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October Month Current Affairs

Index

S.No.	Subject	Page Number
1. National Affairs		
-	Nobel Prize - 2022	06
-	Nobel Prize for Medicine	06
-	Nobel Prize in Chemistry	07
-	Nobel Prize in Physics	08
-	Nobel Prize for Literature	08
-	The Nobel Prize for Economics	08
-	The Price of Peace	09
-	Acid rain	10
-	10% reservation	11
-	3rd Vande Bharat train	11
-	International Innovation Index	11
-	Child Labor Recovery	12
-	GPS toll collection scheme	12
-	Indore bags cleanest city	12
-	5G Services	13
-	A woman's right to Abortion	15
-	New India Literacy Program	16
-	Football Tournament Riots	16
-	Durga Puja festival has been recognized by UNESCO	17
-	DART	17
-	Combat Helicopter	18
-	Bharat Series	19
-	Powers of Public list	19
-	How to raise funds for election freebies?	20

- Vallar International Center	20
- Gundar Sattam	20
- Resolution against Sri Lanka	21
- ISRO launches 36 satellites	21
- Vyommitra's skills	22
- Farewell to Mangalyaan	22
- ISRO's LVM 3 rocket to enter commercial service	23
- GSLV Mk-3	23
- Digital Currency in India	24
- Privileges for converted Dalits?	24
- Sodium Accumulates on the Moon	25
- Drug quality and control regulations	26
- 23.8% increase in direct tax	27
- Revenue rises	27
- Constitutional Session Live Broadcasting	27
- Increasing number of juvenile crimes	28
- Death of foster children	29
- Max Emilian Verstappen - 2nd title	29
- National Textile Corporation	30
- Wind resources for 30 GW power generation in Dhanushkodi	30
- Can Quantum Particles Speak Secretly?	31
- Pesticide use	32
- Nebula at a distance of 7,100 light years	33
- Surrogacy Regulation Act 2021	33
- Global Economy	34
- India's Economic Growth - IMF	35
- India's first Slender Loris Sanctuary	35
- Rejection of Russia's Request	35
- Chandrasekhar Rao's National Goal	36
- No prosecution under Section 66A of the IT Act	36
- Indian and Chinese troops	36
- 5.6 crore people were pushed into poverty in India	37

- Supreme Court's verdict on Hijab ban	37
- Different verdict	38
- Mangrove forests	39
- Asia Women's T20 Champion - India	42
- India is ranked 107 th in the International Hunger Index	42
- First Indigenously Manufactured Aluminum Freight Train	42
- 41 crore people have been lifted out of poverty in India in 15 years	43
- Bharati Das took charge as the new Controller General of Accounts	43
- Booker Award to a Sri Lankan writer	43
- Minimum Support Price	44
- International Solar Alliance	44
- Ballon Or' award for Benzema, Alexia Putellas	44
- Roger Binny becomes BCCI President	45
- New Air Force Base in Gujarat	45
- Resignation of British Prime Minister	45
- Rishi was sworn in as the Prime Minister of England	45
- Brexit Britain	46
- Kashi Tamil Sangam	47
- Biodiversity park at Manimuthar at Rs 7 crore	48
- Rojgar Mela	48
- BrahMos Missiles	48
- Banning State Governments to Provide Television Services	49
- Trade in Rupees instead of Dollars	50
- Abdul Kalam's Bio-Septic Tank	50
- A global economic crisis again?	51
- Solar Eclipse	52
- Transfer to NIA investigation	53
- Churchill's statement was false	53
- Appointment of Chief Justice	53
- Mata Amritanandamayi as Chair of C20	54
- Airbus manufacturing plant to be set up in Vadodara	54
- Glasgow - Change and Impact	54
- New Pension replaces Old Pension Scheme	54

- General Civil Law	55
- Indian law must be followed	55
- Air plant in Vadodara, Gujarat	56
- Special BrahMos missile	56
- Halloween Festival in South Korea	57
- Challenging Intelligence Police System	57
- One Country One Election	58

2. State Affairs

- TN Economy	59
- 29% increase in tiger population	59
- Tamil Nadu is the 1 st in providing drinking water pipe connections to Rural Houses	59
- Jal Jeevan Mission	60
- Denial of government concessions	60
- Online Gambling in TN	62
- The registration department is empowered to cancel fake documents ..	63
- Women marriages before the age of 21	63
- The first solar village in the country	64
- The Right to Housing	64
- Fertility problem	65
- "Kutty Kaavalar" Program	65
- Smart Police	65
- Assembly elections in Himachal on November 15	66
- One Nation One Fertilizer	66
- Paddy procurement: Change in demand policy	66
- All Caste Priests	67
- 100% Hindi Language Learners	67
- TN, 15 states lead	68
- Commissions of Inquiry	68
- Climate Change	69
- Chennai Expand to 5,904 Square KM	71
- How is the earthenware water remains cold?	71

01

National Affairs

Nobel Prize - 2022

Alfred

- Alfred Bernhard Nobel was a Swedish chemist, engineer, inventor, businessman, and philanthropist who lived in the 19th century.
- He holds patents for more than 300 inventions.
- The bomb called dynamite was his invention.
- Nobel Prizes for 2022 have been announced.
- The Nobel Prize is awarded annually in the name of Alfred Nobel, a scientist from Sweden, to those who have made outstanding contributions in 5 major fields: physics, chemistry, medicine, literature, and economics, and who strive for world peace.

Nobel Prize for Medicine

- Scientist Svante Pääbo has been selected for the first Nobel Prize in Medicine.
- Svante Pääbo has done extensive research on the evolution of the previously unknown extinct archaic man Hominin (Denisova) and the development of human dimensions and has published many rare discoveries.
- He has sequenced the genomes of extinct Neanderthals and revealed rare information about their relationship to modern humans.
- Svante Pääbo has explored the genetic differences between the two extinct hominins.
- It is the basis of the reasons that make us unique human beings and leads to many more researches in this regard.

Introduction

- Scientists have always wondered about the origins of mankind.
- Where and when did modern humans Homo sapiens appear?
- For hundreds of years, scientists, scholars and philosophers have been searching for answers to questions such as how modern humans (Sapiens) built a society and culture that was unprecedented from other species of the genus Homo.

Nobel Prize

- In this context, the Nobel Prize in Physiology or Medicine was announced for this year's to Swedish geneticist Svante Pääbo for his discoveries about the human dimension and the genome of extinct human species, which was considered impossible.
- In 1997 he successfully extracted a genome from a Neanderthal genome dating back about 40,000 years.
- It was the first time in the world that a genome had been extracted from a primitive human, and he steadily improved the methods of extracting and analyzing DNA from the skeletal remains of primitive humans.
- His efforts paid off

- In 2010, Svante Pääbo made it possible to sequence the genome of Neanderthals, which was thought to be impossible. This is a great achievement.
- According to the studies carried out following this, the most recent ancestors of Neanderthals and Homo sapiens were found to have lived 8 million years ago.
- His team confirmed that genes from Neanderthals are present in modern humans.
- A 40,000-year-old finger bone was discovered in 2008 in the Denisova Cave of the Altai Mountains in southern Siberia.
- Svante Pääbo's team sequenced its DNA, which was protected by ice, and were stunned by the results.
- It contained a new genome that did not match the genome of anyone from Neanderthals to modern humans.
- Svante Pääbo's team discovered a new species unknown to the scientific world;
- They named it Denisova.
- A new field called Paleogenetics was born.
- Not only in the world of science, but also in sociology.
- Homo sapiens, the modern humans, are the only evolutionary survivors today:
- The Neanderthal and Unioza genes found in the sapiens' genomes make the world's highlow racial puritanism unpopular.

Nobel Prize in Chemistry

- Carolyn R. Bertozzi, Morten Meldal and K. Barry Sharpless have been awarded Nobel Prize in Chemistry for creating the new fields of 'click' chemistry and bio-orthogonal chemistry related to simple construction of useful chemicals by reducing common problems in click chemistry.
- Caroline became the 8th woman to be selected for the Nobel Prize in Chemistry.
- Similarly, Sharpless became the 5th scientist to win 2 Nobel Prizes in Chemistry.
- Barry Sharpless is the founder of click chemistry, which helps to create useful molecules from a new angle in the preparation of pharmaceutical and agricultural molecules.
- This simple chemical reaction, which simulates the mechanism of locking hooks, combines a hook-like molecule (N3) at one end of a chemical with a lock-like molecule at the end of another chemical, with the help of a copper ion catalyst, to form complex molecules with simple-different chemical linkages.

To cure diseases precisely...

- In nature, in the synthetic production of useful medicinal molecules in plants and other organisms, there are many difficulties, such as time wastage, material cost, extraction of unnecessary by-products, and overcoming these problems to produce useful molecules is a big challenge.
- The solution to all these difficulties is click chemistry which helps to create small and large components in a simple way.
- Click chemistry has the ability to combine two molecules in water under normal conditions to form quality products, so this chemistry plays a huge role in the fields of pharmaceuticals, polymers, and biosynthesis.
- The use of click chemistry has now extended to fields such as DNA sequencing, Microbiology, Biomolecules
- Powerful click chemistry has led to surprising developments in fields such as pharmacology, therapeutics, genetics, and the hope that they will benefit humanity.
- It is also believed to move the fields of chemistry and biology to the next level.

Nobel Prize in Physics

- The Nobel Prize in Physics 2022 was awarded jointly to Alain Aspect, John F. Clauser and Anton Zeilinger “for experiments with entangled photons, establishing the violation of Bell inequalities and pioneering quantum information science”
- It has laid the foundation for a new era of quantum technology.
- In particular, their discovery provided the ability to effectively manipulate the properties of quantum states and all their layers.

Nobel Prize for Literature

- The Nobel Prize for Literature goes to French author Anne Ernaux (82), who has written more than 20 books, for promoting equality through simple novels.
- She has very subtly expressed the innermost aspects of the social life of modern France through her writings.
- The jury said that she was awarded the Nobel Prize for expressing feelings and memories, experiences, with courage and commitment.
- The prize money of US dollar (Rs. 7 crore 48 lakh) has also been announced.
- Anne Ernaux is the 17th woman writer to win the Nobel Prize for Literature.
- Annie Ernaux was born in 1940 in Lillebonne, France.
- She grew up in the neighboring town of Yvetot.
- She lost her father at the age of 15.
- Encouraged by his mother, who ran a grocery store and a small cafe, she graduated and worked as a professor of literature.
- In 2019 Anne’s novel ‘Les Années’ was shortlisted for the Man Booker Prize.
- This work is written like diaries based on her life from 1970 to 2006 based on social, economic, political and business.
- It was hailed as a new attempt of historical significance that speaks to the contemporary age rather than being autobiographical.
- In it, Annie compares and contrasts her private life with contemporary political and social events.
- The country’s president, Macron, praised ernaux’s works as “a collection of 50 years of memories of France”.

The Nobel Prize for Economics

- This year’s laureates in the Economic Sciences, Ben Bernanke, Douglas Diamond and Philip Dybvig, have significantly improved our understanding of the role of banks in the economy, particularly during financial crises.
- They have been selected for this award for their research on banks and financial crises.
- Through their research, they have significantly improved our understanding of the role of banks during financial crises.
- Also, an important finding in their research is why it is essential to avoid bank collapse.
- A cash prize of Rs 7.20 crore (9 lakh dollars) will be given to them.

The Price of Peace

- This year's Nobel Prize for Peace has been shared with imprisoned human rights activist Ales Bialiatski, the human rights organization 'Memorial' in Russia, and the 'Centre for Civil Liberties', an organization operating in the Eastern European country of Belarus, which borders Ukraine and Russia.
- Ales Bialiatski was a pro-democracy activist who was instrumental in building a democracy movement in Belarus in the mid-1980s.
- Ales Bialiatski created an organization called 'Wishna' & fought against the changes towards dictatorship.
- He was imprisoned from 2011 to 2014.
- It is worth noting here that Belarus is a country very close and politically close to Putin's Russia.

Memorial Organization

- The 'Memorial' organization operating in Russia documented the violations of Stalin's era and continues to carry out detailed documentation of human rights violations by the Russian government to this day.
- It is an organization that is running as an opposition to phase rule and militarization.
- In 2009, one of the leaders of this organization, Natalia Estemoria, was killed.
- Another endowed organization, the Center for Civil Rights, has been active since 2007.
- It is an organization that works to strengthen civil society in Ukraine, stand up for its democratic rights, document the violations committed in the Russian invasion of Ukraine, and bring Russia's war crimes to the world.

Russia - NATO

- Today's Russia cannot be said to be a rational country.
- But, it cannot be said that its invasion of Ukraine is not justified.
- When the Soviet Union disintegrated, Russia's demand was accepted that the countries thus separated should not join the American puppet 'NATO'.
- But, we cannot forget that 12 countries from the Soviet team have been successively joined in 'NATO'.
- We should note that all Eastern European countries that are part of 'NATO' have today been completely converted into war colonies of the US and 'NATO' countries.
- Ukraine is important to Russia in many ways.
- Giving the Ukraine on its border to the US alliance is equivalent to suicide.
- Not only it is on the border, but the country that has now removed it from the scope of 'NATO'.
- If it falls into the hands of 'NATO', Russia will become a country under almost permanent blockade.
- Because of this, the economic sanctions imposed by the United States on Russia today are unacceptable.
- The Nobel Prize is something that is carried out for political purposes.
- Even though the name of Mahatma Gandhi was proposed for the Nobel Prize in the years 1937, 38, 39, 47, 48, it is noteworthy that he was refused until the end.

Nobel Peace Prize

- This year's Nobel Peace Prize was announced yesterday by Nobel Prize Committee Chairman Berit Reiss-Andersen in Oslo, the capital of Norway.
- The Nobel Peace Prize was announced to Belarusian human rights activist Ales Viktaravich Bialiatski, the Russian human rights organization 'Memorial', and the Ukrainian Center for Civil Liberties.
- Ales Viktaravich Bialiatski, who was born in Russia in 1962, settled in Belarus and became a citizen of that country.
- He dedicated his life to promoting democracy in Belarus.
- He fought against the torture of political prisoners.

- He has been in jail since 2020 without any trial.
- Similarly, Russia's 'Memorial' organization will strive to promote human rights and democracy in Ukraine.
- The Center for Civil Liberties was also nominated for the Nobel Peace Prize.

Ales Viktaravich Bialiatski

- He is a prominent leader who has been fighting for democratic rights in authoritarian Belarus since the 1980s.
- He has been insisting that importance should be given to human rights in the country.
- The Belarus government of 2020 arrested him due to the intensification of the struggle against the government.
- Until now he has been imprisoned without any investigation.
- Ales Viktaravich Bialiatski has been awarded the Nobel Prize.
- Chairman Anderson said that it will help to release him from prison.
- He also demanded that the Belarusian authorities release him immediately.

Russia's 'Memorial' Organization

- This center was started in 1987 in the Soviet Union to fight against communist oppression.
- This center is constantly collecting information related to the violation of human rights by the Russian government.
- The situation of political prisoners in Russia is also being investigated.
- The Center continues to advocate for an end to repression in Russia and emphasis on human rights.
- The Center is also demanding the implementation of rule based on law.

Ukraine's 'Center for Human Freedom'

- It was launched in 2007 to promote human rights and democracy during a time of crisis in Ukraine.
- The center took steps to make Ukraine a democratic country.
- The Center also ensured that the law of the land was followed.
- The Center is working to ensure that the Russian officials involved in violations are punished.
- The Center has continued to document Russia's violations of the laws of war since Ukraine's war with Russia.

Acid rain

- Pure water have a pH value (acid-alkaline balance) of 7.0.
- If it is less than that, it is acid, and that acidic rain is what we call acid rain
- Why acid rain which did not fall during that period is falling only today?
- The industrial revolution era is the beginning of this.
- Then the chimney of the factories were smaller.
- So, the problem was also small at the local level.
- Over time, chimneys have become taller and environmental damage has increased.
- They are the primary cause of acid rain.
- Among the acidic fumes released from it, sulfur dioxide and nitrous oxide were the predominant.
- Sulfur dioxide, in particular, produced a widening effect.
- The Developed countries realizing it, there were strong protests.
- So, those factories slipped silently towards the third world countries and started playing with the breath of the people of that country.
- Example: Tuticorin Sterlite Plant

10% reservation

- In 2019, the Central Government passed the 103rd Constitution Amendment Bill to provide 10% reservation in education & employment to the economically backward general category other than SC, ST & OBC.
- Reservation should be provided to bring balance to the caste-reserved and not to discriminate against the general category on economic grounds.
- The Act defines economically backward people are those who earn less than Rs 8 lakh per annum.
- As 97% of people in India have an annual income of less than Rs.8 lakh, there is still confusion as to who this reservation is for.
- Article 14 of the Constitution, which mandates the pursuit of equality, has been brought into question by the central government's amendment.
- And this is against the Supreme Court judgment in the Indira Sawhney case.
- Scheduled Castes and Tribes are still in a worse state of decline.
- Article 46 of the Constitution states that they shall be legally protected from all forms of exploitation.

3rd Vande Bharat train

- India is manufacturing the "Vande Bharat" train with modern facilities domestically.
- Mainly, coaches of Vande Bharat train are manufactured at ICF in Chennai.
- Vande Bharat trains are already running in the country on two routes namely New Delhi-Varanasi and New Delhi-Shrimata Vaishnava Devi Katra.
- 3rd train will run between Gandhi Nagar and Mumbai.

