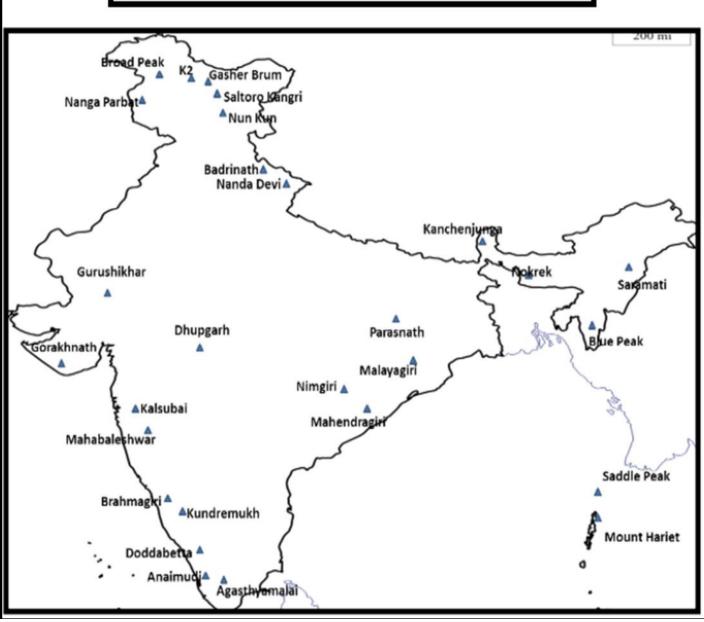














CURBING FAKE NEWS

In the age of the internet, fake news has become the new social evil that is haunting us.

Recently, a fake video was spread in which a migrant worker in Tamil Nadu was being attacked.

Concerned about the ongoing situation, the Tamil Nadu government said that those who spread rumours that migrant workers are being attacked in Tamil Nadu are against the Indian nation and they cause harm to the integrity of the country.

In 2020, the number of cases filed against people 'circulating fake/false news/rumours' under Section 505 of the Indian Penal Code (IPC) has increased by 214%, according to the National Crime Records Bureau.

There is also a need for stronger laws against fake news in India and media organisations need to make factchecking a routine practice and create greater public awareness.

What are the Challenges in Curbing Fake News in India?

Low Digital Literacy:

- India's digital literacy rate is still low, which makes it easy for fake news to spread, as people often do not have the skills to verify the authenticity of news sources.
- According to the India Inequality Report 2022: Digital Divide, approximately 70% of the population has poor or no connectivity to digital services.
- Among the poorest 20% households, only 2.7% have access to a computer and 8.9% to internet facilities.
- Political Use:
- Fake news is often used for political purposes in India, especially during elections. Political parties use fake news to manipulate public opinion, which makes it challenging to control the spread of fake news.
- Limited Fact-Checking Infrastructure:
- India has limited fact-checking infrastructure, and many of the available fact-checking organizations (PIB fact check units) are small and poorly funded.
- Lack of Penalties:
- There are currently no strict penalties for the spread of fake news in India, which makes it difficult to deter people from creating and disseminating fake news.
- Opacity of Social Media Platforms:
- Social media platforms are increasingly becoming the primary ground for public discourse over which a handful of individuals have inordinate control.
- One of the biggest hurdles in being able to curb misinformation is the lack of transparency by social media platforms.
- Even when platforms have disclosed certain kinds of information, the data is often not presented in a manner that facilitates easy analysis.
- Anonymity:
- The most famous reason for anonymity is to be able to speak the truth against vindictive governments or to not let the views be tagged to the real person being spoken about, in the offline world.
- Despite helping people share their views without any insecurity, it does more harm in the sense that they may spread false information without any repercussions.

What are the Initiatives taken in this Regard?

- Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021:
- The Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 proposes that social media platforms are required to remove content that has been fact-checked by the Press Information Bureau's fact check unit and deemed false.
- This rule aims to curb the spread of fake news and misinformation on social media platforms.
- IT Act 2008:
- Section 66 D of the IT Act 2008 regulates offences related to electronic communication.



- This includes punishing individuals who send offensive messages through communication services or social media platforms. This act can be used to penalize those who spread fake news through electronic communication.
- Disaster Management Act 2005:
- The Disaster Management Act 2005 and the Epidemic Diseases Act 1897 (especially during Covid-19) regulate the circulation of fake news or rumours that can cause panic among citizens.
- Indian Penal Code of 1860:
- It regulates fake news that causes riots and information that causes defamation. This act can be used to hold individuals accountable for spreading fake news that incites violence or defames someone's character.

What should be the Way Forward?

- Promote Media Literacy:
- Education and awareness are critical tools in combating fake news. People need to be taught how to verify sources, fact-check claims, and understand the difference between reliable and unreliable news sources.
- Strengthen Laws:
- India has some laws against fake news, but they need to be more robustly enforced. Laws need to be
 updated to address the rapidly evolving online media landscape.
- Encourage Responsible Journalism:
- Journalists need to adhere to ethical standards and be accountable for their reporting. Media organizations can play a role in promoting responsible journalism and fact-checking.
- Encourage Social Media Companies to Act:
- Social media platforms need to be more proactive in identifying and removing fake news. They can use artificial intelligence tools to identify fake news and work with fact-checking organizations to verify news stories.
- Encourage Fact-Checking Organizations:
- Fact-checking organizations can play a critical role in verifying news stories and educating people about fake news. These organizations need to be encouraged and supported by the government and media.
- The fact checks unit of the Press Information Bureau (PIB) busted 1,160 cases of false information since its inception in November 2019.
- Encourage Responsible Social Media Use:
- Individuals need to take responsibility for their social media use. They need to avoid sharing unverified news stories and be more critical of what they see online.
- Foster a Culture of Critical Thinking:
- Critical thinking skills need to be fostered in schools and in society in general.
- People need to be encouraged to question what they read and hear and to seek out reliable sources of information.