International Innovation Index

- As modern technologies continue to grow, innovation is gaining ground.
- Innovation activities are fundamental to entrepreneurship.
- The countries of the world are continuously taking steps to promote innovative research in schools & colleges.
- The World Intellectual Property Organization (WIPO) conducts an annual survey of how countries are performing in innovation.
- Based on the survey for the current year, the organization has published the International Innovation Index
- India has improved by 6 places compared to last year.
- India, which is currently ranked 40th
- This is the first time that India has entered the top 40

Top 40 Countries in Innovation Index

Switzerland	Malta	Finland	Spain	Austria
USA	Norway	Denmark	Czech Republic	Turkey
Sweden	Ireland	China	UAE	Estonia
Britain	New Zealand	France	Portugal	Poland
Netherland	Australia	Japan	Slovenia	Luxembourg
South Koera	Belgium	Hong Kong ,	China Hungary	Lithuania
Singapore	Cyprus	Canada	Bulgaria	Iceland
Germany	Italy	Israel	Malaysia	India

Child Labor Recovery

- According to the latest report of the National Survey of India, the literacy rate in India this year is 77.7%.
- After the Independence of the country, even though the opportunities for education have increased, many families have no education and no facilities to study and send their children to work.
- National Child Labor Scheme Rashtriya Paal Sram Paryojanar was brought to rescue them from this.
- The main objective of this program is to rescue child laborers and provide them with education.
- But the Union government headed by BJP has stopped the National Child Labor Scheme since last March.
- The Union Government has announced that it has incorporated a comprehensive education scheme called Samagra Siksha Abhiyan.
- In May 2018, the Union Government launched a comprehensive education program called Samagra Siksha Abhiyan.
- Sarva Sikhsha Abhiyan, Rashtriya Madhyamik Sikh Shah, a program brought to raise the standard of secondary education, was implemented to coordinate this project.
- The Samagra Shiksha scheme does not work like the National Child Labor Scheme.
- In some areas, students have to walk 5 to 10 km to schools.
- Samagra Siksha scheme does not help in this.
- The National Child Labor Scheme has been in force since 1988.
- So far 2 lakh people have been rescued and enrolled in training centers and have received education under this scheme.

GPS toll collection scheme

- To collect tolls from vehicles using national highways, toll booths have been set up at 805 locations across the country, including 54 locations in Tamil Nadu.
- To collect tolls on cashless transaction basis, 'FASTag' scheme is in place.
- For this purpose, 'FASTag' stickers have been issued through national and private banks and money transfer banks.
- As the FASTag practice has failed, the customs fee is to be collected via GPS as in other countries
- When vehicles pass toll gates GPS identifies through the instrument and the customs duty is to be deducted from the bank accounts.

Indore bags cleanest city

- Indore has been adjudged the cleanest city of India for the sixth year in a row, while Madhya Pradesh is the cleanest state in the country.

Ranking Cleanliness

- The tables list the top six urban local bodies (ULBs) and the best performing States according to Swachh Survekshan, 2022.
- Indore retained the tag of India's cleanest city for the 6th consecutive time, while Madhya Pradesh is ranked first among States.City State Rank

Indore	Madhya Pradesh	1
Surat	Gujarat	2
Navi Mumbai	Maharashtra	3
Vizag	Andhra Pradesh	4
Vijayawada	Andhra Pradesh	5
Bhopal	Madhya Pradesh	6

Rank	State
1	Madhya Pradesh
2	Chattisgarh
3	Maharashtra
(<100 ULBs)	
1	Tripura
2	Jharkhand
3	Uttarkhand

5G Services

- In India, cell phone service and internet service were launched in 1995.
- 2g, 3g & 4g Internet services were introduced one after the other.
- India depended on other countries for 2-G, 3-G and 4-G technologies.
- But India has developed 5G technology at international standards.
- We focus on 4 things for Digital India plan
 - the cost of electronic device
 - connectivity plans,
 - telecom charges
 - Priority to digitilization
- India has the lowest internet service charges in the world.
- The cost of one GB has come down from Rs 300 to Rs 10.
- India may not have benefited from the first 3 industrial revolutions.
- But India will reap the full benefits of the 4th Industrial Revolution.
- India will lead this industrial revolution.
- In the next 6 months, 5G service will be launched in 200 cities.
- 5G service will be extended to 90% of the country in the next 2 years.
- The 5G service will be launched on August 15 next year on behalf of the government by BSNL.
- The cities where 5-G service will be introduced are Delhi, Mumbai, Chennai, Bengaluru, Hyderabad, Chandigarh, Gandhinagar, Ahmedabad, Jamnagar, Kolkata, Lucknow, Pune, Gurugram and 13 cities will be introduced.
- Airtel 5G service will be available across the country by 2024.

What are the advantages?

- 100 times faster than 4G.
- It takes 200 microseconds to receive and execute a 4G command.
- But 1 microsecond is enough for 5G.
- A 5G network can connect up to a million devices per square kilometer.
- 5G can download 20 times faster than 4G network.
- Its download speed is 87.5 Mbps.
- That means a full movie of 3GB can be downloaded in just 35 seconds.
- Farmers can be protected by accurate weather forecasting.
- 1000 times faster than mobile internet speed.
- It works at 100 times the speed of high-speed broadband used in homes.

- TV, Fridge, AC, washing machine can all be controlled from outside by connecting to a remote device.
- Online games can be profitable.
- Semi-autonomous robots can now be controlled at high speeds to rescue humans from immediate reaction hazards.
- Many companies like Google and Uber are designing autonomous cars.
- All those cars require high-speed internet service to function properly.
- That internet speed can only be provided by 5G technology.
- 5G service will help in seamless operation through video call without the presence of the doctor in the patient's room, according to their instructions.
- A doctor who may be in another location wearing VR goggles and gloves can operate on a patient with the robot.

5G Evolution

Introduction

- India has emerged as the fastest growing economy on the global stage, overtaking Britain.
- Leading research institutes in all developed countries, including the World Bank, are convinced of this claim.
- In this scenario, the introduction of 5G technology in India will further accelerate the development of the country.

World's First Cellular

- Motorola is credited with creating the world's first cellular phone.
- Designed by the company's Martin Cooper, the "Motorola Dine Talk 8000X" model was portable.
- This cell phone was introduced in 1973 in New York City, USA.
- At that time, the weight of the phone was around 2 kg.

First Generation

- The world's first cellular network was first introduced in Japan in 1979.
- Nippon Telegraph and Telephone (NTT) introduced the first generation service called 1G.
- After that other countries of the world also started following that service.
- In telecommunication technology, the word G stands for Generation.
- This technology is gradually improved and used to indicate what has passed through the generations.

Second Generation

- Enhanced 2G service introduced due to very low speed, lack of security etc.
- Its reign lasted from 1990 until 2010 when 3G was introduced.

Third generation

- The data transfer speed of 3G is 4 times higher than the 2G.
- Its average speed is 2 Mbps.
- It is because of this that video watching, video conferencing and live video chat are possible.

Fourth generation

- 4G service was first commercially launched in Norway in late 2009.
- After that Airtel first launched this service in India in April 2012.
- Its minimum initial speed was 12.5 Mbps.

- We were able to get high quality services of Audio, video including gaming.
- It was possible to easily switch from 2G to 3G by simply changing the SIM card.
- While the maximum speed of 3G service is promised to be 14 Mbps, 4G is confirmed to provide services at a speed of 100 Mbps.

Fifth generation

- South Korea was the first to fully introduce High speed 5G service in 2019.
- By the year 2025, 5G Internet service will reach 65% of the world’s population, according to the unwavering prediction of Sweden’s Ericsson.

Expectations and Challenges

- Following the introduction of 5G, the share of 5G in the mobile subscriber segment in India will be around 40% by 2027.
- 50 crore people will come under 5G service ring.
- Similarly, they are predicted to use an average of 50 GB of data per month each.

Sectors that will benefit from the arrival of 5G

- Entertainment	- Transport	- Infrastructure
- Education	- Freight transport	- Automobile
- Healthcare	- Agriculture	- Smart homes

A woman’s right to Abortion

- A 25-year-old woman from Delhi approached the Delhi High Court to allow termination of her fetus after 23 weeks.
- The court refused the abortion on the grounds that she was not married.
- The woman appealed to the Supreme Court, saying that she was unable to continue carrying her con-sanguineous fetus due to her family’s poverty.
- A bench headed by Chief Justice Chandrachud ruled that marriage is not an entitlement and unmarried women also have the right to medically abort a fetus below 24 weeks.
- At the same time as insisting on carrying an unwanted fetus by the law is an act of violating the woman’s dignity, the husband’s sexual assault on his wife should also be treated as sexual assault and the resulting fetus should be allowed to be terminated.
- In this only the harmony of the woman is sufficient.

No need for husband’s permission

- Women are exposed to stress from conception to delivery.
- It is important that the court said that carrying a child in the absence of economic background and support from the husband also risks leading to physical degradation of a woman.
- This is where the man stands aside and the woman is trapped, and these rulings show that there is no compulsion to carry an unwanted pregnancy just because the woman has a womb.
- Denying it is tantamount to taking away women’s individual rights.

Contraception should be widespread

- There is no denying that male preference prevails even in the use of contraceptives.
- Condoms are easy to use.
- No side effects.

- But it is women who have to use contraceptives and pills.
- As the Supreme Court Judges have commented on the failure of contraceptive devices, it is better to follow contraceptive methods that avoid abortion at the same stage without extending it to abortion.
- It is important to create an environment where women can access birth control pills without fear or guilt.
- While it is gratifying to see judgments being passed in support of women, the unanswered question is whether there is an infrastructure to implement them.

Abortion Act

- The Medical Abortion Act for Women was enacted in India in 1971.
- This act also fixed the period for abortion or eligibility for Abortion.
- This brought some relief to women who until then had to resort to unsafe abortions and carry unwanted fetuses
- Some of the provisions of this Act have been changed and the Medical Termination of Fetus up to 24 weeks Act 2021 will be implemented.

Verdict

- The Supreme Court has recently ruled that unmarried women can also have abortions for valid reasons and carrying an unwanted fetus is against their dignity.
- This judgment affirmed that only women have the right to make decisions about their physical affairs.
- The Kerala High Court has ruled that a woman does not need her husband's permission to have an abortion.
- Rather than denying women's rights, it is the government's duty to take appropriate action by subjecting the scan centers that detect and tell the sex of the unborn child to strict surveillance.

New India Literacy Program

- As per the recommendation of National Education Policy 2020, the 'New India Literacy Program' for adults has been implemented by the Central Government.
- Under this scheme, it has been decided to teach basic literacy to uneducated people above 15 years of age with volunteers.
- A target has been set to educate 5 crore people by 2027 in collaboration with National Informatics Centre, National Educational Research and Training Group and National Open School.
- It has various special features including online education system.
- The estimated cost of the project for 5 years is Rs 1,038 crore.
- In this way, the 'New Bharat Literacy Project' is going to be implemented in Tamil Nadu through the School Education Department.
- Central Government's 'New Bharat Literacy Program' is going to be implemented in urban wards, villages and rural panchayats in all 38 districts of Tamil Nadu.
- It will be run entirely by volunteers.

Football Tournament Riots

- The East Asian country, Indonesia is ranked 155th in FIFA's rankings.
- Football is one of the most popular sports in the country.
- National and local football tournaments are held throughout the year.
- The 'Liga 1' competition organized by the Indonesian Football Federation (PSSI) is very popular.

- The 'Liga I' football match was held at Kanjuruhan Stadium in Malang, East Java Province.
- There was a big clash between the police and the fans.
- Police fired tear gas shells and baton to disperse the crowd.
- The fans scattered on all sides.
- Caught in the crowd, many people died.
- Hundreds were seriously injured.

Durga Puja festival has been recognized by UNESCO

- Durga Puja has been included in India's cultural heritage list
- Kumbh Mela, Yoga, traditional copper vessels made by Dadiras people of Jandiala Guru in Punjab, Sankeerthan, drumming and dances performed in Manipur, recitation of Buddhist scriptures in Ladakh, Chau dance in Jharkhand, West Bengal & Odisha danced during festivals
- Kalbelia Folk Songs and Dance of Rajasthan.
- Kerala's traditional dance drama known as mudi yettu, Rama Leela and chanting of Vedic mantras are also featured.
- Durga Puja, especially in the northern states, is danced and sung.
- It is a festival of worshipping Durga, the form of Parashakti, which is celebrated in the month of Ashwini (September-October).
- Sarath Navratri and Durga Puja are celebrated with great respect in the eastern parts of India, especially in West Bengal.

DART

- NASA's DART (Double Asteroid Redirection Test) spacecraft intentionally crashed into the asteroid Dimorphos, which orbits a larger asteroid Didymos, on September 27.
- After the crash, a huge tail of dust and debris was seen stretching from the asteroid.
- Dimorphos is an asteroid revolving around the Sun which is about 11 lakh km from the Earth
- It rotates the Asteroid Didymos whose radius is 780 m & mass is 5000 crore kilo at a speed of 11 hours 55 minutes
- This Duo revolves around the Sun in 770 days
- Dimorphos is about 17 m from the asteroid's center.
- In the distance, the Dart spacecraft collided head-on.
- As a result, the rotation speed of the Dimorphos asteroid has decreased slightly and its orbit has shrunk.
- As a result, the primary asteroid Didymos was also impacted, causing the pair of asteroids to deviate from their orbit around the Sun.

The 'Kick' technology

- Dart spacecraft, traveling at a speed of 23,760 km/h, to hit Demorphos and reduce its spin speed very minutely is sufficient
- If the acceleration decreases, the forward velocity increases.
- Hence, the diameter of its orbit will decrease.
- This means that the time it takes to orbit the primary asteroid will be reduced by a fraction.
- How much decrease is depends on the nature of each asteroid.

The impact of the collision

- Based on the images taken by the camera on the spacecraft during the collision, scientists hypothesize that this asteroid is a collection of jagged rocks.
- In the coming months, the extent of the change in the path due to the collision will be analyzed by analyzing the images taken by the CubeSat satellite.

Menacing Asteroids

- About 660 million years ago, One-third of all living things including the dinosaurs on Earth were extinct due to the asteroids whose diameter is about 10-15 km
- About 20,000 asteroids are approaching the Earth.
- A few thousand of these asteroids are approaching us threateningly.
- If the asteroids that are on a path that is likely to cause destruction to the earth are detected and diverted from its path, various organisms of the earth, including the human race, can escape.
- The Dart experiment was part of the development of technology to deflect asteroids.
- Elements such as yttrium, niobium, rhodium, palladium, osmium, iridium, scandium & electronic equipments such as Computers, electric vehicles, capacitors, Solar panels are essential for 4th Industrial revolution
- These are rare on Earth;
- Extracting these is a highly polluting activity.
- Such elements are concentrated in these asteroids.
- The elements excavated from only one small asteroid will meet long-term needs
- The same 'kick' technology that diverts the path of an asteroid hitting the Earth can be diverted to the right place and bring the elements concentrated on asteroids.
- This is a new path opened by Dart technology

Combat Helicopter

- The Hindustan Aeronautics Company (HAL), a public sector company of the country, has manufactured light combat helicopters called Prashant.
- It is a 5.8 tonne twin engine helicopter.
- Missiles and other weapons can be mounted on it to carry out precision attacks.
- This helicopter is designed with features that can be used in high altitude areas.
- It operates in all weather conditions, can be used at night and in wild areas.
- Several tests have already been conducted by installing various types of weapons in this helicopter.

LIGHT HELICOPTER

- By Hindustan Aeronautical Company, 15 all-weather attack light helicopters are to be manufactured to strengthen the country's air force.
- These light helicopters are designed with a weight of 5.8 tons and twin engines.
- Air Force officials have said that these new type of armored helicopters will increase the strength of the Indian Air Force while the border tension with countries including China and Pakistan continues.
- Its speed is 268 km per hour and it can travel up to 550 km.
- Its special feature is that it attacks at night.
- Anti-aircraft missiles, 20 mm.
- Advanced weapons including guns and rocket systems can be launched from this helicopter.
- Currently, as the conflict with China is increasing, these helicopters will be used to attack and destroy

enemy bunkers, military camps and banks in high mountain areas including Siachen and Ladakh.

- Accordingly, these helicopters are designed to fly at high altitudes.
- With the production of these new helicopters, India will soon join the list of world powers that dominate the airspace.

Bharat Series

- New 'Bharat Series' Vehicle Registration Procedure is introduced to Facilitate Unhindered Travel in Own Vehicle Across the Country
- Through this new 'Bharat Series' Vehicle Registration Procedure, passengers traveling in their own vehicles or tourist vehicles across the country will not be stopped at any checkpoint.
- Also exempted from paying vehicle taxes based on state and local practices.

Powers of Public list

- Transferring education from the public list to the state list is a frequent demand in Tamil Nadu.

LIST OF POWERS

- India is a federal state.
- It has a dual system of government as central government and state government.
- Therefore, the powers of both governments are clearly defined in the 7th Schedule of the Constitution of India.
- The powers between the central and state governments are divided into three categories.
- The powers of the Central Government are contained in the Central List.
- The powers vested in the State Governments are contained in the State List.
- Concurrent list has powers common to central and state governments.
- At present there are 107 powers in the central list, 61 powers in the state list and 52 powers in the general list.
- Basically, apart from these three powers, there are residual powers.
- These are not listed in any of the central and state lists.
- In all these the central government has the authority.
- In this, both the central and state governments can legislate on the powers in the general list.
- Although it is widely called a general list or a sync list, it is more correct to refer to it as a sync list.
- The underlying meaning of this is that both the governments should work in harmony.
- But in practice, the state governments themselves conform to the laws of the central government.
- The concurrent list is generally dominated by the central government.

EFFECTS OF EMERGENCY

- The Central Government has the power to transfer any power from the State List at any time
- In 1976, during the emergency period of Indira Gandhi regime, the Central Government transferred the five powers of Forests Administration, Education, Weights & Measures, Animals & Birds Protection and Justice Administration to the General List through the 42nd Amendment to the Constitution.
- Indira Gandhi took this action based on the report given by Sardar Swaransingh.
- By this the full jurisdiction of the State Legislatures in these powers was transferred to the General List.
- The Indira Gandhi government took away the rights even after the end of the crisis.
- No central government after Indira Gandhi made any attempt to devolve those powers to the states.

Continued demand

- In today's environment, when there are differences of opinion between the Central and State Governments on a power in the General List, the State Governments can only raise their voice of opposition.
- If most of the state governments accept the central government's law on public list related powers, the state governments that do not accept it will also be forced to accept it.
- When the ruling party at the center rules many states, the central government law of general list becomes easily enforceable.
- For example, the Tamil Nadu government opposes the NEET entrance exam.
- However, there is an entrance exam in Tamil Nadu.
- The weakness in this is that there is no redress for opposing states in such circumstances.

How to raise funds for election freebies?

- The Election Commission of India has sent a letter to the political parties who make various promises at the time of the elections, asking them to explain how they can raise funds to fulfill those promises if they come to power.
- If political parties make promises of free schemes to voters during elections, how can they raise funds to fulfill them once they come to power?
- Is it a plan to raise taxes or a plan to raise non-tax revenue?
- Is there a plan to rationalize government spending?
- Will additional loans be taken to fulfill those projects? Or is there any other plan?
- Who are the free plans for?
- How much Political parties should report such details to the Election Commission.

Vallar International Center

- Vallar International Center will be set up in Vadalur at a cost of Rs.100 crore.
- The Tamil Nadu government has declared Father Periyar's birthday as Social Justice Day and Ambedkar's birthday as Equality Day, and has declared Vallalar's birthday as Special Mercy Day.

Gundar Sattam

- In 1923, during the British rule, the Gangster Prevention Act gave the police the right to imprison habitual offenders in West Bengal without giving them an opportunity to present their case in court and to keep them in jail for a year.
- This Act, which was brought in Tamil Nadu in the year 1982, will take away Tamil Nadu bootlegger, drug offenders, thugs, sex offenders and slum lands.
- The Act came into force in the name of Prevention of Dangerous Activities including Sand Theft Criminals.
- After this, various amendments were made to this Act in 2014, for the first time it was amended to arrest those involved in crimes.

Procedural problem

- A Police must give at least 10 days of labor to take action against a person under the Prevention of Hooliganism Act.
- A document of around 200 to 500 pages should be prepared without even minor typographical errors.
- For that you have to spend from Rs.10 thousand to Rs.50 thousand.

- Signature should be obtained from Inspector, Assistant Commissioner or Deputy Superintendent, District Administrative Judge, District Collector or Municipal Police Commissioner.
- When a criminal is arrested after crossing several stages, he will approach the advisory board or the High Court against it.
- The court acquitted many of them.

Bail Bond

- Under Sections 107, 109, 110 of the Code of Criminal Procedure, the police get signatures on the bail bond in the presence of the Deputy Commissioners of Police, who are easily administrative referees.
- When this guarantee is violated, the police arrest the person concerned and imprison him.
- They will not be granted bail.
- A person can be jailed for a maximum period of one year under this Act.
- At the same time, signatures cannot be obtained from ordinary people using this law.

Arrest for Violation

- Section 107 of the Code of Criminal Procedure empowers the Administrative Magistrate to require a person to be a nuisance to the public peace, to require him to furnish appropriate bail or surety not to do so.
- Similarly under 109 a person commits a capital offense in the future (cognizable offence), when the administrative referee considers that he will not engage in such activity for one year, a bond is written and purchased.
- According to Section 110, bail bonds are obtained through administrative arbitration for serial offenders, thieves, dealers in stolen goods, offenders against women, disturbers of public peace, adulterers of food, and those involved in foreign exchange fraud.
- But it is noted that under Section 110, a bail bond can be obtained from a person for three years.
- The police who monitor them arrest and imprison them when they violate the guarantee stated in the bail bond.

Resolution against Sri Lanka

- During the final war against the LTTE in Sri Lanka in 2009, innocent Tamils were allegedly killed.
- Allegations of human rights violations against Tamils are being made there.
- The UN has been accused of this violation of human rights.
- The Human Rights Council continues to file resolutions.
- 7 countries including China and Pakistan voted against the draft resolution.
- 20 countries including India, Japan, Nepal and Qatar boycotted the referendum.
- It is noteworthy that the same resolution was brought to the UNHRC in the years 2012, 2013, 2014, 2015, 2017, 2019, 2021.

ISRO launches 36 satellites

- The Indian Space Research Organization (ISRO) plans to launch 36 British satellites by the end of this month with GSLV M-3 heavy rocket.
- The project, which will be implemented for commercial use, is being carried out on the basis of the MoU between ISRO's 'Newspace India' and Britain's 'OneWeb'.
- The satellites will be launched by the heavy variant LVM-3 (GSLV Mark 3) of the GSLV rocket.
- 36 satellites will be launched from the Satish Dhawan II launch pad in Sriharikota, Andhra Pradesh in

the third or fourth week of this month.

- One Web, one of the world's leading telecommunication companies, is going to deploy these satellites for telecommunication services for government, commercial and educational use.

Vyommitra's skills

- Vyommitra, the humanoid designed and developed by the Indian Space Research Organization (ISRO) to fly aboard unmanned test missions ahead of the Gaganyaan human space-flight mission, is undergoing pre-flight ground tests at the ISRO Inertial Systems Unit (IISU) here.
- The IISU has successfully integrated it with a computer 'brain', which enables it to 'read' control panels aboard the unmanned test flights and communicate with the ISRO ground stations.
- The ISRO & the IISU were in the news when they unveiled Vyommitra, the 'female, robot astronaut, in 2020.
- It has been designed to resemble a human with facial expressions and speech and sight capabilities, he said.
- It should operate and read the display panels and communicate back to us using its own voice.
- Vyommitra will fly aboard the first unmanned test flight ahead of the manned Gaganyaan flight expected in 2024.

Farewell to Mangalyaan

- Mangalyaan is making history by successfully completing its eight-year mission to Mars.
- ISRO's (Indian Space Research Organisation) completion of Mangalyaan's journey marks another achievement.
- Mangalyaan was launched from Sriharikota on November 5, 2013 by a PSLV launch vehicle.
- The 'Mangalyaan' spacecraft reached the gravitational limit of Mars within a year.
- The 'Mangalyaan' sent into space by ISRO at a cost of Rs.450 crores and reached the planet Mars surprised the superpower countries.
- The probe is considered to be the first step in human space exploration.
- The purpose of 'Mangalya' is to know about the environment prevailing on Mars, the water source of that planet, its terrestrial structure, etc.
- While various countries have been trying to find out whether the climate for human life and the necessary water source are found on Mars, India has also contributed its space without the help of any foreign power.
- It was only after many failed attempts that superpowers like America and Russia were able to send a spacecraft to Mars.
- But the fact that India managed to reach the target in the first attempt was a huge success.
- It was only after that that the countries of the world began to admire India's space research.
- Mangalya took 76.72 hours to complete one orbit around Mars
- Initially, ISRO scientists predicted that 'Mangalyaan' would last for six months.
- But there is justification in celebrating 'Mangalyaan' as a great success as it continued its mission on Mars for almost eight years without any setbacks.
- In eight years 'Mangalyaan' has given the world a lot of new information about Mars.
- On July 14, 2015, the first image of Mars was obtained by Mangalyaan.
- After that, 'Mangalyaan' sent more than 1,100 films.
- We can feel proud when our scientists sent 'Mangalyaan', took the first photograph of Mars' sub-planet Deimos and given to the world.

Chandrayaan-3

- The Chandrayaan-3 spacecraft is scheduled to be launched to the Moon in 2023
- India's first 'Chandrayaan' was launched in 2008.
- That experiment discovered that there is water on the moon.
- Chandrayaan-2 was launched in 2019.
- However, some problems occurred while landing on the moon and the attempt failed.
- ISRO scientists are working hard to correct all those mistakes and once again send the spacecraft to the moon.
- If 'Chandrayaan-3' succeeds, it is already planned to follow it with the Gaganyaan mission to send a man to the Moon.

Conclusion

- The success of 'Mangalyan' has given India's space dreams confidence and freshness.
- The nation owes its thanks to the ISRO scientists who are waiting to conquer the skies with 'Chandrayaan-3' and 'Gaganyaan'.

ISRO's LVM 3 rocket to enter commercial service

- UK-based OneWeb is engaged in manufacturing satellites for internet use.
- The company currently launches 36 satellites for government, education and commercial use.
- It will be launched by 'LVM3' rocket from Satish Dhawan launch pad in Sriharikota.

GSLV MK 3

- The rocket which used to be called GSLV Mk 3 is now known as LVM3
- It is 43.5 meters long and weighs 640 tons.
- So far this rocket has been used only for government functions.
- It is now being used for commercial activities for the first time.
- In a statement released by ISRO, NewSpace India and Britain's OneWeb have launched OneWeb's satellites 'LVM3' based on the MoU.
- This agreement is a historic milestone.
- Through this deal, LVM3 is entering the global business services market.

GSLV Mk-3

- This project, which will be implemented for commercial use, is being carried out on the basis of the MoU between ISRO's 'New Space India' and Britain's 'OneWeb'.

Positioning

- UK company's 36 satellites, ISRO's GSLV Mk-3 rocket successfully placed them in Earth orbit yesterday morning.
- ISRO's PSLV and GSLV rockets are launching not only domestic satellites but also foreign satellites.
- Thus, NewSpace India Limited (NSIL), a public sector company, was started to launch commercial satellites.

Oneweb

- This has contracted to deploy 36 communication satellites of Oneweb in England.
- Each satellite weighs about 150 kg.

- The total weight of the 36 satellites is about 5,400 kg.
- So it was decided to launch them on ISRO's GSLV Mk-3 rocket, which is capable of carrying more weight.
- ISRO is currently calling this rocket as LVM-3.
- This rocket can carry satellites weighing up to 8,000 kg.
- Countries that do not have a rocket launch pad and rockets are trying to send their satellites into space through other countries
- Following the success of this project, many countries are ready to ask India for help.
- The GSLV M3 rocket is 43.5 meters tall and weighs 640 tonnes.
- The work of designing it and the work of installing the satellites have been completed.
- ISRO said that it will be launched as planned.
- One Web, one of the world's leading telecommunications companies, will launch the satellites for govt, telecommunication services for commercial and educational use.
- It is noteworthy that India's Bharti Telecom Service Company is a major shareholder and investor in OneWeb.

Thoothukudi

- The acquisition of land for setting up the 2nd launch pad at Kulasekarapatnam in Thoothukudi district has been completed.
- The launch pad will be operational in another 2 years.
- Chandrayaan-3 & Gaganyaan will be launched soon.
- Chandrayaan-3 rocket will be launched in July.
- In 1999, ISRO first launched commercial satellites on PSLV rocket.
- Since then, 345 foreign satellites have been placed in space.

Digital Currency in India

- The role of e-currency will be crucial in developing the digital economy in India.
- Also, this introduction will be very useful for efficient handling of financial integration services and payment systems.
- Concepts related to digital currency called e-currency are welcome.
- In particular, various key fundamentals, including technology, design choices, potential uses and delivery mechanisms for digital rupees, were discussed in detail.
- Accordingly, a digital currency is a currency issued by the Reserve Bank for monetary policy.
- This would be a liability on the central bank's balance sheet.
- Digital currency should be considered a medium of payment, legal tender and secure store of value by all citizens, companies and government agencies.
- Efforts are being made to popularize bank account electronic form of currency to use digital currency

Privileges for converted Dalits?

- The central government has set up a 3-member commission to look into the demand for concessions with SC status to converted Dalits.

Converted Dalits

- Our country's Constitution (Scheduled Castes) Order 1950 says that, people belonging to religion other than Hindu, Sikhism, Buddhists cannot be considered as SC.

- But Islamic and Christian groups are demanding privileges that are being given to SC to the people who have been converted to their religion

Central Government Commission

- The central government has set up a commission headed by Justice KG Balakrishnan.
- The 3-member commission consists of retired IAS Officer Dr. Ravinder Kumar Jain and University Grants Commission Prof.
- Sushma Yadav will be members.

Aspects to be examined

- Historically they belong to the SC category.
- At the same time, this commission will examine the issue of SC status being given to those who claim to have converted to other religions not mentioned in Article 341 of the Constitution.
- After the conversion of Dalits, it takes into account the changes in their customs, traditions, social discrimination and inferiority.
- The commission will also examine the implications of this decision.
- The Commission shall examine, in consultation with and with the approval of the Central Government, such other related questions as it may deem relevant.
- This commission will function with headquarters in Delhi.
- It has been ordered that the chairman of this commission should submit his report to the central government within 2 years of assuming charge.

What are the benefits?

- It is noteworthy that if Dalits who have converted to Christianity and Islam are given the status of SC category, they will also get the reservation privilege given to them in education and employment.

Sodium Accumulates on the Moon

- Chandrayaan-2 spacecraft was launched into space on July 22, 2019 by GSLV launched by Mark-3 rocket to explore moon
- This spaceship consists of 3 parts namely Orbiter, Vikram Lander and Pragyan Rover.
- An attempt to gently land the Vikram lander to study the surface of the Moon met with an unexpected failure.
- But the Chandrayaan-2 orbiter is functioning normally & Its tools also work.
- It collects new information about the Moon and its environment

Sodium in the Moon

- Now for the first time, the Indian Space Research Organization (ISRO) announced that the sophisticated X-ray spectrometer instrument called 'GLASS' in the Chandrayaan-2 orbiter has mapped the abundance of sodium on the Moon.
- The Glass X-ray Spectrometer is built at ISRO's UR Rao Satellite Center in Bengaluru.
- Glass X-ray Spectrometer with its high sensitivity and efficiency has been able to map the sodium concentration on the moon

What is the benefit?

- Chandrayaan-2 orbiter's 'Glass X-ray Spectrometer Glass' mapping of sodium deposition on the Moon is a guide to researching lunar surface-extraterrestrial interactions.
- ISRO says it will help create models of Mercury and other airless bodies in our solar system and beyond.

Drug quality and control regulations

- 66 children died recently due to poor health conditions in the West African country of Gambia.
- The World Health Organization has warned that the four contaminated cough medicines manufactured by the Meiton Pharmaceutical Company, operating in Sonipat, Haryana, may be responsible for the deaths of children.

Drug formulation

- The World Health Organization ensures that the quality of the drug is regular in its formulation
- The organization examines the quality of the drug through various scientific tests at the initial stage of drug development.
- The World Health Organization also ensures that the drug works well throughout its lifespan.
- The quality of medicines is ensured through expert consultation.
- Moreover, the World Health Organization also studies in detail the methods of preparation of medicines, the method of collection, the ability to react, and the ability to fight against disease.

Drug preparation

- Drug preparation includes everything including obtaining the raw materials for the drug, manufacturing procedures, method of dispensing the drug, printing the details related to the drug.
- WHO is actively investigating all of these.
- The World Health Organization ensures that medicines are always of good quality during manufacture to fulfill the purpose for which they are made.
- Measures are taken during manufacture to minimize the potential hazards of medicines.
- The World Health Organization closely monitors 300 other ingredients, including misinformation
- WHO ensures that drug manufacturers do not act in a way that could jeopardize patient safety.

Drug distribution

- The World Health Organization also examines how drugs are distributed to the market once they are quality assured.
- Dispensing procedures should ensure that the quality of medicines remains unchanged.
- Also, drugs should be marketed in such a way that patients are not harmed.
- The World Health Organization, in collaboration with member countries, monitors compliance with the distribution of medicines.
- WH conducts regular inspections to ensure that investigational drugs are of consistent quality.
- Pharmaceutical manufacturing plants are regularly inspected to ensure the quality of medicines.

Quality Control

- WHO ensures quality right from the procurement of raw materials for medicines.
- After that, the World Health Organization examines whether the appropriate rules are followed in the methods of preparing medicines, storage methods, and distribution.
- Tests ensure that the ingredients of the medicine are in the right proportion.
- The World Health Organization is constantly improving its laboratory facilities to ensure the quality of medicines.

Regulations

- The World Health Organization has formulated international regulations for the preparation, storage and distribution of medicines.

- Drug manufacturing companies and distribution companies are bound to follow those rules.
- The organizations concerned should also ensure that the materials used to pack the medicine do not react with it.
- It should be ensured that the medicines are properly stored.
- WHO is taking strict action against companies that violate the rules.

23.8% increase in direct tax

- Union Finance Ministry says that the tax collection in the current year with a steady growth till October 8 was a total collection of Rs 8.98 lakh crore
- This is a growth of 23.8% compared to the same period of the last financial year and 52% of the current year's collection target has been completed.
- In this direct tax collection, there has been a 32% growth in corporate and personal income tax (including stock exchange tax) and corporate tax revenue has increased by 16.73%, according to the revenue department of the Union Ministry of Justice.
- Some analysts have said that although the country's industrial production and exports have slowed down and the economic growth has lost momentum, the reason for the strong per capita direct tax collection is the increase in the profits of corporations.
- The net direct tax collection from April 1 to October 8 of this year was Rs 7.45 lakh crore, including refunds of Rs 1.53 lakh crore to overpaid direct tax payers.
- This is 16.3% more than the same period last year.
- Individual collections and corporate direct income tax collections have increased by 16.25% and 16.29% respectively.
- It also said that 52.46% of the full year tax collection target has been met as per the financial statement of 2022-23.

Revenue rises

- The graph shows the increase in tax collections this fiscal year up to October 8, 2022 compared with the figures for the corresponding period last year.
- Net personal income tax collections grew at 17.35%, faster than corporate income tax collections that were up 16.29%, net of refunds.
- Direct tax collections - 23.8%
- Direct tax collection (net of refund) - 16.3%
- Corporate income tax - 16.73%
- Personal income tax (including securities transaction tax) - 32.3%
- Corporate income tax (after adjusting for refunds) - 16.29%
- Personal income tax (after adjusting for refunds) - 17.35%

Constitutional Session Live Broadcasting

- From 27th September, Constitutional hearings are being telecasted live on YouTube.
- Chief Justice U.U. Lalit has said that soon the Supreme Court's own platform will be used.
- It is something that no one could have expected that a common citizen who is not a lawyer, who is not

related to the judiciary, and who has never set foot in the court, can watch the important constitutional court hearings that affect him, his life and the society he lives in from his home.

- Not only that, we can directly monitor the activities of the Supreme Court in any corner of India, it is the pride of Indian democracy.

Kenya

- The proceedings of the Supreme Court in the African country of Kenya are telecasted live
- The whole world is watching it.
- The hearings of the Constitutional Court of South Africa were uploaded on the Internet and made available to the public.
- Apart from them, no other country has dared to allow public viewing of court proceedings.

Common people can also know

- A large country with a large population like India, not everyone can go and see the proceedings of the Supreme Court located in the capital city of Delhi.
- Even in Delhi, only a few people get the chance to gain entry to the Supreme Court and witness the hearings firsthand.
- Now the common man can get to know how the administration of justice is done when the constitutional session hearings are telecasted live.

Increasing number of juvenile crimes

- Juvenile Justice Act and the resolution of the United Nations Convention on the Rights of the Child have pointed out that life imprisonment or death sentence should not be given to juveniles involved in crimes.
- Recently, a court decision has been issued in Tamil Nadu which awarded double life sentence to a seventeen-year-old boy who committed a crime.
- The juvenile offender is currently serving a life sentence in a central jail in Tamil Nadu.