INDIA AND THE AUKUS GROUPING

Recently, the US, UK and Australia have unveiled details of their plan to create a new fleet of nuclear-powered submarines, aimed at countering China's influence in the Indo-Pacific region. Under the AUKUS pact Australia is to get at least three nuclear-powered submarines from the US.

The AUKUS agreement, which involves Australia acquiring nuclear-powered submarines with the help of the US and the UK, is being praised and criticized simultaneously. It is viewed as a means of strengthening deterrence and stability in the Indo-Pacific. However, China sees it as a dangerous alliance that the US is building in the area, along with the Quadrilateral forum or the Quad.

This pact will trigger multiple strategic consequences for Asia, including India. However, it is also an opportunity for India to develop a unique set of arrangements with the US and its allies.



What is AUKUS Grouping?

- It is a trilateral security partnership for the Indo-Pacific, between Australia, the UK and the US (AUKUS) which was signed in 2021.
- The major highlight of this arrangement is the sharing of US nuclear submarine technology to Australia.
- Its Indo-pacific orientation makes it an alliance against China's assertive actions in the South China Sea.
- It involves a new architecture of meetings and engagements between the three countries, as well as cooperation across emerging technologies (applied AI, quantum technologies and undersea capabilities).

What are the Concerns related to AUKUS Grouping for Asia?

- Regional Security:
- The AUKUS partnership has been perceived as a challenge to the security and stability of the region, particularly by China. The agreement includes the sharing of sensitive defense technologies and intelligence, which has raised concerns about its impact on the strategic balance in the region.
- Diplomatic Implications:
- The AUKUS partnership has also been viewed as a diplomatic setback for countries such as India, Japan, and South Korea, which have traditionally been seen as key allies of the United States in the region.
- These countries fear that the new partnership will sideline them and reduce their influence in the region.
- Impact on Non-Proliferation:
- The AUKUS partnership involves the transfer of nuclear-powered submarine technology to Australia, which has raised concerns about its impact on global non-proliferation efforts. Some experts have expressed concern that this move could set a dangerous precedent and encourage other countries to pursue nuclear capabilities.
- Economic Consequences:
- The AUKUS partnership has also raised concerns about its economic implications, particularly for countries such as India that have significant defense industries. The agreement is expected to lead to increased competition and could potentially impact the ability of these countries to sell defense equipment to Australia.

What will be the Strategic Consequences for India?

- Strengthening ties with Australia:
- With Australia's upgraded scientific and technical capabilities, there is an opportunity for India to deepen its S&T cooperation with Australia, which could eventually expand to sensitive strategic areas.
- This would enhance India's own technological capabilities and contribute to regional peace and security.
- Recognizing the Continuing Global Strategic Salience of Britain:
- India tends to neglect the strategic importance of Britain, but the AUKUS deal may boost UK's profile in Asia.
- India could explore opportunities for closer cooperation with Britain on Indo-Pacific security issues.
- Embracing the idea of an "Anglosphere":
- Despite India's difficult past relations with the Anglosphere, the AUKUS deal has brought enduring geopolitical bonds between the US, UK, Australia, Canada, and New Zealand back to life.
- An Anglosphere is also called the world of English-speaking people bound by common political beliefs, similar legal traditions, and shared geopolitical interests.
- India could explore opportunities to expand its ties with the English-speaking world, particularly in the areas of technology and defense.
- Developing a Unique Set of Arrangements:
- With the US seeking to boost the strategic capabilities of its allies and partners in the Indo-Pacific, India has a rare opportunity to develop its own set of arrangements with the US and its allies.
- This could involve closer military cooperation, joint exercises, and intelligence sharing, among other things. How can India Safeguard its Strategic Interests?



Exploring Opportunities for Collaboration:

- India can explore opportunities for collaboration and technology transfer with the AUKUS countries, while also ensuring that its own national security interests are not compromised.
- India can seek collaborations with AUKUS countries in areas such as maritime security, cybersecurity, and intelligence sharing.

Maintaining Balance:

- India should maintain a balance between its engagement with AUKUS and other key partners, such as Russia, France, and Japan.
- India should avoid being drawn into a zero-sum game and strive to maintain strong ties with all relevant countries.
- This is particularly important given the complex geopolitical landscape of the Indo-Pacific region.
- Strengthening Quad:
- India should work towards strengthening the Quad, which could provide a counterbalance to AUKUS and help promote a rules-based regional order.
- India should leverage the Quad to promote regional stability and balance of power.
- Ensuring the Interest of Smaller Countries:
- India needs to ensure that the interests of smaller countries in the region are not overlooked in any engagements with AUKUS. India should take a leadership role in promoting a cooperative and inclusive approach to regional security issues.
- This could involve initiatives such as capacity building for smaller countries in the region and promoting greater regional integration and connectivity.

TRANSFORMING INDIA'S LOGISTICS SYSTEM

The Union Budget 2023 has doubled the PM Gati Shakti National Master Plan to States from Rs. 5,000 crore to Rs. 10,000 crore, and has announced an outlay of Rs. 2.4 lakh crore for the Indian Railways.