Nirbhaya

- On a night in the month of December 2012 in Delhi, a medical student was sexually assaulted by six people including the driver of the bus and died as a result.
- Four of the six criminals involved in this atrocity were given the death penalty.
- A criminal committed suicide before the verdict of the trial
- Because the sixth offender was under eighteen years of age at the time of the crime, the Juvenile Justice Commission, which conducted the criminal investigation against him, ordered him to stay in a juvenile reform school for three years.
- After three years, he was released from there

Juvenile Justice Reforms

- This judgment faced strong criticism across the country.
- Consequently, the Juvenile Justice Act was amended in 2015.
- According to the law, if a juvenile between the ages of 16 and 18 is involved in a violent act, the Juvenile Justice Committee must prepare a 'preliminary assessment' report with the help of psychologists on the child's mental stability, physical ability, ability to understand the consequences of the crime, the environment in which the crime took place, etc.
- Based on the preliminary assessment, whether the violent act committed by the accused should be

treated as a crime committed by an adult and should be tried in court as per the Criminal Procedure Act, or whether the offender should be treated as a juvenile.

- An amendment brought in in 2015 states that the Juvenile Justice Commission should decide whether to send a child to a reformatory.
- According to statistics compiled by the National Crime Archive, 26,954 juveniles between the ages of 16 and 18 were brought before the Juvenile Justice Commission for offenses punishable by imprisonment in 2020 and 28,539 juveniles in 2021.
- For everyone who wants it, the Juvenile Justice Committee has conducted a preliminary assessment only for juveniles involved in high profile cases without conducting a 'preliminary assessment' of their crime.
- Currently, in the year 2021, Tamil Nadu ranks 4th in the list of states with the highest number of juvenile delinquents among Indian states, and Chennai is 2nd in the list of Indian cities with the highest number of juvenile delinquents.

Why?

- Today's society has passed the time when minors were involved in criminal activities for basic needs like food and clothing.
- It can be seen that juveniles are involved in violent acts such as murder, sexual harassment of women, sale of drugs, street robbery, alone and in association with exoffenders.
- Juvenile crime awareness programs and lowering the age of juveniles from 18 to 16 are not the solution to juvenile crime.

Death of foster children

- According to Child Rights Campaigners, two lakh children are growing up like this.
- Even licensed nurseries do not have child protection programs or child welfare counsellors.
- As recommended by the World Health Organization, children are not being given nutritious food.
- Therefore, children become unable to withstand even minor infections.
- It is noteworthy that Tirupur orphanage children were malnourished.
- According to the Child Protection and Maintenance Act 2015, the State Child Protection Society has been started and under this a District Child Protection Unit has been established in every district.
- A Child Protection Officer has been appointed in all 38 districts of Tamil Nadu.
- Their duty is to inspect registered childcare centers and ensure the safety of the children there.
- But these deaths are proof that this duty has not been properly fulfilled
- The protection of children under The Maintenance Act 2000, Sections 34 and 35 clearly state the responsibility of the State Government in the maintenance of children's homes.

Max Emilian Verstappen - 2nd title

- Max Emilian Verstappen is a Belgian-Dutch racing driver and the 2021 and 2022 Formula One World Champion.
- He competes under the Dutch flag in Formula One with Red Bull Racing
- He won the Grand Prix car race in Japan.
- With this, he has also won the current season title of F1 race.
- This is his 2nd consecutive F1 title win.

National Textile Corporation

- The British who were well aware of the future of the garment manufacturing industry and the profits to be made in this industry, chose three locations in India with the necessary climate and facilities to grow cotton and spin it into yarn and weave clothes.
- They provided road and rail transport facilities to those places and made them textile centers.
- Ahmedabad, Bombay (Mumbai) and Coimbatore, which were called A, B and C, were formed in this way.
- The first mill was started in 1888 in Coimbatore, where the climate required and labor available at low wages.
- It was the Coimbatore Spinning and Weaving Mills, known as CSW.

Dilapidated Mills

- The National Textile Corporation (NTC) was started by the Central Government in 1968 to manage 16 private Textile mills which were in a debilitated state.
- NTC was involved in the production and sale of yarn and cloth by purchasing cotton from farmers.
- Later, in 1972-73 the number of plants under the management of NTC increased to 103.
- During Indira Gandhi's tenure as Prime Minister, 123 mills across the country were nationalized in 1974.

Shutdown During Corona

- These factories, which were functioning till Corona, were not opened after the general lockdown period

Closure of the factories

- A recommendation has been given to the government to operate the plants
- Niti Aayog did not come forward to continue operating NTC
- The organization says that the government will only incur losses due to these plants.
- When asked whether the government is on the verge of closing down the factories, the officials say that there is no such intention.
- At present, NTC has assets worth around Rs 1 lakh crore across the country.
- It is thought that the central government is working with the intention of selling these.

Wind resources for 30 GW power generation in Dhanushkodi

- Since Dhanushkodi has wind resources for power generation of 30 GW, for the first time in the country, the Central Energy Department has chosen the Dhanush Kodi sea area to set up a wind farm in the sea.
- On 09.09.2015, the central government announced the plan to generate electricity by setting up offshore wind farms in India.
- The study was carried out by measuring the wind speed on the 7600 km long sea surface in the country.
- In the end, Tamil Nadu and Gujarat were chosen as the states with the windiest coast.
- In this, it was revealed that the wind was blowing at a speed of 29 km per hour in the Dhanushkodi area of Gulf of Mannar and 24.5 km per hour in the Gulf of Kutch region in Gujarat state.
- For this purpose, a high tower was erected in the Dhanushkodi Arichalmunai sea area near Rameswaram and a high-tech instrument was installed to study the wind speed from 2015 to 2020.
- Indian coastal region has 70 GW of wind power generation potential.

- In this, Tamil Nadu and Gujarat have 35 GW wind resources each.
- In particular, Dhanushkodi has about 30 GW of wind power.
- 2 wind turbines will be installed here.
- Through this, electricity can be distributed throughout Rameswaram.

Can Quantum Particles Speak Secretly?

- This year's Nobel Prize in Physics is being distributed to Alan Aspect, John F. Glaser, and Anton Zeilinger, who established the possibility of quantum entanglement through systematic experiments and thereby made great leaps in physics, communication, and computer engineering.

Politicians and Quantum Particles

- To understand the nature of quantum particles, let us first look at the story of two politicians.
- Two politicians belonging to the same party were close friends.
- Due to some reason the friendship broke and they separated.
- Now one is the ruling party and the other is the opposition party.
- Their policy has always been to deny what the other says.
- People thought that if they were asked questions at the same time in different places, they would be stuck giving the same answer.
- Both agreed to this challenging interview (competition).
- At the same time, it was decided that they would give an interview from their respective party office.
- The interviewers were prepared with questions.
- During the interview, contrary to everyone's expectations, both of them gave opposite answers!
- People speculated that maybe the questions have been leaked or the two might have shared their answers through WhatsApp.
- But, even if you send a WhatsApp message, there will be a short time gap.
- But it turns out that both of them gave opposite answers without any noticeable gap.
- After all, people joked that old friends knew what the other was thinking.
- Now, let us replace the two politicians with entangled quantum particles.
- Particles like electron and photon are called quantum particles.
- Even if two entangled quantum particles are placed several meters apart, the two react in opposite directions;
- That is, the response of one particle affected the response of another particle.
- Einstein believed that such an effect was possible only if the two spoke.
- But this year's Nobel Prize in Physics has been awarded for establishing that quantum particles do not interact.

Quantum entanglement and the speed of light

- Even sunlight takes about eight minutes to reach Earth due to distance.
- But the particles in quantum entanglement, no matter how far apart they are, give a response within a very short period of time, like a nanosecond.
- That is, this physical property called quantum entanglement works at a speed many times faster than the speed of light.
- Einstein (1935) said that the problem lies in the fundamentals of quantum physics, as this contradicts the previous assertion that information traveling at the speed of light is the fastest in existence.

- But it was Alan Aspect (1982) who discovered through his experiments that two particles in a quantum entanglement cannot travel faster than the speed of light.
- Studies of how quantum entanglement makes this property possible are still underway.
- John F. Glaser, and Anton Zeilinger took Aspect's research to the next level, and the experimental results gave hope and a new breakthrough to the field of quantum physics.

Applications

- If two politicians answer oppositely, we only need to listen to one's answer!
- One would have said 'yes' and the other would have said 'no'.
- Is it some kind of communication? In India, is it night time? ' If it answered 'yes' to the question, the particle in America would have answered 'no'?
- Because information cannot be transmitted so quickly, quantum entanglement is the key to high-speed computing and communication.
- Even more surprising information is that physics says that quantum entanglement is possible even if one particle is here and another particle is a galaxy away!

Pesticide use

- In view of the various harmful effects of the increasing use of pesticides in agriculture, the state governments of Punjab and Haryana have banned the use of 10 pesticides.

Elementary School

- India's Green Revolution in the 1960s saw a significant increase in the use of inputs such as vigorous seeds, chemical fertilizers and pesticides to increase yields.
- It has contributed appreciably to the production of food grains, oilseeds, cotton and horticulture crops.
- The production of food grains increased from 52 million tonnes in 1951-52 to 309 million tonnes in 2020-21.
- Production of horticultural crops like vegetables and fruits has increased from 97 million tonnes in 1991-92 to 331 million tonnes in 2020-21.
- The intensive farming practices that have been practiced for more than 50 years have brought unnecessary risks to agriculture such as pests and non-pest diseases.
- The total use of pesticides increased from 14,630 tonnes in 1965-66 to 62,180 tonnes in 2017-18.
- Application per hectare increased from 94 grams to 315 grams (4 times).
- It reduces biodiversity and increases soil, water and air pollution and causes many longterm problems.
- Therefore, the excessive use of pesticides has been strongly criticized by environmental researchers and activists

Increased cost of cultivation

- Excessive use of pesticides have caused long-term, irreversible health problems for people.
- But increased use of new chemical pesticides has significantly increased the cost of cultivation in various crops over time.
- According to Agricultural Expenditure and Prices Commission data, rice cultivation in Punjab spent Rs 262 per hectare on pesticides in 1990-91.
- That is an increase of Rs 5,624 in 2019-20.

Do's

- There is no doubt that banning pesticides will affect crop production.
- A complete ban on pesticide use would reduce the world's total crop production by 50%;
- The father of Green Revolution and Nobel Laureate Norman Borlaug said in the 1970s that it will increase the price of food products by 4-5 times.
- Species such as snakes, snails, crabs, earthworms, frogs, which are considered essential for agriculture and the environment, are rapidly disappearing from agricultural lands.
- Necessary measures should be taken without delay to control the use of pesticides without affecting the productivity of crops.
- Concerted efforts are needed to increase the area of organic farming, which does not require pesticides and is a method of crop cultivation without the use of modern inputs.
- Cotton and rice alone account for 65% of India's pesticide use.

Nebula at a distance of 7,100 light years

- The countries of the world are sending many satellites and telescopes to find out the many mysteries
- In that line, the United States' space exploration agency, NASA, placed the Hubble telescope in space on April 24, 1990.
- This state-of-the-art telescope is sending back many rare images.
- Currently, NASA's Hubble telescope has taken a picture of the nebula, which is 7,100 light-years away from Earth.
- The 'Pearl Nebula' within the constellation is spectacularly colorful.
- Nebulas are large clouds of stars, dust, and gasses such as hydrogen and helium found in space.
- The nebula is now covered by a huge bubble or cloud of gas.
- It is 40 lakh years old.
- According to NASA, it will become a 'super nova' within 1 to 2 million years.
- And the bubble nova is the most massive, 7 light-years in circumference, and is an exploding star event known as a supernova.
- Scientists say that it will emit many times the energy of the Sun.
- "The Pearl Nebula is clearly visible. It is colorful with hydrogen in green, oxygen in blue, and nitrogen in red."

Surrogacy Regulation Act 2021

What does the Surrogacy Regulation Act 2021 say?

- Only a couple who cannot conceive a child due to physical disability can adopt a surrogate mother and have a child.
- The couple must be legally married.
- Only one child can be adopted through surrogacy.
- A couple who adopted a child, cannot have a child through surrogate mother
- After one year of marriage, even after having direct sexual intercourse, an infertile couple who cannot conceive can apply to the appropriate committee and obtain a certificate stating that there is no possibility of conception.
- A couple cannot have a child within one year of marriage through surrogacy

- In couples wishing to have a child through surrogacy, the male should be between 26-55 years of age.
- Female should be between 25-50 years.
- A woman acting as a surrogate mother can do this only once in her lifetime.
- One cannot act as a surrogate mother by taking money. She should be a volunteer to help the couple.
- Before hiring someone as a surrogate mother, the potential consequences of acting as a surrogate mother should be clearly outlined.
- After that, her permission should be obtained in writing.
- Surrogate mother should be between 35 to 45 years of age.
- After selecting the surrogate mother, she should be placed under the direct control of specially licensed fertility centers.
- Delivery should be arranged through that particular centre.
- In case of any wrongdoing, surrogate mother, there is no great penalty;
- She should be approached as a victim.
- A couple who violates the Surrogate Mother Act will be punished with imprisonment for five years and a fine of Rs 50,000.
- If you commit this mistake continuously, you will be imprisoned for 10 years and a fine of one lakh rupees will be imposed.

Global Economy

Three Factors in the Global Economy

- The International Fund points out three reasons why the global economy faces serious challenges.
- The energy shortage caused by the Russia-Ukraine war, the impact on daily life seen in many developed countries due to rising prices, and the slowdown of the Chinese economy are said to be three important factors.
- The global economy could shrink by less than a third by 2023, according to a report by the International Monetary Fund.
- The report states that the United States, the European Union and China will continue to face economic decline, and 2023 will plunge the world into a deep recession.

China

- Not only India but also China is gaining prominence in the report of International Finance.
- China's current growth forecast of 8.1% in 2021 is just 3.2%, with the real estate sector, which accounts for one-fifth of China's economy, facing a sharp decline.
- The report also mentions that as China plays an important role in the international supply chain, it is inevitable that other countries' economies will be affected.

Europe

- Seven months into Russia's invasion of Ukraine, the European Union, like Russia, faces major problems.
- Most importantly, the energy crisis has affected the countries of the European Union.
- European countries are mostly dependent on Russian crude oil imports.
- Germany relies on Russian crude for 38% of its domestic demand.
- Belgium, Finland and the Netherlands are more than 50%.
- Many other European countries depend only on Russian crude oil.

India's Economic Growth - IMF

- The International Monetary Fund (IMF) has lowered India's economic growth estimate for the current financial year to 6.8%
- Last January, the IMF had projected India's GDP growth at 8.2% in the fiscal year 2022- 23.
- Later, it was reduced to 7.4% last July.
- In this report released after the annual meeting of World Bank and IMF officials, India's economic growth estimate for the current fiscal year is 6.8%
- This is 0.6% lower than last July's forecast.
- According to the IMF report, global economic growth is expected to decrease from 6.0% in 2021 to 3.2% in 2022 and 2.7% in 2023.
- These forecasts echo a significant slowdown in major economies (the United States, the European Union, and China), according to the IMF.

Challenges

- Russia's invasion of Ukraine continues to destabilize the global economy.
- Prolonged inflationary pressure and rising cost of living problem.
- These challenges have arisen due to the impact of the corona virus outbreak and the slowdown in China due to the series of lockdowns.
- China's economic growth, which was 8.1 percent in 2021, will slow down to 3.2 percent this year, according to the IMF report.

India's first Slender Loris Sanctuary

- India's first Slender Loris Sanctuary has been set up in Karur and Dindigul districts on an area of 11806 hectares by the Government of Tamil Nadu.
- Slender Loris are small, nocturnal mammals that benefit farmers.
- They spend most of their lives in trees.
- This species causes damage to agricultural crops.
- But also beneficial to farmers by hunting insects.
- They play an important role in ecological and terrestrial ecosystems.

Kadavur Devangu Sanctuary

- Notification of Kadavur Slender Loris Sanctuary as India's first Slender Loris Sanctuary in Karur and Dindigul districts covering an area of 11806.56 hectares under the Wildlife (Protection) Act.
- India's first sea cow sanctuary in the Palk strait
- Kazhuveli Bird Sanctuary in Villupuram district
- Agathiyar Hill Elephant Sanctuary
- Tirupur Nanjarayan Pond Bird Sanctuary

Rejection of Russia's Request

- Due to Ukraine's decision to join the EU, Russia started a war on that country.
- In the places captured by the Russian army, 4 regions namely Luhansk, Donetsk, Zaporizhzhia and Kherson Russia held a referendum and annexed them.
- The UN said it was illegal.

- In the Security Council, Albania brought a resolution of condemnation.
- Russia demanded the UN on this resolution that the vote in the General Assembly be held in secret.
- A referendum was held on this the day before yesterday.
- Out of the total 193 member states, 107 countries, including India, have opposed Russia's request to hold a recorded referendum.
- Although there is no change in India's stance on the Russia-Ukraine war, it is noteworthy that India has voted against Russia for the 3rd time in the last few months.

Chandrasekhar Rao's National Goal

- To enter the national politics, the party leader and Telangana Chief Minister K. Chandrasekhar Rao has changed the name of his party 'Telangana Rashtir Samithi' to 'Bharat Rashtra Samithi'.
- Telangana launched the Telangana Rashtra Samithi in 2001 with a demand for a separate state of Telangana.
- Telangana state came into existence in 2014 during the Congress rule at the Centre.
- For a party to be recognized as a national party, it must contest the Legislative Assembly and Lok Sabha elections in at least four states.
- Must have secured 6% of the total votes cast.
- Also, candidates of the party should have won at least 4 Lok Sabha constituencies.

No prosecution under Section 66A of the IT Act

- No prosecution can be instituted against any person under the repealed Section 66A of the IT Act.
- According to Section 66A of the Information Technology Act, 2000, objectionable through a computer or telecommunication device, the person who publishes the information can be imprisoned for up to 3 years and fined.
- However, pointing out the importance of freedom of expression, the Supreme Court said that Section 66A directly affects the right of the public to know anything and canceled that section in 2015.

Indian and Chinese troops

- Indian and Chinese troops have engaged forces on both sides in the Gogra-Hot Spring conflict zone along the Line of Control in eastern Ladakh.
- Both sides have issued a one-line press release regarding the withdrawal of troops from 15 areas by the Gogra-Hot Springs Observatory to ensure peace in the border areas.
- This decision has been taken in the 16th Bilateral Commander Level Officers Meeting.
- After the 12th round of commander-level meetings in August 2021, troops were withdrawn from Observation Center 17A area.
- After that, the troop withdrawal has taken place.
- As per the current deal, the tension has been reduced to face-to-face readiness in the Gogra-Hot Springs area and the troops have returned to their respective border camps.
- Even so, both sides are keeping troops ready to face each other at the 'Way' junction in Depsang and Charging Along Nallah in Demchok.

Boundary Line

- The boundary between India and China is not formally demarcated.
- The current Line of Control is based on bilateral positions after the Chinese invasion in 1962.
- The 3.488 km long LoC can be divided into several parts.
- East-West Ladakh
- The central region bordering Uttarakhand-Himachal Pradesh states
- The eastern region bordering Sikkim-Arunachal Pradesh regions
- The 832-km-long Eastern Ladakh region, which is currently in conflict, has been divided by the military along the Line of Control.
- The India-China border with seven states including Ladakh, Jammu, Kashmir, Himachal Pradesh, Uttarakhand, Sikkim and Arunachal Pradesh has been witnessing tension for the last 60 years following the Indo-China war due to the lack of formal agreement.
- There are 65 observation centers in East Ladakh alone.
- Starting from the Karakoram Pass and extending up to Demchok, all these observation posts are bordered by Indian troops & are engaged in security.

CONCLUSION

- We should not be overjoyed that China is currently withdrawing troops from Observation Center 15 in eastern Ladakh.
- A Chinese foreign ministry official's comment on this is worth noting.
- It should be assumed that the official stated that the tension arose as a result of the conflict caused by the illegal crossing of the Line of Control by Indian troops in April 2020 and that India's position cannot be accepted, which is the position of the Chinese government.

5.6 crore people were pushed into poverty in India

- The World Bank said that 5.6 crore people were pushed into poverty in India due to the Corona disaster in 2020.
- In 2020 alone, 7.1 crore people worldwide were forced into extreme poverty due to the impact of Corona.
- Of this, 79% are from India, especially, 5.6 crore people in India fell into severe poverty due to Corona disaster alone.
- While the international extreme poverty rate was 8.4% in 2019, it increased to 9.3% in 2020.
- Accordingly, in 2020, after 7.1 crore people were pushed into the grip of extreme poverty, the total number of poor people in the world increased to 70 crore.
- Poverty reduction will be further hampered in 2022 as Russia's war on Ukraine, a slowdown in Chinese growth, and rising food and energy prices weigh on global growth.

Supreme Court's verdict on Hijab ban

Karnataka High Court

- On February 5, Muslim girls were banned from wearing hijab in government and educational institutions in Karnataka
- Meanwhile, a case was filed in the High Court of Karnataka by the Muslim students against this ban.
- The Karnataka High Court session that heard it, said that wearing hijab is not an essential custom in Islamic law.

- Therefore, it ordered that the ban imposed on wearing hijab in educational institutions will be valid
- The Supreme Court objected to this and 24 people, including Muslim students, filed appeals in the Supreme Court.
- Supreme Court Judge Hemanth Gudda, Sudhanshu Dhulia announced their verdict yesterday.
- In this matter, the appeals filed by the students were dismissed
- Can the college administration decide about the uniform of the girls?
- Do restrictions on wearing hijab violate Article 25 of the Constitution?
- 11 questions including whether wearing hijab is an essential religious practice were presented and the investigation was held in this case.
- The appeals are against all these questions.
- Therefore, the Judges ruled to dismiss them.

DIFFERENT JUDGMENT

- The judgment of the High Court of Karnataka banning the wearing of hijab was set aside.
- The ban on wearing hijab is invalid.
- Wearing hijab is their choice.
- Therefore, I cancel the ordinance issued by the Karnataka government banning hijab.
- I set aside that judgment as it is not necessary for the court to interfere with an essential religious practice like Hijab.
- Since the two judges and both of us have issued different verdicts, we suggest to the Chief Justice that this case should be heard by an additional judge of the Supreme Court.
- As there have been 20 different judgments on the continuation of the hijab ban, the previous judgment will be followed in this case.
- Accordingly, Hijab ban will continue in Karnataka and no religious symbols will be allowed in educational institutions.

What's next?

- Since both the judges have issued a different verdict, the case will be transferred to a bench of 3 or 5 judges headed by the Chief Justice of the Supreme Court.
- If not, considering the nature of the case, there is a possibility of transfer to the constitutional session.
- The Additional Session will hear these appeals afresh and till then the High Court of Karnataka will remain in force.

Different verdict

- The case of whether Muslim students can wear hijab or not in educational institutions of Karnataka state was heard by a two-judge Supreme Court bench.
- The two-judge bench could not resolve the conflict between a student's right to wear hijab and the government's desire to maintain secularism in schools.
- The High Court on March 15 banned the use of hijab, other than the prescribed uniform, in educational institutions.
- The High Court of Karnataka had ruled that the ban order of the state government would be upheld in the case filed by the hijab-wearing students against it.
- Supreme Court Justice Hemanth Gudda, who heard the appeal against this verdict, upheld the verdict of the Karnataka High Court on the Hijab issue.

- Another judge, Sudhanshu Dhulia, overturned the Karnataka High Court's verdict.
- In this case, the next step of this case will be according to the guidance of Supreme Court Chief Justice U.U. Lalit.

Split verdict:

- When the verdict of a case heard by a court session cannot be decided unanimously or by majority, it becomes a split verdict.
- Such judgments are possible only when there is an equal number of judges in the court session.
- This is why the bench for major cases is composed of odd numbers (three, five, seven, nine judges).
- However, two-judge benches known as division benches are not uncommon.
- After the verdict, the case in which the dissenting judgment was given in the Supreme Court is transferred to a larger bench or a bench of a third judge.
- Each of the judges will give their judgment after carefully examining the evidence presented before the grand session.
- After that, the final verdict will be reached on the basis of majority and in the case of Hijab, the Chief Justice of the Supreme Court will decide on the next step.

Procedure followed in High Courts

- When two Judges give different judgments in respect of the High Court, the case is placed before the Chief Justice of the Court.
- He shall assign the case to a third judge on the administrative side.
- Or change to a larger session.
- Then, the input of the judges who heard the case earlier was not necessary

When can you appeal?

- In a case where a different judgment has been given, the position is that no judgment has been passed in that case until the third judge or the High Session gives a fresh hearing.
- An appeal can be made to the Supreme Court only after the larger bench or the third judge has given their verdict.

Some of the earlier dissenting judgments:

- A two-judge bench of the Delhi High Court had given a dissenting judgment in a case against the exemption of marital rape from the section punishing rape.
- Section 375 of the Indian Penal Code for the punishment of rape provides that any sexual act by the husband on the wife does not amount to adultery.
- Justice Rajeev Shakhter said that this is unconstitutional.
- At the same time, Justice C. Harishankar said that the exception given to marital relationship is valid.

Mangrove forests

Introduction

- According to the ancient Tamil nature classification of natural bulwarks, the marshy forests are a mixture of Mullai, Marudham, Neithal
- Mangrove forests help to control the high and fast waves that form during high tide.
- Because these forests play a major role in regulating the speed of the wave, they are called tidal forests.

Surapunnai Forests (*Calophyllum inophyllum*)

- Surapunnai tree species are found in Mangrove forests.
- These tend to be close, hairy, and towering in appearance.
- The leaves of these plants are thick, waxy on the surface and have a distinct fragrance.
- Due to this, they are also called Surapunnai forests.

Intertidal forests

- These forests thrive in the middle of the ocean tide.
- When the brackish water due to the sea waves and the fresh water arriving through the rivers joins in this area, the oxygen level increases and the salinity decreases.
- The intertidal forests grow well because the minerals in the fresh water accumulate between these forests and help these plants to grow.

Thillai forests

- Thillai (*Excoecaria agallocha*) trees are found in the estuarine areas of Chidambaram region.
- Their leaves look like banyan tree leaves.
- The head tree of the Nataraja Temple in Chidambaram is this Thillai tree.

Sundaraban forests

- The trees in Mangrove forests are also called Sundara trees.
- These are beautiful in appearance. Hence, these forests are also known as Sundaravan forests.
- These are the coastal forests of West Bengal.
- India's national animal, the Bengal tiger, is found here.
- These forests are the reason why tigers got the name Bengal tiger.

Aquatic forests

- Mangrove forests are located along estuaries where rivers and seas meet.
- Thus fresh water is rich in minerals including nitrogen, phosphorus, potassium and calcium.
- These minerals mix with sea water in the estuary.
- As a result, the production of phytoplankton and zooplankton will increase.
- Due to this, fish stocks increase.
- In the estuary, salinity is low, biogas (O₂) levels are high, and the pH level is high.
- These are known as fishery forests because they are suitable for breeding and have abundant fish resources.

Breathing root forests

- Generally plant have roots that are Geotropic and anti-phototropic.
- But the respirating roots of Mangrove forests have roots that are phototropic and antigeotropic
- The roots of these plants extend above the sea water.
- These roots have very fine pores.
- Air is absorbed through these pores and carbon dioxide (CO₂) is present in the plant body to prepare the polysaccharide food product called starch.
- These are called respiratory forests because they absorb atmospheric air directly.

Coastal Protection Forests

- Coastal forests act as bulwarks to protect against natural calamities such as sea earthquakes, extreme storms, and avalanches.

- Hurricanes are formed when an earthquake occurs under the sea.
- When they reach the continental slope, they collide with it and reach the seashore at a higher height and speed (the continental slope is a vertical coastal area).
- These forests are natural barriers that reduce the speed of this storm.
- These undulating forests protected the people from the tsunami that hit on December 26, 2004.

MIRACLE FORESTS

- These plants are well adapted to grow in areas with high salinity.
- They also absorb sea water and excrete excess salt through their leaves.
- Osmoregulation is the excretion of excessive amount of salt in animal body with the help of sweat gland
- These properties and special salt veins are located in the leaves of this plant, hence they are called miracle forests.

Alkaline forests

- Production of phytoplankton biomass depends on light penetration and acid balance.
- The respiratory roots of plants in the Mangrove forests play an important role in the acidbase balance process.
- Because of this, the marine life in the area is rich in protein and very tasty.
- These plants are specially known as saffrons because they prevent ocean acidification.

Cold forests

- Land breeze are winds that blow from land to sea at night.
- This is a phenomenon that happens due to the sea breeze blowing from the sea towards the land during the day and temperature variation.
- These forests are also named as cooling forests because they play a major role in preventing the temperature variation in the sea and making the sea water a cold area.
- These forests are also important in preventing global warming.

Hatchery forests

- These forests are used as a suitable place for hatching of organisms like fish, shrimps and crabs.
- Because there is the optimal situation for this is that the number of these species is high in these areas.

Rare Forests

- India has 105 species of migratory plants.
- Of these, 40 species of plants are found in the east coast regions, 27 species of plants in the west coast regions and 38 species in the Andaman and Nicobar Islands.
- The coastal areas of East India are rich in undulating forests and rich alluvial soils.
- The perennial rivers and river basins are the reason.
- The total area of alluvial forests in India is 4,921 sq km.
- 6.2% of this is in Tamil Nadu.
- In Tamil Nadu, these forests are mostly found in Picchavaram, Muthuppet and Gulf of Mannar.
- Mangrove forests are unique.
- The benefits of this natural protective barrier are numerous.
- Our coastline is protected by mangrove forests and the continent's fisheries are enriched.
- It should be kept in mind that mangroves also generate employment in the surrounding villages.

Asia Women's T20 Champion - India

- India won the Asian Women's T20 Cricket Championship title for the 7th time.
- The Asian Women's T20 Cup matches were held in Sylhet, Bangladesh.

Champion for the 7th time

- India has won the title of champion for the 7th time in the 8th Asia T20 Cup held so far.
- This victory is a motivation to prepare for the T20 World Cup to be held in 2023.
- India's loss was only to Pakistan in the league matches

India is ranked 107th in the International Hunger Index

- This report helps in identifying the situation of hungry people at international, regional & national level.
- The report is published for 121 countries for which data has been collected.
- India is at the 107th position.
- In 2020, India was ranked 94th.
- In South Asia, except Afghanistan, all other countries have performed better than India, the report said.
- Importantly, India has the highest number of underweight children in the world, the report said.

KEY DETAILS OF THE REPORT :

- Malnutrition
- Child Mortality Rate
- Children underweight for height
- Children underweight for age

Status of India's Neighboring Countries	
Sri Lanka	64
Myanmar	71
Nepal	81
Bangladesh	84
Pakistan	99
Afghanistan	109

Countries with the most severe hunger	
Yemen	121
Central African Republic	120
Madagascar	119
Democratic Republic of the Congo	118
Chad	117

India's position	
2002	107 (out of 121 countries)
2021	101 (out of 116 countries)
2020	94 (out of 107 countries)

First Indigenously Manufactured Aluminum Freight Train

- For the first time, a freight train with coaches made of indigenous aluminum was incorporated into the Indian Railways.
- Union Railway Minister Ashwini Vaishnav inaugurated a freight train with aluminum coaches in Odisha's Bhubaneswar.

- Lightweight aluminum coaches are a major innovation for Indian Railways.
- This is a proud moment for the country and the journey towards indigenization.
- 14,500 tonnes of carbon emissions will be prevented by these trains.
- This train can carry heavy loads.
- It is long lasting without rusting.
- 100% recyclable.
- It will look fresh even after 30 years.
- He said that this train will help the country achieve its climate change goals.
- Aluminum coaches can carry 180 tonnes more cargo per journey than conventional coaches.
- According to Hindalco, which is involved in the production of aluminum railway coaches, the rust-free nature will reduce the maintenance cost of these railway coaches.
- Aluminum railcars have 10 years more armor compared to normal railcars.
- However, their production cost is 35% higher than normal trains.

41 crore people have been lifted out of poverty in India in 15 years

- In India, 41.5 crore people have been lifted out of multidimensional poverty in the last 15 years (from 2005-06 to 2019-2021)
- According to this year's Global Multidimensional Poverty Index, the poverty index has decreased from 55.1% to 16.4%
- Goa is showing high speed in poverty reduction.
- It is followed by the states of Jammu and Kashmir, Andhra Pradesh, Chhattisgarh and Rajasthan.
- According to the 2015-16 census, 10 states were included in the most poor category.
- West Bengal is the only state to exit this category in 2019-21.
- Remaining Bihar, Jharkhand Meghalaya, MP , U.P. , Assam, Odisha, Chhattisgarh and Rajasthan states continue in that list, say UNDP

Bharati Das took charge as the new Controller General of Accounts

- Bharati Das has taken charge as the country's 27th Chief Accounts Officer
- Bharati Das, a 1988 batch Indian Public Accounts Service (ICAS) officer, has served as the Principal Audit Officer of the Board of Direct Taxes.
- She has also worked as an Audit Officer in Ministry of External Affairs and Ministry of Home Affairs.
- She has also worked as a consultant on audit matters for the central government.
- Currently she has taken charge as CGA.
- The Chief Accounts Officer is responsible for preparing departmental accounts and submitting them to the Central Government and conducting departmental audits.

Booker Award to a Sri Lankan writer

- Writer Shehan Karunatilaka has been awarded the Booker Prize for his novel 'The Seven Moons of Mali Almeida', which reveals the intensity of the civil war in Sri Lanka along with the different emotions of life.

- The Booker award ceremony was held in London.
- After 2019, the ceremony was attended by authors nominated for the banquet and former awardees.
- Britain's Princess Camilla and others participated in this program.
- Sri Lankan writer Shehan Karunathilak won the Booker Prize for his novel "The Seven Moons of Mali Almeida".
- Along with the Booker Award, a prize money of around Rs. 45 lakhs was given to writer Karunatilaka.
- The selection committee said that he has recorded the violence in the Sri Lankan war with humor in that novel.

Minimum Support Price

- Approval was given to increase the minimum support price for 6 crops including wheat grown in Rabi season.

Crop	Increase in MSP	New MSP
Wheat	Rs 110	Rs 2125
Mustard	Rs 400	Rs 5450
Barley	Rs 100	Rs 1735
Masur dal	Rs 500	Rs 6000
Gram dal	Rs 105	Rs 5335
Saffron	Rs 209	Rs 5650

International Solar Alliance

- Union Minister for Power and New Renewable Energy RK Singh has been elected as the President of the 5th General Assembly meeting of International Solar Alliance
- The International Solar Alliance is developing rapidly.
- There are currently 110 countries in this organization.
- Our aim is to provide electricity to the 70 crore people of the world who are unable to get electricity through resources that do not harm the environment.
- The International Solar Alliance of Nations is working with countries around the world to promote secure access to electricity globally and promote solar energy as a sustainable way to become carbon neutral in the future.
- By 2030, the objective of the organization is to attract one lakh crore US dollars in investments in the sector to promote solar energy and to reduce the cost of technology and investments in the power demand.
- Also, this organization aims to promote the use of solar energy in agriculture, health, transportation and power generation sectors.

Ballon Or' award for Benzema, Alexia Putellas

- The prestigious Ballon Or' award in the world of football has been won by Karim Benzema of France in the men's category and Alexia Putellas of Spain in the women's category in 2022.

Roger Binny becomes BCCI President

- Roger Binny (67) was elected unopposed as the 36th President of the Board of Control for Cricket in India (BCCI).
- Roger Binny replaced Sourav Ganguly, who completed his tenure as president, at the BCCI Annual General Meeting in Mumbai.

New Air Force Base in Gujarat

- Prime Minister Narendra Modi laid the foundation stone for a new air force base at Deesa in North Gujarat, near the India-Pakistan border.

Resignation of British Prime Minister

- The British Prime Minister had reversed the previous government's rise in corporate tax from 19% to 25%
- Through that, the tax on the loss earned by the companies was allowed to remain at 19%
- In the mini budget, Liz Truss had removed the 45% higher tax on high income earners.
- Also, reduction of income tax for low income earners from 20% to 19%
- Concessional features including raising the minimum property value for deed registration fees were included in the mini budget.
- Internal party elections were held to choose a new Prime Minister in the ruling Conservative Party.
- In the final round with eight contestants, there was a battle between Liz Truss and Rishi Sunak of Indian origin.
- Liz Truss won and became Prime Minister.