The plan is a "transformative approach for economic growth and sustainable development dependent on the engines of roads, railways, airports, ports, mass transport, waterways and logistics infrastructure".

Providing the right platform to address the infrastructure challenges that have hindered the movement of freight by rail, PM Gati Shakti sets the goal of increasing rail freight movement from 27% to 45% by 2030 and freight movement from 1.2 billion tonnes to 3.3 billion tonnes by 2030.

So, improving the logistics system is essential for enhancing a country's competitiveness in logistics.

What are the Issues with India's Logistics System?

- Skewed Modal Mix:
- The modal mix in India's freight movement is heavily skewed towards road transport, with 65% of freight being moved by road. This has led to increased congestion, pollution, and logistics cost escalation on roads.
- Loss of Rail Freight Share:
- Despite being a more cost-effective mode of transportation, railways have been losing freight share to more flexible modes, due to the convenience of road transport.
- The Indian Railways face infrastructural challenges such as the lack of necessary terminal infrastructure, maintenance of good sheds and warehouses, and uncertain supply of wagons, absence of all-weather roads as a substantial part of the country is out of reach for railways.
- This results in high network congestion, lower service levels, and increased transit time.
- Dominance of Bulk Commodities:
- Coal, iron ore, cement, food grains, and fertilizers account for a significant share of India's freight movement, while non-bulk commodities have a very small share in rail freight movement.



- In 2020-21, coal constituted 44% of the total freight movement of 1.2 billion tonnes, followed by iron ore (13%), cement (10%), food grains (5%), fertilizers (4%), iron and steel (4%), etc.
- Transportation of non-bulk commodities accounts for a very small share in the rail freight movement.

Operational and Connectivity Challenges:

 Increased transit time by rail, pre-movement and post-movement procedural delays, multi-modal handling, and the absence of integrated first and last-mile connectivity by rail are some of the operational and connectivity challenges faced by India's logistics system.

Lack of Skilled & Specialist Personnel:

- It has emerged as one of the most prominent concerns, especially in the face of increasing volumes, complex operations, and increasing work pressure with multi-tasking.
- Availability of experienced human resources for mostly labor-intensive processes, demanding higher skills and expertise is a challenge for logistics companies.

Warehousing & Taxation Discrepancies:

- Logistics companies generally opt for warehousing because it enables them to store goods and move them closer to the customer when demand occurs. It helps to reduce the transit time.
- However, warehousing is not free of cost and needs proper planning for optimum use.
- Fragmentation:
- The logistics industry in India is highly fragmented, with many small and medium-sized players operating independently, leading to suboptimal utilization of resources and higher costs.
- Inefficient Supply Chain Management:
- The lack of coordination between various players in the supply chain, including manufacturers, distributors, and retailers, leads to inefficiencies, delays, and increased costs.

तमसो मा जयोतरिंगमय

What are the Initiatives Related to Logistics?

- National Logistics Policy (NLP)
- Multimodal Transportation of Goods Act, 1993. DEMAN FOR
- PM Gati Shakti Scheme
- Multi Modal Logistics Parks
- LEADS Report
- Dedicated Freight Corridor
- Sagarmala Projects
- Bharatmala Project

What should be the Way Forward?

- Need for Investment:
- India needs to heavily invest in advanced rail infrastructure for quick and low-cost container movement, like China, to improve its logistics competitiveness.
- Continuous monitoring of existing projects along with identification of new priority areas will also help in achieving the targets of rail freight movement.
- India needs to focus on developing dedicated freight corridors to ease the oversaturated line capacity constraints and improve the timing of trains.
- The upcoming Dedicated Freight Corridors along India's eastern and western corridors and multimodal logistics parks will ease the oversaturated line capacity constraints and improve the timing of trains.
- Encouraging Private Participation:
- Indian Railways should encourage private participation in the operation and management of terminals, containers, and warehouses to enhance the efficiency of the logistics system.
- Establishment of a Special Entity:



- Indian Railways should establish a special entity in partnership with the private sector to handle intermodal logistics, which could function as a single window for customers for cargo movement and payment transactions.
- Integrated Logistics Infrastructure:
- An integrated logistics infrastructure with first and last-mile connectivity is essential to make rail movement competitive with roads and facilitate exports by rail to neighbouring countries such as Nepal and Bangladesh.
- Collaboration with Neighbouring Countries:
- India should collaborate with neighbouring countries to develop a seamless logistics network that facilitates the efficient movement of goods across borders.
- Examples:
- Bangladesh-India can collaborate in the Petrapole-Benapole integrated check post (ICP) which has already improved trade facilitation between the two countries.
- The Kaladan Multi-Modal Transit Transport Project between India-Myanmar aims to connect the Indian ports of Kolkata and Haldia with the Sittwe port in Myanmar, is a good example of such collaboration.
- Adoption of Digital Technologies:
- Adoption of digital technologies such as blockchain, Internet of Things (IoT), and Artificial Intelligence can help in enhancing the efficiency of the logistics system and reducing operational costs.
- Skilling and Training:
- Skilling and training of the workforce in the logistics industry is crucial to ensure the smooth functioning
 of the logistics system.
- Regulatory Reforms:
- India needs to undertake regulatory reforms to simplify the regulatory framework and remove barriers to the growth of the logistics sector.

R&D INADEQUACIES IN INDIA

Kodak was a renowned company in the world of photography and videography, founded in 1888 by George Eastman as 'The Eastman Kodak Company'. However, the company's downfall serves as a warning of the risks of neglecting innovation, even for the most powerful companies.