Rishi was sworn in as the Prime Minister of England

Introduction

- Rishi Sunak of Indian origin was sworn in as the 57th Prime Minister of England yesterday.
- He has received various honors including the first Hindu Prime Minister, the first non-white Prime Minister and the first Indian origin Prime Minister.
- The reason is that after the resignation of Boris Johnson, the senior leader of the Conservative Party, who was the Prime Minister of England, Liz Truss was sworn in as the Prime Minister on September 6.
- The economy has suffered a major downturn in the mid-term budget she recently filed.
- Finance Minister Kwasi Kwarteng, Home Minister Suella Braverman and Party Chief Whip Wendy Morton resigned in protest of opposition to Liz Truss
- With the crisis over, Liz Truss resigned on the 20th.

Rishi

- Internal party elections started again in the Conservative Party to choose the new Prime Minister.
- The Conservative Party has 357 MPs.
- More than 200 people supported Rishi Sunak.

Unopposed

- Rishi Sunak was unanimously elected as the new Prime Minister of England.

Brexit Britain

Introduction

- No country in the world that has seen five Prime Ministers in the last six years except Britain.
- The contemporary history of Britain begins with 'Brexit'.

Brexit

- The event of Britain's separation from the European Union, and it is normal for people from the backward countries of the European Union to come to Britain and engage in menial jobs.
- This created a general antipathy in the British mind.
- This was widely believed to be the cause of Britain's unemployment and economic depression.
- Fearing that Britain will be exploited if this situation continues, Britain has decided to leave the European Union.

David Cameron

- In 2016, the then Prime Minister David Cameron (Conservative Cut) held a referendum on whether or not Britain should remain in the European Union.
- The vote was by a narrow margin of 52% to leave and 48% to remain.
- But there are no clear explanations of what 'exit' means or how Britain's future trading relationships will be managed.
- Cameron, who campaigned for Britain to remain in the European Union, stepped down as Prime Minister after the majority voted to leave.

Theresa May

- Political watchers felt that political control would have been relatively in Britain's hands if Theresa May, who took over as the new Prime Minister, had opted for something like a Norway-style agreement that would preserve the important trade relationship with the European Economic Area.
- However, 'Brexit' was actively promoted for various reasons such as restoration of Britain's sovereignty, immigration control, trade, local workers' rights, human rights and economic policy.
- Theresa May, however, resigned on 'Brexit' because the tie could not be met.

Boris Johnson

- Following this, Boris Johnson, who was the Foreign Minister, became the new Prime Minister.
- Due to his 'Brexit' policy, coalition parties lost their majority & withdrawal of support from the Conservative Party in Parliament
- As a result, Boris Johnson dissolved the parliament and ordered re-election.
- Boris Johnson returned to power with a majority after declaring his primary promise to "Get Brexit Done".
- Britain left the European Union.
- The ensuing coronavirus pandemic is believed to have delayed the effects of Brexit

Consequences

- After 'Brexit', the value of the pound against the euro has suffered a series of declines.
- Increased England's resources, reduced trade with Europe and promote free trade.
- Boris Johnson has not fully delivered on his promises on many fronts such as immigration controls.
- Allegations began to arise.
- Britain's economy further declined under Boris.

- Dissatisfaction has fallen on Boris that he has failed to efficiently manage unfavorable external factors such as inflation which is not in 40 years, economic recession which is not in 300 years, electricity bills, gas price increase, exports, continued stagnation in employment, Russia-Ukraine war and so on.

Liz Truss

- Liz Truss became England's third female Prime Minister on September 6.
- In this difficult situation, while the Prime Minister was in charge, the death of Queen Elizabeth II on September 8 brought Britain's movement to a standstill.
- Various measures, including cuts in the 'mini budget' presented by Truss through Finance Minister Kwasi Kwarteng, exacerbated Britain's economic problems, including the fall in the value of the pound.
- Truss resigned saying that she could not fulfill her promises.

Rishi Sunak

- Rishi Sunak will be the 57th Prime Minister of Britain at the age of 42, the youngest Prime Minister of Britain in the last 200 years, and the Prime Minister whose property value is more than the King.
- He has various primaries such as Prime Minister of Indian origin.
- The challenges facing Rishi Sunak are many.
- The primary expectation of the people is that Sunak should immediately curb the rise in prices.
- Businesses are facing crisis due to economic crisis.
- Corporations demand tax are being cuts.
- But economists say the country is forced to levy higher taxes on corporations to curb rising prices of essential commodities.
- As investments have decreased, there are no new jobs.
- There is no job security for those who are employed.
- And crises like food shortages, housing loans, pension investments are piling up.

Kashi Tamil Sangam

- A month-long 'Kasi Tamil Sangam' events will be held to re-establish and reaffirm the centuries-old ties between Tamil Nadu and Kashi.
- Bharatiya Bhasha Samiti (BBS) has come up with a project to rediscover, affirm and celebrate centuries-old connections between Tamil culture and Khasi.
- Various aspects of literature, ancient texts, philosophy, spirituality, music, dance, drama, yoga, Ayurveda, handlooms, handicrafts and modern knowledge will be included in the Kashi-Tamil confluence.

Inflation

- The situation has worsened to the point of food shortages due to rising inflation in the UK.
- Liz Truss had promised various tax breaks to save people's livelihoods.
- But after assuming power, she could not fulfill her promises.

Economic Decline

- The country's economy suffered a further decline due to the interim budget presented by the Liz Truss government.

Resignation

- I could not fulfill the promises made to the people. I have resigned from the post of Prime Minister. I have informed King Charles about this, say Liz Truss

Biodiversity park at Manimuthar at Rs 7 crore

- A biodiversity park is being set up at Manimuthar dam in Tirunelveli district at a cost of Rs 7 crore.
- On one side of the dam is a biodiversity park and on the other side is a science park for students.
- Arrangements will be made for a park with play equipment for children and for tourists to undertake trekking and adventure activities.
- The park covers a total area of 23.06 acres.

Rojgar Mela

- Prime Minister Narendra Modi yesterday inaugurated the Rojgar Mela (Employment Festival) which will provide government jobs to 10 lakh people across the country.
- Prime Minister Modi conducted a survey last June regarding human resources in central government departments and ministries.
- He directed the authorities to take steps to provide employment to 10 lakh people in the next 18 months.

Global Economy

- India has emerged as the 5th largest economy in the world.
- India, which was at 10th place 8 years ago, has now moved up 5 places.
- This is due to the removal of barriers to economic growth in the last 8 years.
- The world's largest economies have been reeling from inflation, unemployment and the worst-ever crisis in 100 years caused by the spread of the coronavirus.

BrahMos Missiles

- Various countries including Philippines, Vietnam, Malaysia, Indonesia, United Arab Emirates, Saudi Arabia, South Africa have expressed interest in buying India's BrahMos missiles.
- The central government plans to achieve a revenue target of Rs 41,500 crore by the year 2025 through the export of BrahMos missiles.

BrahMos

- India and Russia signed an agreement in 1998 to jointly develop supersonic missiles.
- The new supersonic missile is named BrahMos after the India's Brahmaputra River & Moakva river in Russia.
- The name is also given in reference to Brahmastra, the mighty weapon of Brahma, the god of creation.
- BrahMos missile was successfully tested for the first time in 2001 in Odisha.
- After this, BrahMos missiles were developed to be launched from water, land and air.
- Later BrahMos were added to the triads.
- At present BrahMos missiles can be launched from submarines, warships, warplanes and land.
- It is the world's fastest supersonic missile.
- 28 feet long, 2 feet diameter, 3,000 kg weight, BrahMos missile can travel at 3 times the speed of sound.
- The speed and range of this missile is constantly being improved.
- During the test conducted in March 2017, the BrahMos missile flew up to a distance of 450 km and destroyed the target.

The new manufacturing plant

- The headquarters of Brahmos Aerospace, a joint venture between India and Russia is located in Delhi
- Its manufacturing plant is in Hyderabad.
- The spare parts manufacturing plant is functioning at Thiruvananthapuram.
- A new Brahmos manufacturing plant is being built in Lucknow, capital of Uttar Pradesh, with an area of 80 hectares at a cost of Rs.300 crores.
- The new plant is scheduled to open in 2024.
- Once operational, the plant will be able to produce 100 BrahMos supersonic missiles annually.

Weight reduction

- Active research is currently underway on the next generation missile of BrahMos, BrahMos NG.
- In particular, the weight of the missile is reduced by half.
- At present, Brahmos, which can be launched from land & warship weighs 3,000 kg and the one to be launched from fighter jets weighs 2,500 kg.

BrahMos 2K

- The new BrahMos NG missile will weigh 1,330 kg.
- It can be launched very easily from fighter planes.
- Production of the BrahMos NG missile is scheduled to begin late next year or early 2004.
- The new hypersonic missile is named BrahMos 2K.
- The "K" word has been added to the missile in memory of the late former President Abdul Kalam.
- This missile can reach a speed of 9,000 km per hour and destroy a target at a distance of 1,000 km to 1,500 km.
- The first test will be carried out in 2024, carrying bombs weighing up to 500 kg.

Banning State Governments to Provide Television Services

- Central Information and Broadcasting Ministry has banned state governments from providing television services.
- Due to this, an environment has developed which will affect the educational television program run by the Tamil Nadu government.
- The central telecommunication watchdog TRAI (Telecom Regulatory Authority of India) in the last 2012 instructions given to the central and state governments has mentioned that the central and state governments and their companies should not carry out the broadcasting business together with the private sector.
- At present state governments like Andhra Pradesh, Kerala and Tamil Nadu are starting and running television channels for educational purposes.
- In this way, the central government has received information that the televisions run by the state governments are showing information adverse to the central government.

Instruction

- Central Ministries, Central, State and Union Territory Government Departments shall not provide television broadcasting services.
- If you want to broadcast like that, it should be done through Prachar Bharati, a public sector organization of the central government.
- It has been advised that the work should be completed by December 31 next year.

Trade in Rupees instead of Dollars

Vostra Account

- India's trade with foreign countries is mostly done in dollars.
- At present, the central government has taken efforts to carry out this trade in rupees.
- For this, the Reserve Bank had advised Indian banks to open special accounts with foreign banks.
- In this case, Russia's Gazprombank has opened a special rupee account in the Indian public sector bank UCO Bank.

Trading in Dollars

- All procedures for opening a Gazprom Bank, Vostro account at UCO Bank have been completed.
- This Vostro account has now become operational.
- India's foreign exchange reserves are dwindling as it trades in dollars
- Apart from this, it is also problematic for India to trade with countries like Russia and Iran which have been embargoed by the US.
- In order to change this trend, the central government has made an effort to create a structure to carry out export-import transactions in rupees.
- RBI said that Indian banks can trade with foreign countries in rupees by opening Vostro accounts.
- In this case, Gazprombank, one of the largest private banks in Russia, has started a Vostro account with the Indian public sector bank UCO Bank.
- Through Vostro account, Indian importers can pay their dues in rupees instead of dollars.
- Likewise, exporters can get their due amount in rupees from the other country.

Abdul Kalam's Bio-Septic Tank

Tamil Nadu

- The Tamil Nadu government introduced a water management policy for the first time in India in 1994.
- However, Tamil Nadu is reluctant to pay extra for sewage management.
- In India, Tamil Nadu has the highest number of people living in urban areas (54%);
- This is higher than the national average
- According to the Central Pollution Control Board's Detailed List of National Sewage Treatment Plants (2021) report, Tamil Nadu discharges 6,421 million liters (ml) of sewage per day.
- Only 15% of this is treated and discharged.
- According to Central Government's State of Cleanliness (2016) report, 46.3% of sewage in Tamilnadu villages is discharged in the open, 23.4% in ponds and puddles, 18% in streams and rivulets, 7.3% in rivers, and 5% in other ways without undergoing any treatment.
- There is a risk of infection.

Bio Septic Tank

- Under the leadership of former President Dr Abdul Kalam (1992-1907), the Defense Research and Development Organization (DRDO) invented the 'Bio Septic Tank' technology to completely eliminate this rising sludge and sewage pollution.
- This septic tank, which runs naturally without the help of energy, takes up less space and is less expensive.

- In this technology, microorganisms are scientifically produced in an environmentally friendly manner and after proper testing are injected into bio septic tanks.
- Once injected into a bio septic tank, the microbes are self-reproducing.
- It is best to make bio septic tanks with cement concrete (RCC Precast) in order to not affect nature.
- The bio-septic tank, which was first used by the Indian Army in 1997, is still working well today.
- In 2013, DRDO made this technology available for public use across the country.
- A license fee of Rs.15 lakh was obtained and this technology was given to more than 50 private companies.
- Tamil Nadu is the first state in India to get a license for this.
- More than 20,000 bio septic tanks have been installed in private and government buildings across the country and are functioning well;
- Since 2013, Indian Railways has installed more than 12 lakh bio septic tanks in all trains.

A global economic crisis again?

- In 2008, Lehman Brothers caused the worst economic collapse in the United States.
- As a result, the world was in economic crisis.
- The Credit Suisse case could have similar ramifications.
- Credit Suisse currently operates in more than 50 countries.
- It has an annual revenue of \$22.5 billion.
- The bank has total assets under management of \$1.1 trillion.
- Credit Suisse's decline is said to be the main reason for the bank's CDS-Credit Default Swaps.
- The CDS of this bank has increased to the highest level in the last 14 years.
- It is considered to be similar to the global financial crisis of 2008

What is CDS?

- Just like the government issues debt securities, private companies also issue debt securities.
- For example suppose a company needs 100 crore rupees, it is not possible to charge such a huge amount from a single person.
- Therefore, after giving this 100 crore rupees to 10,000 people as debentures of 1 lakh each, the company will receive 1 lakh rupees from them.
- Let us assume that the company pays 6% interest on this Rs 1 lakh and returns the investment in a period of five years.
- Now a person who has bought a bond worth Rs 1 lakh from a company is worried that the company will not return the money due to economic downturn or some other similar reason.
- He insures the debenture held by him.
- Let us assume that the insurance company undertakes to indemnify this bond and charges 2% as underwriting fee.
- If the company does not return the money, the insurance company will pay Rs 1 lakh to the insured for the bond.
- In this way, if the company is unable to repay the loan, the insurance company will pay 1 lakh rupees to the insured of the bond.
- Thus CDS is to ensure that the insurance company will pay the amount to the insured of the bond if the company is unable to repay the loan.
- The question may arise as to what is the profit for the insurance company.

- The answer to this question is simple.
- Let's assume that 15 thousand people are insuring a debenture of Rs. 3 crore.
- Even assuming that 100 of the policyholders lose money on a probabilistic basis, the amount of compensation that the insurance company can provide is only Rs 1 crore.

The story of Lehman Brothers' bankruptcy

- In 2008, most of the Americans were in need of a home loan.
- Similarly, various banks were ready to provide home loans.
- For example, suppose 5 people need a home loan of 20 lakh each and 1 crore rupees is required.
- Interest on this is 6%.
- Now the home loan companies will borrow this money from someone else instead of giving their own money and agree to pay 3% interest on it.
- This one crore rupees obtained as a low interest loan will be divided among five people.
- Now the net profit for the bank is 3%
- For the investor who believes that the money will come back as the bank guarantees the loan.
- Borrowers also get money easily.
- As far as the bank is concerned, it earns profit without investing a single penny of its own.
- Thus, the banks overran the housing loan.
- At some point the bank officials got scared
- Immediately they approached insurance companies to insure the loans given by their banks.
- For a loan of one crore rupees, they have built an insurance amount of 2 lakh rupees on the basis of mortgage backed security with a property worth one crore rupees.
- Perhaps if the home loan borrowers fail to repay the money, the insurance company will give the bank a compensation of one crore rupees.
- Lehman Brothers is one of the companies that provided insurance to banks.
- As more and more houses were built, the demand for houses and rents began to decline.
- Borrowers began to stumble as they were unable to repay their loans.
- Banks that gave money faced financial crisis.
- Banks started approaching insurance companies to get their cover.
- Then a bigger problem arose.
- A huge gap was observed for the required amount & the provided insurance
- As a result, insurance companies could not provide compensation.
- At this point, the basic operating principle of insurance companies is probabilistic.
- At this point, Lehman Brothers was forced to sell its assets to compensate the banks, and Lehman Brothers could not provide insurance for the banks selling the assets.
- Eventually the company went bankrupt.

Solar Eclipse

- Eclipses occur when the Sun, Moon and Earth
- If the shadow of the moon covers the sun, if the earth covers the moon, it is called a lunar
- An average of 4 eclipses occur annually.
- Accordingly, if the moon completely covers the sun, it is called a total solar eclipse, and if it covers only a part, it is called a partial solar eclipse.

Transfer to NIA investigation

- A case has been registered against those arrested in the Coimbatore car blast incident under the Prevention of Unlawful Activities (UAPA) Act.
- Generally, the National Investigation Agency (NIA) officers investigate cases related to anti-national activities.
- If a case is registered under the 'UAPA' section, the state police will send a complete investigation report of the case to the Central Home Office.
- The Ministry of Home Affairs will examine it and decide whether the NIA will investigate the case or not.
- In the present context, the use of explosives, conspiracy etc, the car blast case may soon be transferred to the NIA probe as it has been included in the case, police said.

Churchill's statement was false

- In 1947, the then Prime Minister Winston Churchill said in a debate in the Parliament of England, "If India is given independence, power will go to crooks, scoundrels & robbers.
- All Indian leaders are incompetent and weak. They talk like honey, they are daydreamers.
- He said that India will be left with nothing in the political fight.

Appointment of Chief Justice

- Dhananjaya Yashwant Chandrachud aka DOY Chandrachud as the 50th Chief Justice of the Supreme Court of India has been appointed by the President of the Republic of India Droupadi Murmu.
- Justice Chandrachud will hold the post of Chief Justice for two years commencing on November 9, 2022 and till his retirement on November 10, 2024.
- With this, he will be the longest-serving Chief Justice of the Supreme Court in the last ten years.