Innovation and technical progress are prerequisites for economic growth. The central concept of growth in the Schumpeterian Paradigm of creative destruction is that previous innovations become obsolete as new innovations emerge.

Therefore, innovation is essential for an economy to grow. In India, the government undertakes 60% of R&D expenditures, unlike other nations where private enterprise is the primary driver. Despite efforts to boost R&D, the country spends around 0.7% of GDP on R&D.

The latest Research and Development Statistics, published by the Department of Science and Technology (DST) in 2020, has provided an estimate of Rs. 60.9 billion R&D spending in 2017-18 by foreign MNCs, which is only about 10% of what U.S. firms have reported to have spent in India on R&D.

It is crucial to tackle the issue of inadequate private sector involvement in research and development, as it may have negative implications for the country's progress.

Why Participation of Private Players limited in R & D?

- Weak Patent System:
- Historically, India's patent system has been weak and unreliable in safeguarding commercial innovations, which has created a sense of unease among firms, as they fear that their intellectual property may not be adequately protected, leaving their potential profits vulnerable.
- Risk of Imitation:



 Private firms are hesitant to invest in R&D in India because of the risk of imitation by local competitors, which further disincentivizes investment in R&D.

Lack of Talent:

- Private firms invest more heavily in R&D than the government in the US and China due to the calibre of talent that their higher education institutions attract. India needs to develop its higher education institutions to attract top talent and drive innovation.
- Lack of High-Quality Research:
- Out of the approximately 40,000 higher education institutions in India, less than 1% actively participate in high-quality research, spanning both scientific and social science research.
- This implies that 99% of HEIs are not contributing to the country's high-quality knowledge creation.
- Suffocating Research Ecosystem:
- The government's effort to impose fiscal discipline on States and educational institutions has suffocated the research ecosystem at institutions like IISc, IITs and IISERs.
- Challenges in Procuring Laboratory Equipment:
- Procuring laboratory equipment can be a nightmare for researchers due to bureaucratic red tape and delays in the system.
- Capacity Issue:
- The Indian Patent Office had only 860 patent examiners and controllers as of March 2022, which is substantially lower than China's 13,704 and the US's 8,132 examiners and controllers, leaving the Indian Patent Office grappling to handle the demand.

What are the Other Reasons for the Low Private Players in R & D?

- Lack of Funding:
- One of the main reasons for R&D inadequacies in India is the lack of adequate funding for research and development.
- The government invests very little in research, and private companies are also not willing to invest a significant amount in R&D due to the high risks and uncertainties involved.
- Lack of Infrastructure:
- India lacks adequate infrastructure for research and development. There are few well-equipped laboratories and research facilities in the country, which limits the ability of researchers to carry out advanced research.
- Limited Collaboration between Academia and Industry:
- In India, there is limited collaboration between academia and industry, which hinders innovation and the commercialization of research. There is also a lack of focus on applied research, which is critical for the development of new products and technologies.
- Brain Drain:
- Many of India's brightest minds emigrate to other countries for better opportunities, resulting in a brain drain that weakens the country's research and development capabilities.
- Inadequate Education and Training:
- India's education system does not adequately prepare students for research and development careers. There is also a lack of training opportunities for researchers to improve their skills and keep up with the latest advances in their fields.
- Bureaucratic Hurdles:
- There are many bureaucratic hurdles that researchers must navigate to obtain funding and carry out research projects in India. This bureaucratic red tape slows down the research process and discourages many researchers from pursuing projects in India.

What should be the Way Forward?

Creating an Enabling Regulatory Environment:



- The government can create a conducive regulatory environment that encourages private sector participation.
- This could include measures such as simplifying regulatory procedures, providing incentives for private sector investment, and ensuring a level playing field for all players.
- Public-Private Partnerships (PPPs):
- The government can work with private sector players through Public Private Partnerships (PPPs), where the private sector invests in and operates public infrastructure projects, such as roads, airports, and power plants.
- This can help leverage private sector expertise and resources, while also ensuring that the public interest is protected.
- Encouraging Foreign Direct Investment (FDI):
- The Indian government can encourage Foreign Direct Investment (FDI) by liberalizing investment rules, simplifying procedures, and providing incentives for foreign investors.
- This can help bring in much-needed foreign capital and expertise to help spur economic growth.
- Skill Development and Education:
- The government can invest in skill development and education initiatives to help build a pool of skilled workers that can help support private sector growth. This can help address the skills gap that many private sector players face when trying to expand their operations.
- Infrastructure Development:
- The government can invest in infrastructure development, such as building new roads, airports, and ports, which can help attract private sector investment. Improved infrastructure can also help improve productivity and reduce costs for businesses.

BECOMING ATMANIRBHAR IN CLIMATE FINANCE

Climate finance refers to the financial resources that are allocated to address climate change and its impacts. It encompasses a wide range of financial instruments and mechanisms that support climate mitigation and adaptation measures. Climate finance is critical in enabling countries to transition towards low-carbon and climate-resilient economies and achieving the goals set out in the Paris Agreement.

The funding is essential to support developing countries in reducing greenhouse gas emissions, adapting to the impacts of climate change, and pursuing sustainable development.

According to the Climate Finance Working Group, 118 trillion rupees are required to address climate change, 64 trillion rupees are available, while 54 trillion rupees are unrestricted. This gap has to be met by way of domestic and foreign debt. Indian Development Financial Institutions (DFIs) and commercial banks have to contribute by raising domestic funds and channelling resources from abroad.

To address the challenges of Climate finance, India needs to develop its own framework and a variety of funding systems, rather than work on terms laid down by the Western countries.

What are the Challenges in Climate Financing?

- Lack of Funds from the West:
- The developed countries are historically responsible for the majority of greenhouse gas emissions that have caused climate change.
- However, many developed countries have failed to provide adequate financial support to developing countries for climate action.
- This has led to a significant funding gap, making it difficult for developing countries to implement climate change mitigation and adaptation measures.
- Lack of Access to Finance:



- Many developing countries and small island states have limited access to financing due to various factors such as weak financial systems, inadequate regulatory frameworks, and limited access to international markets.
- High Cost of Financing:
- Climate-related projects often require significant upfront costs and long-term financing, which can be difficult to obtain at affordable rates. This can deter investors from financing such projects, particularly in developing countries.
- Uncertainty and Risk:
- Climate-related investments can be risky due to uncertainty around regulatory and policy frameworks, changing technology, and natural disasters. This can make it difficult for investors to accurately assess the potential returns on their investments.
- Lack of Capacity and Technical Expertise:
- Many developing countries lack the technical expertise and capacity to design and implement effective climate projects, which can lead to delays and inefficiencies in project implementation.
- Political and Policy Barriers:
- Political and policy barriers such as political instability, corruption, and lack of political can hinder climate financing efforts.
- Inadequate Private Sector Engagement:
- Private sector investment is crucial for scaling up climate financing, however, there is still inadequate private sector engagement due to various factors such as limited market incentives, lack of regulatory frameworks, and limited awareness of climate risks.

What are the Related Initiatives?

- National Adaptation Fund for Climate Change (NAFCC):
- It was established in 2015 to meet the cost of adaptation to climate change for the State and Union Territories of India that are particularly vulnerable to the adverse effects of climate change.
- National Clean Energy Fund:
- The Fund was created to promote clean energy, and funded through an initial carbon tax on the use of coal by industries.
- It is governed by an Inter-Ministerial Group with the Finance Secretary as the Chairman.
- Its mandate is to fund research and development of innovative clean energy technology in the fossil and non-fossil fuel-based sectors.
- National Adaptation Fund:
- The fund was established in 2014 with a corpus of Rs. 100 crores with the aim of bridging the gap between the need and the available funds.
- The fund is operated under the Ministry of Environment, Forests, and Climate Change (MoEF&CC).

What should be the Way Forward for Climate Financing?

- Raising resources from DFIs:
- The banking system is unlikely to finance climate mitigation and adaptation investments due to lower commercial appeal, so it is important to sharply define the priority sector to include climate finance.
- However, long-term resources will need to be raised from Development Financial Institutions (DFIs) as there is a large financing gap.
- DFIs have previously avoided foreign currency loans due to competition from domestic funds and high hedging costs.
- The government may need to step in to manage hedging costs in order to encourage DFIs to provide the necessary funding for climate investments.
- Investments from the Private Sector:
- Private sector investments are crucial for financing climate mitigation and adaptation projects.



• Some investments can be financed through access to bank credit, but many others cannot meet the interest costs due to below-par returns, long gestation periods, and higher financial risks.

Promoting Blended Financing:

- Blended finance can be used in various ways to support climate financing.
- Blended finance is an innovative financing approach that combines public and private capital to achieve development objectives.
- For example, it can be used to finance renewable energy projects, green infrastructure, and climate-smart agriculture. It can also be used to provide financing for climate adaptation projects, such as building sea walls or improving water management systems.
- Catalytic or Start-up Funding:
- Catalytic funding should be utilised for 're-purposing' key economic activities into green activities something that western finance and its frameworks may not recognise as per their taxonomy.
- Re-purposing, supported by a simple and inviolable classification framework, oversight and capacity building mechanisms can transform existing economic activities to green activities, crucially with smaller amounts of investments.
- Need for Innovative Financing Mechanisms:
- There is a need for innovative financing mechanisms that can provide funding for climate-related projects, particularly in developing countries.
- Some of these mechanisms include green bonds, climate funds, and carbon markets.