Judgements

- India recognizes privacy as one of the fundamental rights guaranteed by the Constitution
- 18-50 age group allowed women in Sabarimala temple.
- Abolished Section 377 of the Indian Penal Code which criminalized homosexuality.
- Justice Chandrachud has given several watersheds upholding democratic, liberal and progressive values as it has confirmed that the right to abort a fetus up to 24 weeks extends to unmarried women.
- He was the only judge to rule against the majority of the Supreme Court which recognized the Indian government's Aadhaar Act as constitutional.

Challenges

- There is a demand that laws including the Sedition Act implemented during colonial rule should be abolished.
- Human rights activists and legal scholars are concerned that the rejection of bail applications of arrested persons has increased more than ever before.
- Due to long drawn out cases, the victims have to wait for years for justice, the people arrested in criminal cases have to languish in jail for a long time as undertrials without their charges being proved.
- In this context, Justice Chandrachud becoming the Chief Justice of the Supreme Court has created a natural expectation.

Mata Amritanandamayi as Chair of C20

- The Central Government has appointed Mata Amritanandamayi Devi as the Head of India's Civil Society Section at the G20 Summit.
- The European Union and 19 countries are members of the G20 organization.
- India joined in 1999.
- India will chair the G20 from December 1 to November 30 next year.
- The next G20 summit will be held in Delhi in 2023.
- The C20 organization was established to communicate the views of non-governmental organizations to the leaders of the G20 countries

Airbus manufacturing plant to be set up in Vadodara

- Airbus C295 aircraft will be manufactured in India for the first time outside of Europe.
- The plant will be set up in Vadodara, Gujarat.

Glasgow - Change and Impact

- At the United Nations Climate Change Conference held a year ago in Glasgow, Scotland, the decision to phase out fossil energy vehicles and switch to electric vehicles by 2040 was adopted.

New Pension Requires Old Pension Scheme

- New Pension Scheme was announced in December 2003 and started on April 1, 2004.
- It was said in 2003 that Rs 65,000 crore is being spent annually by the central and state governments on government employee pensions, and this amount will increase by 20% annually.
- It was also said that by reducing this, the amount can be used for development projects.

West Bengal

- First Central Government introduced this scheme to its new employees.
- Then the state governments also continued.
- Only the state of West Bengal did not accept this and continued with the old pension scheme.

Effects

- The new pension plan will not affect employees immediately.
- Especially after the 1st of January 2004, the effect of this will be fully visible only when the government employees retire.
- The states of Rajasthan, Chhattisgarh and Jharkhand have switched to the old pension scheme.
- The states of Delhi and Punjab have also announced that they are going to take the same decision.

Contribution

- As per the new pension scheme, 10% of salary and allowances are deducted monthly from every government employee and sent to the Labor Pension Fund.
- Then the government also contributes 14% (previously it was 10%).
- This amount is invested in companies and earns interest.
- When the government employee retires, this amount can be withdrawn with interest.
- Or, they can set an annuity and receive a certain lump sum every year.

ILO

- The 102nd Social Security Conference held by the International Labor Organization (ILO) in 1953 recommended that retired employees should pay 50% of their last month's insured wages as pension.
- The proportion of informal workers in the employment sector in India is less than 7%.
- Moreover, public sector (pro-government) employees are only 4%.
- According to 2017 statistics, there are 34.65 lakh central government employees and 1.06 crore state government employees in India.
- Among them, the number of those who joined the service after 2004 will be less.
- Only they will be affected by the new pension scheme.

Member of Legislative Assembly (MLA)

- An MLA who retires after five years of service receives full pension.
- There is also a difference from state to state.
- A one-day MLA in Madhya Pradesh and a seven-term elected MLA in Haryana get a monthly pension of Rs 2.38 lakh.
- In Telangana, a one-time MLA gets Rs 50,000 and a three-time MLA gets Rs 75,000 as pension.
- MLA pension is Rs 30,000 in Andhra Pradesh and Rs 40,000 in Tamil Nadu.

General Civil Law

- As the assembly elections are approaching, the Gujarat government has decided to set up a committee to implement the General Civil Law.
- There is a long-standing plan to implement a common civil code for all people across the country without discrimination of religion, caste or gender.

Shabanu case

- The Supreme Court which ruled in the Shabanu case recommended the establishment of a general civil law in 1985.

Goa

- General Civil Code is in force only in the state of Goa in India.
- The Supreme Court itself hailed Goa's implementation of a common civil code for all castes as a "shining example"
- The state governments of Uttarakhand and Himachal Pradesh have constituted an expert committee headed by a retired Supreme Court judge to implement the General Civil Code.

Indian law must be followed

- It is mandatory for the companies to appoint their own official to deal with the complaints related to the content shared on the social networking sites.
- But there were complaints that the appointed officials were not taking appropriate action.
- Following this, the central government said that a regulatory committee should be set up to investigate people's complaints.
- Twitter and Facebook were the first companies to agree.

- But Google did not agree.
- In this case, the central announcement has been made that appeal committees will be set up within 3 months to investigate the complaints of people on social networking sites.
- Social networking sites such as Twitter, Facebook, YouTube, and Instagram operating within India must henceforth operate in accordance with Indian laws.
- Social networking companies must receive user complaints within 24 hours.
- It has made mandatory that action should be taken within 15 days

Air plant in Vadodara, Gujarat

- Tata and Airbus alliance will set up this plant in Vadodara, Gujarat at an estimated cost of Rs 22,000 crore.
- Through this, at least 15,000 jobs are expected to be created.
- Steps are being taken to make India a manufacturing hub of the world
- Make in India project is for the world.
- India is producing fighter jets and vaccines.
- Mobile phones and cars made in India have attracted global attention.
- Along with these, India-made passenger aircraft will also attract the world's attention as soon as possible.

Special BrahMos missile

- We have intercontinental ballistic missiles like Agni and Prithvi.
- As they fly at high altitudes, enemy countries can track their movement through radar, satellite etc.
- Brahmos are designed to attack and destroy enemy positions at low altitudes.
- It is a supersonic missile that travels at 3 times the speed of sound.
- It is 9 times faster than ones in countries like USA.
- No other country has such a missile.
- It is also included in the three armies of India.
- It is the first weapon used by India to attack the enemy.

How did export opportunities come about?

- The countries of the world asked India to give us such a missile with various features.
- Based on that, an agreement has been signed to sell to the Philippines.
- Other countries are also interested in buying the missile.
- Although India's income from exports to the world is one side, the value of India in the world arena has increased.

Missile upgrade project

- Next Generation (New Generation) BrahMos, hypersonic BrahMos has been started.
- It can travel 7 times faster than sound.
- The current Brahmos weighs 3 tonnes.
- It is planned to reduce it to 1.5 tons.

How much revenue will be generated from its export?

- This missile project was implemented with a total investment of 300 million Dollar, 150 million dollars each, in collaboration with Russia.
- But 7 billion dollar trades have been made.
- 14 countries are interested in buying it.
- Then the export will exceed 5 billion dollars (approximately 41 thousand crores)

Halloween Festival in South Korea

- Every year on October 31st, thousands of people have gathered in Seoul for the last few days to have fun and celebrate.
- Young men and women dressed as skeletons, witches, werewolves roamed the streets.
- There are many pubs on the narrow road.
- Being hilly, the road is sloping from top to bottom.
- On the road which is about 45 meters long and 4 meters wide, thousands of people went. as suddenly, the news spread that a famous 'K-pop' singer had arrived, young men and women flocked to see him. Then there was a crowd.
- 153 people died of suffocation.

Challenging Intelligence Police System

Introduction

- Since the time when the British established in India, the intelligence department called 'CID' has been functioning as a part of the police.
- There are two major divisions in the police force for intelligence gathering at the state level.
- In each district under the direct control of the District SP, a 'Special Unit' is involved in the collection of district-level intelligence.

State CID

- A unit called 'SPCID' is doing the work of collecting intelligence information throughout the state.
- This branch of SPCID is known as State Intelligence.
- The Intelligence Unit is also functioning as a part of the State Intelligence to monitor terrorist activities.

Headquarters

- Although the headquarters of the state intelligence is in Chennai, each district has a separate office for the SPCID intelligence wing.
- SPCIDs in the districts are tasked with informing the intelligence headquarters about attempts to disturb public peace and law and order in the state.
- The department is looking into it.

Functions

- The Intelligence headquarters is doing the work of classifying the information collected from all over the

state and bringing it to the attention of the state government and informing the police superintendents and police officials who are looking after the law and order work in the districts.

- State Intelligence also brings important intelligence to the attention of Central Intelligence.

One Country One Election

- Simultaneous Elections for Parliament and Assemblies Organizations like Election Commission, Law Commission, Niti Aayog support the holding of parliamentary and assembly elections simultaneously.

It is not new

- The idea of holding parliamentary and assembly elections simultaneously is not new.
- Between 1951-1967, elections to the Parliament and the Assembly were held at the same time.
- In 1968 and 1969, the derailment from the system of holding simultaneous elections occurred only when the assemblies were dissolved prematurely.
- The Election Commission has already given a detailed plan to the Central Government regarding One Country One Election.
- Parliament is still the same as it was before 1970.
- It is possible to hold assembly elections simultaneously.

Simultaneous elections

- The ruling party should establish a consensus among all the political parties in the simultaneous election.
- Consensus should be made with all the concerned parties and necessary amendments should be made in the constitution.
- In the coming parliamentary elections in 2024, the possibility remains to hold the assembly elections simultaneously as recommended by the Legislative Commission and Niti Aayog.

Not possible

- It requires massive resources. Especially the security forces.
- It is not possible in the current environment.
- Even now it is not possible to hold elections in a single phase in a large state.
- In many states, the Election Commission cannot hold elections in one phase.
- Elections are conducted in 4 or 5 phases in big states.
- Security reasons are the most important in this.
- There are practical problems in holding parliamentary and assembly elections at the same time.

Even now it is possible

- If there is unity in the political opinion, assembly elections can be held in the states of Haryana, Jharkhand, Maharashtra and Delhi along with the parliamentary elections.
- Assembly elections should be held in 2026 in remaining 16 states and Puducherry.
- It should be held before this.

State Affairs

TN Economy

- Tamil Nadu Chief Minister M.K.Stalin has said that our ambition is to increase the economy of Tamil Nadu to 1 trillion US dollars by 2030.
- In the last financial year 2020-2021, Tamil Nadu has taken the 3rd place in India by making exports worth 1.93 lakh crore rupees.
- This export of Tamil Nadu is 8.97% of the total export of the country
- Exports are very important to achieve this economic growth.
- At present, Tamil Nadu's export is 26 billion dollars.
- This should be increased to 100 billion dollars by 2030.
- 48 products have geo codes including unique paintings of Thanjavur, Plates, veena, Coimbatore cotton sarees, Kovilpatti groundnut candy, Salem silk, Erode turmeric, Alapai green cardamom, Nilgiri tea, Thiruvilliputtur balgao, Palani panchamirtham, Sirumalai mountain banana
- These products also have good export prospects.
- Also, 24 products including Kampam Panneer Raisin, Salem Jawarisi, udankudi Panangarupatti, Manaparai Murukku, Thoothukudi Macaroni, Panrutti Cashew and Jackfruit and Marthandam Honey are under consideration for getting Geographical Codes.
- A growth rate of 13 to 13.5% per annum is required to increase Tamil Nadu's economy to \$1 trillion by 2030.
- In the first year of the DMK government, Tamil Nadu's growth was 14.5%.
- If the same situation continues in the next 4 years, the target can be achieved for sure.
- Looking at the potential and resources in Tamil Nadu, we can definitely say that we will surpass the target in exports.

29% increase in tiger population

- A formal census in Tamil Nadu in 2006 found 67 tigers.
- Then, a survey is conducted once in four years.
- As of 2018, there are 264 tigers in this.
- 10% of the 2,700 tigers in the country are in Tamil Nadu.
- This number is being raised on the basis of 20% per annum.

Tamil Nadu is the 1st in providing drinking water pipe connections to Rural Houses

- Drinking water facility is the lifeline for everyone's survival.
- No one can survive without air, water and food.
- The government cannot provide wind. Nature should give.
- Similarly, although water is a gift of nature, it is the main duty of the government to bring it to the people.

- In 2019, Prime Minister Narendra Modi announced a program called Jal Jeevan Mission to provide all homes in rural areas with protected drinking water pipes.
- The goal of this project is to provide piped water connections to all the houses in the villages by the year 2024.
- The aim is to provide at least 55 liters of drinking water to each person through this scheme.
- At that time 37% of the houses had such drinking water pipe connections.
- According to the current survey, 53% of the houses in rural areas, i.e. 10 crore 20 lakh houses, have piped water connections.
- Among the states with less than 60% pipeline connections, Tamil Nadu was chosen as the first state to perform well through this project and the award was presented by President Draupadi Murmu in Delhi, which was given to Tamil Nadu Municipal Administration Minister K.N. Nehru.

Jal Jeevan Mission

- The 'Jal Jeevan' mission was launched in 2019 to provide piped connection to all rural households.
- This movement is implemented in collaboration with state governments.
- Under this, in the last three years 7 crore rural houses have been provided with drinking water pipe connection and by this the number of rural houses that have got water pipe connection in India has increased to 10.2 crore.

Key Components

- A fully functional piped water system is defined as having a minimum of 55 liters of drinking water per person per day in each household.
- It has been said that 75% of the households participating in the survey get drinking water on all days of the week, 4% of the households get drinking water 5-6 days a week and 14% households get drinking water 3-4 days a week.
- It is said that 8% of the houses get drinking water only once a week and 80% of the houses have their drinking water needs fully met.
- Pipeline alone does not ensure availability of drinking water all the time.
- There is a wide disparity between states in the number of rural households with piped water connections.
- 80% of households have fully functional piped water connections in Tamil Nadu, Himachal Pradesh, Goa, Puducherry
- Rajasthan, Kerala, Manipur, Tripura, Maharashtra, Madhya Pradesh, Sikkim and Mizoram have less than 50% of houses only have got a full-time functioning pipeline.
- The survey revealed that drinking water pipe connections are available to 90% of schools, Anganwadis and in rural areas.
- However, although 93% of the drinking water samples tested in the survey did not contain bacteria, it was revealed that the drinking water available in schools and Anganwadis contained more than the permissible level of chlorine.
- This should be rectified immediately.

Denial of government concessions

- The first school in Tamil Nadu was St. George's School, established in 1715 in Chennai.
- The two established schools in Tamil Nadu are the Bishop Heber School established in 1762 in Trichy.
- In 1911 when the first SSLC examination was held, all the schools in Tamil Nadu were aided schools.

- Village-wise aided schools are non-profit making on par with government schools to provide education to all, started by service minded people.
- Fund-aided schools started after the government announced that "Just build the infrastructure, we pay the teachers' salaries", also imparted primary education to students in TN

Three types of schools

- In today's environment, there are three types of schools operating in Tamil Nadu.
 - The first category is Government School, Panchayat Union School and Municipal School under the direct management of the Government. The structure of these types of schools, the appointment of teachers and the remuneration of teachers are all the responsibility of the government.
 - The second category is government aided schools. The infrastructure of these schools and recruitment of teachers will come under private management. But the government will pay the salary of the teachers.
 - Third category, nursery matriculation, CBSE private schools. The infrastructure of these schools, the appointment of teachers and the salary of teachers will all be under the control of the private sector
- In the first two types of schools, the school administration does not charge any fees from the students.-
- But the students studying in the third category of private schools must pay fees
- Governments that have ruled till now have treated government school students and aided school students equally and provided benefits.
- Aided school students were getting all kinds of benefits like book bag, laptop and concessions include Lunch, Uniform, Shoes, Bicycle, Text Book, Study Notebooks, backward-underprivileged scholarship, just like government school students.

Recent Changes

- Recently there has been a change in this practice.
- In the previous regime, 7.5% reservation was given in the medical college if the government school students passed the NEET exam.
- Through this concession, about 300 government school students got an opportunity to join the medical college every year.
- It created an opportunity for economically backward students to pursue medical education.
- But as per the recent government order students of government aided schools cannot get this concession, the government aided school students who have been getting all the privileges till now have been shocked by this order.
- Similarly, according to the Muvalur Ramamirtham Ammaiya Educational Assistance Scheme announced by the present government, a scholarship of Rs. 1000 is granted
- According to this notification, the girl students studying in the aided school are not able to get the scholarship.
- The decree that 20% preference will be given to students who studied in government schools in Tamil Nadu government job opportunities is welcome.
- But even in this opportunity no reservation is made for students studying in government aided schools.
- Aided schools are also not included in the breakfast scheme for school students launched recently by the government.
- Aided schools have not been given the equipment provided to government schools under the 'Ennum Ezhuththum' scheme.
- Keeping in mind the future of 28 lakh students studying in government aided schools, Tamil Nadu government should provide government benefits to the students of government aided schools as before.

Online Gambling in TN

- A committee was formed under the chairmanship of Judge K.Chandru to make strong law against online gambling.
- The government received a report regarding the enactment of the new law.

Governor's Approval

- Following the Cabinet's approval, the Government sent it to the Governor's office on October 1 for the Governor's approval.
- Governor RN Ravi considered the emergency law on the same day and immediately approved it and sent it to the government.

Appointment of Commission

- The name of this Act is the Tamil Nadu Prohibition of Online Gambling and Regulation of Online Games Ordinance-2022.
- It is effective immediately.
- According to this Act, the Tamil Nadu Online Games Regulatory Authority is constituted by the Government.
- This commission will be chaired by a retired person holding the post of not less than Chief Secretary.
- Also, retired Police IG, one expert in IT and one expert in online games will be members.

Function of the Commission

- The Commission supervises the online game providers who regulate the online games.
- Maintain data about them.
- The Commission is given powers similar to those of a civil court (to issue summons, record witnesses, subpoena documents).

Ban on Gambling

- All online gambling games are banned by the Ordinance brought in at present.
- This also prohibits all online games (rummy, poker) that are considered games of chance to win money (or prizes).
- No one should be allowed to play that game.
- Media should not publish advertisements related to online games where money is involved.

Penalties

- Anyone who plays online games is liable to imprisonment for 3 months or a fine of Rs.5 thousand or imprisonment with fine.
- Advertising related to these games shall be punishable with imprisonment for one year or with fine of Rs.5 lakhs or with both.
- Providers of online games will be punished with imprisonment of up to 3 years or a fine of Rs.10 lakh or both.

Repeated offense ...