IMPORTANT MCQ FOR COMPETITIVE EXAMS

1.	 Who has been awarded the title 'Governor of the Year' for 2023 by Central Banking ? a) Amartya Sen b) Arvind Subramanian c) Raghuram Rajan d) Shaktikanta Das 		Exercise 'Al-Mohed-Al Hindi- 23' is held between India and which country ? a) UAE b) Saudi Arabia c) Israel d) Oman	10.	Excellence for Hyperloop Technology' ? a) IIT Delhi b) IIT Madras c) IISc Bengaluru d) IISER, Pune What is the name of the
2.	NationalVaccinationDay2023 is observedeveryyearon which day ?a) March 12b) March 13c) March 15d) March 16		Considerthefollowingstatements1. AUKUS is a 2021 defencedealbetweenAustralia,the US.2. The AUKUS partnership wassignedtobolsterAustralia'snavalheft in the region.	11.	 technology in which the DNA of an organism is changed ? a) Genetic Modification b) Genome Editing c) Genetic Change d) Genome Regulation Which is the first state in
Q3.	Who among the following has been recently appointed as the chairman of Pension Fund Regulatory and Development Authority (PFRDA) ? a) Debasish Panda b) Deepak Mohanty c) Tablesh Pandey d) Siddhartha Mohanty	N	 3. The AUKUS partnership involves only the sale of US nuclear submarines to Australia. Which of the above statements is/are correct ? a) 1 and 2 only b) 2 and 3 only c) 1, 2 and 3 	12.	India to launch a policy to establish Special Agriculture Zones (SAZs) a) Haryana b) Uttarakhand c) Uttar Pradesh d) Gujarat What is India's Rank in the
4.	The Indian Railway has set a target of becoming Net Zero Carbon Emitter by a) 2025 b) 2035 c) 2030	8 8 7 8	d) 2 Only DEMAPHE Consider the following statements with respect to the PM Ghati Shakti scheme 1. It aims to bring convergence among the infrastructure	0 रिंग	World in terms of Fish Production ? a) 1st b) 2nd c) 3rd d) 4th
5.	 d) 2040 India and the World Bank have signed a loan agreement for the construction of the Green National Highway Corridors Project in which of the following states ? a) Himachal Pradesh, Rajasthan, Uttar Pradesh and Andhra Pradesh b) Assam, Meghalaya, Mizoram Tripura and Manipur c) Maharashtra, Uttar Pradesh, Himachal Pradesh, Punjab and Utanana 		schemes launched by both the Union and state governments. 2. The PM Ghati Shakti Digital portal facilitates the electronic transfer of funds from one department to another. 3. The plan will lead to different departments working under NITI Aayog. Which of the statement/s given above is/are correct ? a) 1 only b) 2 and 3 only c) 1 and 3 only d) All of the above	13.	Alibag's white onion is recognized as a GI tag from which state it belongs to ? a) Bihar b) Uttar Pradesh c) Punjab d) Maharashtra In which state is the "Harike Lake" located ? a) Haryana b) Madhya Pradesh c) Uttarakhand d) Punjab
	Haryana d) Himachal Pradesh, Rajasthan, Uttar Pradesh and Karnataka		The Indian Railways collaborated with which institute for the 'Centre of	15.	Where is the headquarter of United Nations Educational, Scientific and Cultural





16.

17.

18.

19.

20.

21.

Organization(UNESCO)situated ?a) Washington DCb) Dubaic) Parisd) Dubai	 b) 14th March c) 15th March d) 16th March 22. The International Day of Mathematics, also known as 'Pi Day', is celebrated	28. In which city the headquarters of Coal India Limited is located? a) Bangalore b) Delhi c) Kolkata d) Pune
Where is the headquarter of International Criminal police organization (Interpol) ? a) Paris b) New York c) London	on a) 10th December b) 15th January c) 20th February d) 14th March	29. Where is the headquarter of United Nations Educational, Scientific and Cultural Organization (UNESCO) situated ?
d) Lyon As per the recent data, what is the CPI-based retail inflation recorded in February	 23. What is the rank of India at most polluted nation in the world in 2022 ? a) 6th b) 7th 	a) Washington DC b) Dubai c) Paris d) Dubai
2023 in India ? a) 6.34% b) 6.46% c) 6.41%	c) 8th d) 9th 24. According to railways and	30. Where is the headquarter of International Criminal police organization (Interpol) ? a) Paris
d) 6.44% Which country was named as	telecom minister Ashwini Vaishnaw, the first bullet train in India will begin	b) New York c) London d) Lyon
the world's largest arms importer in the SIPRI report for 2023 ? a) India b) China	a) 2028 b) 2023 c) 2025 d) 2026	31. As per the recent data, what is the CPI-based retail inflation recorded in February 2023 in India ?
c) Pakistan d) US How many countries have	25. Which of the following port was developed as a substitute of Karachi port after the	a) 6.34% b) 6.46% c) 6.41% d) 6.44%
been given permission by the RBI to trade in rupees recently? a) 18 b) 19	partition of India ? a) Marmagao Port b) Jawahar Lal Nehru Port c) Kandla Port d) New Mangalore Port	32. Which country was named as the world's largest arms importer in the SIPRI report for 2023 ?
c) 20 d) 21 In 2022, the United Nations	26. Frontier, the world's fastest supercomputer, is developed in which country ?	a) India b) China c) Pakistan d) US
established the International Day To Fight Islamophobia, which is observed annually on across 140 nations. a) March 11	a) USA b) Russia c) China d) Israel	33. How many countries have been given permission by the RBI to trade in rupees recently ?
a) March 12 c) March 14 d) March 15	27. Where is the National fisheries development board located ? a) Pune	a) 18 b) 19 c) 20 d) 21
Which day is celebrated as World Consumer Rights Day ? a) 13th March	b) Hyderabad c) Delhi d) Kolkata << 60 >> NIMBUS TIMES MAY 2023	34. In 2022, the United Nations established the International



Day To Fight Islamophobia, b) Russia observation satellite jointly which is observed annually on c) China developed by ISRO and which __ across 140 nations. d) Israel space agency ? a) March 11 a) JAXA 41. National b) March 12 Where is the b) NASA c) March 14 fisheries development board c) ROSCOSMOS d) March 15 located ? d) ESA a) Pune Which day is celebrated as b) Hyderabad 48. 35. was India's first World Consumer Rights Day? c) Delhi women teacher. She was also a) 13th March d) Kolkata an Indian social reformer and a powerful voice in the Indian b) 14th March c) 15th March 42. In which the freedom struggle. city d) 16th March headquarters of Coal India a) Aruna Asaf Ali Limited is located? b) Sarojini Naidu 36. The International Day a) Bangalore c) Usha Mehta of Mathematics, also known as b) Delhi d) Savitribai Phule c) Kolkata 'Pi Day', is celebrated 49. d) Pune Five day on__ long Yaoshang a) 10th December festival has begun in which b) 15th January 43. CSIR-Central Leather state ? c) 20th February Research Institute is located a) Tripura d) 14th March b) West Bengal in which city? a) Ahmedabad, Gujarat c) Assam 37. What is the rank of India at b) Noida, Uttar Pradesh d) Manipur c) Chennai, Tamil Nadu most polluted nation in the world in 2022? d) Pune, Maharashtra 50. Who among the following has a) 6th recently taken oath as Chief 44. Which of the following Minister of Nagaland? b) 7th country does not belong to a) Neiphiu Rio c) 8th d) 9th the G7 groups? b) Conrad Sangma a) United States c) Prestone Tynsong d) Sniawbhalang Dhar 38. According to railways and b) Canada telecom minister Ashwini c) Japan Vaishnaw, the first bullet d) India 51. Every year on March 10, the train in India will begin Central Industrial Security 45. Indian Army installed the Force (CISF) Raising Day. This service in August _____. tallest 'Iconic National Flag' year, the _____ CISF Raising a) 2028 in which district of Jammu & b) 2023 Day celebrated. a) 53rd c) 2025 Kashmir? d) 2026 a) Srinagar b) 54th b) Anantnag c) 55th 39. Which of the following port c) Baramulla d) 56th was developed as a substitute d) Doda of Karachi port after the 52. Which country has signed partition of India? 46. Ram Chandra Paudel has been MoU with India on a) Marmagao Port elected the new President of semiconductors? b) Jawahar Lal Nehru Port which country ? a) France c) Kandla Port a) Sri Lanka b) Germany d) New Mangalore Port b) Bhutan c) United Kingdom d) United States c) Mauritius Frontier, the world's fastest 40. d) Nepal supercomputer, is developed 53. The Headquarters of Eastern in which country? 47. NISAR was handed over to Railway Zone of Indian a) USA ISRO. NISAR is an earth << 61 >> | NIMBUS TIMES | MAY 2023



Railway is located at which of c) 4 March electronics mega the following places ? d) 5 March manufacturing facility and its a) Gorakhpur largest such campus in _____. b) Allahabad 60. Who won the season-opening a) Bengaluru c) Kolkata Bahrain Grand Prix from pole b) Mumbai d) Guwahati position? c) Delhi a) Max Verstappen d) Ahmedabad 54. In which of the following b) Sergio Perez states, the density of the c) F. Alonso 67. Arrange the following islands population is the lowest as d) Carlos Sainz Jr of Andaman island group in the direction from north to per the census 2011? a) Manipur 61. _ and NCERT signed an south b) Meghalaya MoU to strengthen value-1. Interview island c) Mizoram sports education 2. Middle Andaman island based d) Arunachal Pradesh amongst school children and 3. Swaraj Dweep teachers. 4. North Sentinel island 55. With which organization are a) Board of Control for Cricket Choose the correct option from the meat Export-oriented the codes given below in India units registered? a) 2, 1, 3, 4 b) National Anti Doping Agency c) Wrestling Federation of India a) NABARD b) 1, 2, 3, 4 d) Sports Authority of India b) APMC c) 4, 1, 3, 2 c) APEDA d) 3, 1, 2, 4 d) None of the above What is the rank of India on 62. Electoral Democracy Index 68. Which of the following is the most populous island of India 56. Which among the following is 2023? not under the priority sector a) 102 ? lending scheme of RBI ? b) 108 a) Lakshadweep a) Agriculture c) 111 b) Andaman and Nicobar c) Majuli 🛆 为 b) MSME d) 123 c) Food processing d) None of the above d) Real Estate 63. Mauganj became the 53rd district of which state ? 69. In which year, Rs. 10,000 notes were demonetized in 57. Which ministry has launched a) Madhya Pradesh NashaMukt b) Uttar Pradesh the Bharat India? Abhiyaan Campaign ? c) Rajasthan a) 1978 a) Ministry of Women and Child d) Punjab b) 2016 Development c) 1975 b) Ministry of Social Justice and 64. Who has launched Yuva d) 2015 Empowerment Utsava – India@2047 from Ropar in Punjab? Ministry 70. Which state is the largest C) of Rural a) Anurag Singh Thakur meat producer in India? Development b) G. Kishan Reddy d) Ministry of Law and Justice a) Bihar c) Parshottam Rupala b) Uttar Pradesh d) Mahendra Nath Pandey 58. What is the c) Tamil Nadu capital of Solomon Island? d) Kerala Which state recently launched a) Honiara 65. b) Port Vila 'Laadli Behna' scheme for 71. Where is the Zaruki c) Palikir women? International Airport is d) Noumea a) Maharashtra located ? b) Punjab a) Mumbai 59. On _____, the International c) Jharkhand b) Patna Day for Disarmament and d) Madhya Pradesh c) Shillong Non-Proliferation Awareness. d) Kanyakumari a) 1 March 66. Taiwan-based iPhone b) 3 March assembler Foxconn to set up a << 62 >> | NIMBUS TIMES | MAY 2023