- Advertisements related to these games are punishable and repeated offense will be punishable with imprisonment for a term which may extend to 3 years and a fine of Rs.10 lakhs.
- If the online games provider is convicted once and repeats the offence, the punishment will extend to 5 years in jail and a fine of Rs 20 lakhs.

The registration department is empowered to cancel fake documents

- People buy land to invest their savings, for subsistence farming, build houses and start businesses.
- Many people buy land in one place and go to foreign countries for work.
- There are many scams where some people prepare fake documents and sell their hardearned land to someone else and make it their own.
- An amendment to the law to empower the registry department to cancel fraudulent deeds registered on the basis of impersonation and forged documents
- This historic bill was passed in the Tamil Nadu Assembly in September last year.
- The Bill was approved by the President on 6-8-2022 and became law.
- A new section 22-B has been added in the amended Act.
- Empowers Registrars to refuse registration of forged documents.
- The public who have already been affected by fraudulent registrations should file a petition with the relevant documents to the concerned district registrar.
- Enquiry will be conducted within 90 days and appropriate action will be taken
- The fake deed will also be canceled and the property will be returned to the real owner.
- Thus, the legendary actress Vanishree, who had made many efforts to recover her land for 11 years, got the 4 ground land in Chennai through this law and got fake document cancellation certificates from the hands of CM M.K.Stalin.
- In addition to this, not only the document holders who registered the fake deed without proper consideration of the documents for registration, but also the registration officer can be prosecuted and jailed.
- This highly commendable act, the first of its kind in India, is making all states look at Tamil Nadu with wonder.
- Many states like Jammu & Kashmir, West Bengal are consulting Tamil Nadu government to implement this.
- On the whole, there can be no alternative opinion that this revolutionary law is a law that adds fame to the Tamil Nadu government.
- People also no longer have to fear about the safety of their property.

Women marriages before the age of 21

- Nationally, the percentage of women married before age 18 is 1.9.
- The state of Jharkhand has the highest rate of 5.8%
- In the state of Jharkhand, the rate of child marriage is 7.3% in rural areas and 3% in urban areas.
- According to the survey, no girl in Kerala gets married before the age of 18.
- There is more awareness about marriage in that state.
- The national percentage of women getting married before the age of 21 is 29.5%.
- This amount is 54.9% in West Bengal and 54.6% in Jharkhand.
- Similarly, according to the information released by the National Crime Archives, there are more crime incidents in the state of Jharkhand.

The first solar village in the country

- Modhera village in Mehsana district of Gujarat is India's first solar village.
- Modhera village in the Mehsana district of Gujarat is famous for its Sun Temple.
- From now on it will be a world famous village for solar power and will be a great start for the great journey towards harnessing solar power.

24 hour electricity

- Modhera villagers no longer need to pay electricity bills.
- They will prepare the electricity they need.
- They can earn income by selling the electricity that is left over for use..
- 1,300 solar panels have been installed on the roofs of the houses in Modhera village to get 24 hours of electricity from the sun.
- These are capable of producing one kilowatt of electricity.
- "This solar system is fully integrated with Battery Energy Storage System (BESS) which ensures power supply even at night.
- The world famous Sun Temple was built in Modhera village in 1026-27 by Chalukya King Bhima.
- Now solar power project has been introduced focusing on this temple.

The Right to Housing

The scheme that did not work

- The Union Ministry of Urban Development introduced special schemes for the urban homeless in 1992.
- The scheme, implemented by the State Housing Board under the name 'Shelter-sanitary facilities for slum dwellers in urban areas', was renamed 'Urban Homeless Night Shelter' in 2002.
- The project was abandoned in 2005 due to improper financing
- Realizing the plight of the homeless, the Supreme Court in 2010 ordered the central and state governments to set up 24-hour permanent shelters for the homeless in 62 cities in the first phase in India.
- The order says that it should operate 24 hours, 365 days with basic facilities such as Beds, mattresses, blankets, drinking water, toilets, first aid, basic health facilities, drug prevention services including entertainment at the level of shelter for at least 100 people per one lakh urban population.
- 30% of these shelters should be reserved as special or rescue camps for the elderly, women living alone, mentally challenged and otherwise vulnerable.
- The Supreme Court also said, it will also continue to be considered that all state governments should provide shelter to the urban homeless.

New Project

- In 2013, the Shelter for the Urban Homeless (SUH) project was launched under the National Urban Livelihood Program (NULM).
- Later renamed as 'Deendayal Antyodaya Yojana' (DAY), the scheme acknowledged the contribution of the urban homeless to the economic development of cities and sought to provide them with permanent accommodation with basic amenities.
- Currently 150 shelters are functioning under this scheme across Tamil Nadu.

- The central government will not allocate funds to archives operating for more than 5 years under this scheme.
- Therefore, the state government should take full responsibility.
- However, there is no state level policy or plan for this yet

Why is there a need for an integrated policy?

- Access to identification documents, bank accounts, skill training, employment linkage, livelihood assistance (entrepreneurial scheme or loan), educational child care facilities, old age allowance (CAP), allowance for single women (widow, destitute), Co-ordination between government departments is required to ensure access to various social rights such as stipend for disabled persons and their needs for socio-economic rehabilitation.

Fertility problem

- According to the General Fertility Rate the birth rate in the country has decreased by 20%.
- Especially women between 15 and 49 years have increased problems.
- Around 15% of the Indian population is facing the problem of infertility.
- India's average fertility rate was 86.1% in 2018-2020, which has declined to 68.7% at present.

Reason

- Fertility rate in rural areas has increased over the last three years.
- It is 15.6% in urban areas and 20.2% in rural areas.
- There are various reasons why young men and women are not able to conceive.
- Physiological inequality, infertility, economic status, stress, late marriage, environmental changes, urbanization, modernization, higher education and so on
- 70% of fertility problems are curable.

TamilNadu

- In Tamil Nadu, inability to have a child is called primary infertility and inability to have a second child is called secondary infertility.
- Primary Infertility is what most people face in Tamilnadu
- About 20% of Tamilnadu's population of 8.24 crores are facing infertility problem.
- Along with various reasons, complex life style, alcoholism also play an important role.

"Kutty Kaavalar" Program

- This Program aims to educate and transform school children into ambassadors of road safety through a well-designed curriculum.

Smart Police

- A program called Electronic Patrol has been introduced in Tamil Nadu Police through a new app called Smart Police.
- The Government of Tamil Nadu has undertaken the work of modernizing the police department by introducing various technologies of international standards.

- As a part of it, Tamil Nadu Police has introduced a new online application called 'Smart Police' to improve the efficiency of the police, to accurately record and maintain crime documents, and to handle data properly and efficiently.

Assembly elections in Himachal on November 15

- Chief Election Commissioner Rajeev Kumar said that the elections for all 68 assembly constituencies in Himachal Pradesh will be held in one phase on November 12.
- Counting of votes will be held on December 8.
- The election notification will be published on October 17.

Vote Counting in Single day

- The term of the Himachal Pradesh Assembly, which has 68 members will end on January 8 next year.
- The tenure of the Gujarat Assembly is till February 18 next year.
- Pointing out that there is a gap of 40 days between the two, Rajiv Kumar said that the election procedures carried out in one state will not affect another state.

Election Freebies - A Warning

- Political parties have the right to make promises they can.
- However, voters have the right to know how those promises will be fulfilled.
- Therefore, it is planned to bring changes in the rules of conduct of elections so that political parties can explain about the financial resources required to fulfill their promises.

One Nation One Fertilizer

- 600 Agricultural Development Centers have been started across the country in the name of Prime Minister Kisan Samriti Kendra.
- Fertilizer will be sold in these centers.
- Under the Prime Minister's Kisan Samman Fund Scheme, a total of Rs 16,000 crore has been disbursed in the bank accounts of small and marginal farmers at the rate of Rs 2,000 each.
- They bought fertilizer from famous companies at high prices.
- Due to this, the cost of cultivation increased.
- Keeping this in mind the 'One Country One Fertilizer' project has been launched.
- Through this, the farmers will get quality fertilizer at a reasonable price without shortage.

Paddy procurement: Change in demand policy

- Due to widespread rains across Tamil Nadu, air humidity has increased.
- It has affected the moisture content of paddy.
- As per central rice procurement policy, 17% moisture content is suitable for procurement;
- Based on the request of the Tamil Nadu government, the central government increased it to 19%.

- As the moisture content of paddy for sale is said to be more than 19%, the minimum reference price is likely to be missed.
- Farmers will suffer due to this.
- According to the National Food Security Act, the central government is procuring food items like rice and wheat through the state government agencies.
- In the case of Tamil Nadu, the state government provides an incentive of Rs.100 and Rs.75 depending on the variety of paddy along with the central government's purchase price.
- Farmers are ill-equipped to deal with the impacts of a changing climate on agriculture, relying only on sunlight to grow rice, and lack mechanical facilities to reduce moisture levels.
- Therefore, it is understandable that the agricultural societies have raised the demand to increase the permissible moisture level from 17 to 22%, discoloration from 5 to 7%, maturity from 3 to 5% and damage from 5 to 7%.

All Caste Priests

- The Tamil Nadu Hindu Religious Charitable Trusts Act 1959 was established to manage all temples under the control of the Charitable Trusts in Tamil Nadu.
- Section 55 of this Act is regarding the ordination of priests.
- Accordingly, priests should be appointed on the basis of succession.
- The DMK government led by M. Karunanidhi amended section 55 (2) of this Act in 1970.
- Seshammal went to the Supreme Court against the amendment that 'Priests should not be appointed on the basis of succession rights'.
- 'Tamil Nadu Govt's Law Amendment will be valid.
- At the same time, the Supreme Court ruled in 1972 says that the appointment of a priest should be subject to the rules of the Agama.
- In 2006, the Tamil Nadu government issued an ordinance (No. 118) stating that 'any Hindu who has the necessary qualifications and training can be appointed as priests in Hindu temples'.

100% Hindi Language Learners

- Seyannur village in Kerala's Kozhikode district is aiming to achieve 100% Hindi literacy
- The Gram Panchayat is carrying out an initiative to teach Hindi to all the villagers.
- As a large number of migrant workers from North India are living in this Panchayat, this initiative has been started to communicate with them.
- Hundreds of villagers regardless of age, gender, education etc. are enthusiastically learning Hindi.
- Organizations like Kerala State Literacy Program Commission, Sarva Siksha Abhiyan, Dakshakshina Bharat Hindi Birsara Sabha are providing all support and assistance to this program organized by Panchayat.
- It is noteworthy that in 1991, when the state of Kerala achieved full literacy, Seyannur Panchayat became the first panchayat in Kozhikode district to achieve full literacy.

TN, 15 states lead

Cargo Handling Index

- Logistics is very important in the development of the country.
- The raw materials required for the industry are transported from agricultural lands and forest areas.
- The product produced in the factory is taken to the markets for sale.
- Governments are giving importance to cargo handling and are rapidly implementing transport related projects.
- Sagarmala Project, Bharatmala Project, Golden Quadrilateral Project, Separate Line Project for Freight Trains etc. are also being implemented to reduce the time of transportation of goods.

Status of States in Cargo Handling			
Categories	Achievers	Fast growing	Growing
Landlocked States	Haryana, Himachal, Punjab, Telangana, Uttar Pradesh, Uttarakhand	Madhya Pradesh, Rajasthan	Bihar, Chattisgarh, Jharkhand
Coastal states	Tamil Nadu, Andhra Pradesh, Gujarat, Karnataka, Maharashtra, Odissa	Kerala	Goa, West Bengal
North eastern states	Assam	Sikkim, Tripura	Arunachal, Manipur, Mizoram, Meghalaya, Nagaland
Union Territories	Chandigarh, Delhi	Pondicherry	Andaman & Nicobar, Daman & Diu & Dadra Nager Haveli, Jammu Kashmir, Ladakh, Lakshadweep

Commissions of Inquiry

Introduction

- Justice Arumukaswamy Commission of Inquiry set up in 2017 regarding the death of late former Chief Minister J. Jayalalitha
- Justice Aruna Jegatheesan Commission of Inquiry set up in 2018 regarding the Thoothukudi firing.

Origin of the Act

- The 'Commissions of Inquiry Act' enacted in 1952 guides the Commissions of Inquiry set up by the Central and State Governments in India.
- Commissions of Inquiry are set up under this Act.
- Rules for this were framed in 1972.

When can it be set?

- According to the Commission of Inquiry Act, Central and State Governments can set up Commissions of Inquiry.

- If the central government sets up a commission of inquiry, a resolution should be passed in the parliament and the order should be published in the gazette.
- If set up by the State Governments, a resolution should be passed in the Legislative Assemblies and published in the Gazette.
- In general, commissions of inquiry may be set up to investigate and report on a particular issue and find out the causes of events that have already taken place.

What is the task?

- Besides finding out the causes of the problems, the main task of the inquiry commission is to examine the precautionary measures to be taken by the government to prevent untoward incidents from happening in the future and to submit recommendations to the concerned government.

Who is investigating?

- Commissions of Inquiry may be constituted by a sitting Supreme Court or High Court judge or a retired judge under the Commissions of Inquiry Act.
- Generally, inquiry commissions are constituted with retired judges.
- The Commission of Inquiry may consist of one person or several members.
- If it consists of several members, a chairman should be appointed for it.

What is authority?

- According to the Civil Procedure Code 1908, the Commission of Inquiry has the jurisdiction of a civil court.
- According to this, any person in India can be summoned for investigation, can be tested, affidavits can be obtained.
- Under the Code of Criminal Procedure 1898, the investigation team authorized by the Commission can seize documents wherever they go.
- To assist the Commission, experts in the field may be appointed as assessors.
- Any proceeding before the Commission is a judicial proceeding under Sections 193, 228 of the Indian Penal Code 1860

Jurisdiction

- A State Government cannot set up an Inquiry Commission in the same matter until the Commission of Inquiry appointed by the Central Government is functioning.
- As long as the commission set up by the state government is functioning, the central government cannot set up an inquiry commission on the same subject.
- If more than one State is concerned, the Commission of Inquiry may be expanded.

Climate Change

Climate Action Plan Draft Report

- Chennai's sea level will rise by 7 cm and 100 meters of land will sink into the sea in the next five years.
- Up to 60% submergence of two electronics manufacturing plants, 18 metro stations in North Chennai due to sea level rise. 30% of Chennai is likely to be affected by floods.

- Within 2100, Chennai's 67 kilometer area, 16% of the existing city, will be permanently submerged
- 10 lakh people will be affected due to this.
- More than 200 slums will be affected.
- 7,500 Urban Housing Development Board flats with close proximity to rivers and water bodies will also be affected.
- The report focuses only on reducing greenhouse gas emissions and mitigating climate change.
- How to adapt to climate change and how to adapt the city in a way that does not exploit resources is not talked about.
- Most of the features stated in this draft action plan are based on guesswork.
- Practically implementable plans are understated.

Some of the questions that arise from this report

1. A metro station is currently being constructed a few hundred feet from the sea near the Gandhi statue on the Marina beach.
 - However, the above draft report says that 18 metro stations will be submerged due to sea level rise.
 - What kind of danger will there be if sea water enters the underground metro stations that connect the entire city?
 - What is the plan of the Chennai Corporation-Metro Rail Corporation to deal with it or abandon the railway station project?
2. What is the plan to restore Chennai's three heavily dammed rivers, the Buckingham Canal and countless lakes that have already been destroyed?
 - How can we deal with monsoon floods and summer water demand without restoring these?
3. The report says that a large number of slum dwellers will be affected and they will be provided housing that will not be affected by the rise in temperature.
 - How is it possible to reduce the temperature in these houses without air conditioning?
 - Where are those houses to be built?

Ensuring Security

- Climate change is a huge problem affecting not only Chennai but also Tamil Nadu, India and the world.
- The problem of intensifying natural disasters in the coming years is that we are not yet prepared to face this even at the policy level.
- Although the people are not yet fully aware of this, the government and the rulers should not display a similar ignorance.
- There is an urgent need for the government to join hands with the people and spread understanding to prevent the natural calamities that are already intensifying.
- Against this backdrop, government bodies like the Chennai Corporation should ensure transparency in climate change action plans.

Chennai Expand to 5,904 Square KM

- The New Chennai Metropolitan Area is expanding from 1,189 Sq Km to 5,904 Km with 4 Corporations, 12 Municipalities, 14 Municipalities and 22 Panchayat Unions.
- In 1975, the Chennai Perunagal Project area covered 1,189 km including 179 villages in Chennai Corporation, Avadi and Tambaram Municipal Corporations, 5 Municipalities, 3 Municipalities and 10 Panchayat Unions.
- The housing department issued a notification for this during the AIADMK regime in 2017-18.
- Accordingly, it was reported that Chennai and nearby Kanchipuram, Thiruvallur, districts and Vellore district will be expanded to the extent of 8,878 square km by including Arakkonam circle.
- It was decided to expand to 5,904 sq km in areas in Arakkonam of Tiruvallur, Kanchipuram, Chengalpattu and Ranipet district as against the 8,878 sq km proposed by the DMK regime.
- Through this expansion, other major cities in India such as Bengaluru Metropolis (8,022 sq.km.) Next to Hyderabad Metropolis (7,100 sq km), Chennai Metropolis is the largest area.
- At the same time, the country's capital city of Delhi has an area of 1,482 square km and Mumbai has an area of only 4,355 square km.

How is the earthenware water remains cold?

- Water seeps through small pores in the earthen pot.
- This water continues to evaporate.
- In this way, the heat of the pot and the water inside the pot are continuously removed by evaporation.
- So water is in cold state.
- Depending on the nature of the outside air, the cooling capacity of the water will change.
- Around the pot, i.e. if the outside temperature is high, the evaporation of water takes place due to high heat.
- The water inside the pot becomes very cold as heat is removed through evaporation.
- There is a lot of 'moisture' mixed in the air during the winter season and during the windy season, the wind blows.
- The amount of water evaporation decreases during this season when the humidity of the air increases.
- So the water in the pot gets cooled to a lesser extent.
- But if you keep water in the clay pot for a long time and cool it, you can't expect it to turn into ice
- A crock pot does not cool the water enough to scald the teeth.
- The temperature of the water in the earthen pot will be 5 degrees less than the room temperature
- If the outside temperature is 30 degrees Celsius, the temperature of water will be 25 degree celsius