72. Where is the capital of Angola 78. temple become 84. Which of the following Located ? India's first to induct robotic terminology defines outright elephant for ritual duties. a) London purchase and sale of b) Tirana a) Kerala government securities, for c) Luanda b) Karnataka injection and absorption of d) Baku c) Uttarakhand durable liquidity, by the d) Himachal Pradesh central bank of a country ? 73. Who among the following has a) Open Market Operations been appointed by Pepsi India 79. Which country b) Market Stabilisation Scheme to invest as its Brand Ambassador ? crores c) Liquidity Adjustment Facility ₹7,200 in Uttar a) Ranveer Singh Pradesh, Group d) Marginal Standing Facility HMI b) Salman Khan developing 30 hotels? c) Akshay Kumar 85. Which is the highest peak in a) China d) Ranveer Kapoor Madhya Pradesh? b) Japan a) Lady Hill c) USA 74. Which of the following Indian d) Chile b) Kaimur Hills Cricketer statue installed c) Dhupgarh Peak inside the iconic Wankhede d) Mount Logan 80. Which of the following city in stadium where he played his Maharashtra is going to be last game for India? Which of the following temple 86. renamed Chhatrapati is not located in Uttarakhand a) MS Dhoni Sambhajinagar? ? b) Sachin Tendulkar a) Nagpur c) VVS Laxman a) Badrinath Temple b) Nashik d) Virendra Sehwag b) Yamunotri Temple c) Aurangabad c) Gangotri Temple d) Jalgaon d) Dwarakadhish Temple 75. Which state / UTs has been chosen by India Today 81. Which among the following Tourism Survey for the best states of India have common 87. India ranked biggest nation ready to adopt crypto adventure tourism award? borders with Pakistan? a) Jammu and Kashmir in 2023 1. Jammu and Kashmir b) Guiarat 2. Punjab a) 1st c) Himachal Pradesh b) 2nd 3. Rajasthan d) Punjab c) 10th 4. Gujarat Choose the correct option from d) 7th 76. What is the theme of National the codes given below Science Day 2023 ? a) 1 & 2 88. Which film bagged the 'Best a) Women in Science International Film award at b) 1, 2 & 3 b) Future of STI: Impact on Hollywood Critics c) 1, 3 & 4 the Education Skills and Work Association Film Awards ? d) 1, 2, 3 & 4 c) Science for the People and the a) James Cameron – Avatar: The People for Science 82. Which zonal council covers Way of Water b) Steven Spielberg - The d) Global Science for Global the maximum number of Wellness states ? Fabelmans c) S.S. Rajamouli - RRR a) Central Zonal Council 77. Foreign direct investment d) Park Chan-wook - Decision b) North Eastern Zonal Council (FDI) into India declined by 15 c) Southern Zonal Council to Leave per cent to USD 36.75 billion d) Western Zonal Council during the April-December 89. When was the Pradhan Mantri this fiscal year, which of the Kisan Samman Nidhi Yoiana 83. Gold Monetization Scheme is following country was the top managed by ? launched in India? investor? a) Central Government a) 24th February 2020 a) USA b) 24th February 2019 b) Reserve Bank of India c) 24th February 2022 b) Netherlands c) State Bank of India d) 24th February 2023 c) China d) All commercial banks d) Singapore



90.	India and have agreed to cooperate in the oil and gas sector, including long-term crude purchases. a) Guyana b) Suriname c) Venezuela d) Paraguay	93.	The Central Reserve Police Force (CRPF) will hold its Raising Day function in which state for the first time ? a) West Bengal b) Odisha c) Chhattisgarh d) Kerala	96.	Which of the following straight separates Middle Andaman and North Andaman Island ? a) Homfray's Strait b) Austen Strait c) Palk straight d) Coco straight
91. 92.	pursue an agreement with India to build 6 submarines for \$5.2 billion. a) France b) USA c) China d) Germany Churchgate railway station in Mumbai will be named after	94.	 develops a new HD-3385 wheat variety that can beat the heat. a) Indian Council of Agricultural Research b) Indian Agricultural Research Institute c) Council of Scientific and Industrial Research d) National Council for Teacher 	97.	How much amount was provided by the Central Government during the first five year plans for the development of roads ? a) Rs 25 crores b) Rs 28 crores c) Rs 30 crores d) Rs 23 crores
	 whom ? a) First President of India Dr. Rajendra Prasad b) First Chief Justice of India H.J.Kania c) First PM of India Jawaharlal Nehru d) First Governor of RBI CD Deshmukh 		Education Which port is known as Queen of Arabian Sea ? a) Vizag port b) Paradip port c) Kochi Port d) Mumbai Port	98.	Bilateral monopoly refers to whose market position ? a) two sellers, two buyers b) one seller and two buyers c) two sellers and one buyer d) one seller and one buyer

1-d	2-d	3-b	4-c	5-a	6-b	7-d	8-a	9-b	10-b	11-b	12-c	13-d	14-d	15-c
16-d	17-d	18-a	19-a	20-d	21-c	22-d	23-с	24-d	25-с	26-a	27-ь	28-c	29-с	30-d
31-d	32-a	33-а	34-d	35-с	36-d	37-с	38-d	39-с	40-a	41-b	42-c	43-c	44-d	45-d
46-d	47-b	48-d	49-d	50-a	51-b	52-d	53-с	54-d	55-с	56-d	57-b	58-a	59-d	60-a
61-b	62-b	63-a	64-a	65-d	66-a	67-b	68-c	69-a	70-b	71-c	72-с	73-a	74-b	75-a
76-d	77-d	78-a	79-b	80-c	81-d	82-b	83-b	84-a	85-c	86-d	87-d	88-c	89-b	90-a
91-d	92-d	93-с	94-a	95-с	96-b	97-d	98-d							